THE MARKET PLACE REZONE PROJECT

SCH NO. 2024020969

prepared for
City of Tustin
300 Centennial Way
Tustin, CA 92780

prepared with the assistance of
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June 2024

Draft Environmental Impact Report

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1. Executive Summary

This Draft Environmental Impact Report (EIR) evaluates the environmental effects that may result from the construction and operation of The Market Place Rezone Project (proposed Project). This EIR has been prepared in conformance with State and City of Tustin environmental policy guidelines for the implementation of the California Environmental Quality Act (CEQA).

This Draft EIR is being circulated for review and comment by the public and other interested parties, agencies, and organizations for 45 days in accordance with Section 15087 and Section 15105 of the CEQA Guidelines. During the 45-day review period, the Draft EIR will be available for public review at the City of Tustin website: https://www.tustinca.org/HousingElementRezone.

A physical copy is available for review at the following locations:

City of Tustin
300 Centennial Way
Tustin, CA 92780

Orange County Library – Tustin Branch
345 E. Main Street
Tustin, CA 92780

Written comments related to environmental issues in the Draft EIR should be addressed to:

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A Notice of Availability of the Draft EIR was published concurrently with distribution of this document.

1.1 PROJECT BACKGROUND

The City of Tustin is required by State law to periodically update its Housing Element, a mandatory component of the City's General Plan. The Housing Element is the City's housing policy and planning document that identifies housing needs and constraints, and sets forth goals, policies, and programs that address the future housing needs for all income levels over an eight-year planning period that coincides with a Regional Housing Needs Allocation (RHNA). The City of Tustin prepared the 2021-2029 Housing Element of the General Plan – the most recent update to the Housing Element that covers the Sixth Cycle planning period from October 15, 2021, to October 15, 2029 – in accordance with Government Code Section 65580 et seq. (*Housing Elements*).

On October 5, 2021, the City Council adopted Resolution No. 21-86, certifying the Negative Declaration (ND) for General Plan Amendment (GPA) 2021-0002, which analyzed environmental impacts related to the City's Draft Housing Element Update of the General Plan (Resolution No. 21-87, approving GPA 2021-0002). Following preparation of the Draft Housing Element Update and certification of the ND, the Draft Housing Element went through several rounds of revisions and submittal for review to the State Department of Housing and Community Development (HCD). The City received formal HCD certification of the Housing Element Update on September 12, 2022. On October 4, 2022, the City Council adopted Resolution No. 22-47, approving GPA 2022-0002 for the final Housing Element Update.

The 2021-2029 Housing Element includes several provisions that aim to ensure the City can meet the required "fair share" of affordable housing units, as specified by the State of California. During the Housing Element process, the City assessed a number of sites and areas throughout the community that would be able to

accommodate the City's assigned 2021 Regional Housing Needs Allocation (RHNA). The City identified 19 sites and one housing category (accessory dwelling units [ADUs]/junior accessory dwelling units [JADUs]) as qualifying sites to accommodate its RHNA allocation. Of the 19 Housing Element inventory sites, The Market Place (Housing Element Site 18) was identified as necessary for rezoning under Housing Element Program 1.1f in order to allow for high density residential development.

The Market Place (Project site) is an approximately 76.9-acre shopping center. Within The Market Place, 18 acres of the Project site, currently used as surface parking, have been identified as being suitable for housing development. Per the adopted City General Plan 2021-2029 Housing Element, redevelopment of the 18 acres is expected to accommodate up to 900 housing units.

1.2 PROJECT LOCATION

The Project site is located within the City of Tustin, which is in the central portion of Orange County and is surrounded by the cities of Irvine to the south and east, Santa Ana to the west, and Orange and unincorporated Orange County to the north. Major freeways and highways within or bordering the City of Tustin are the I-5 freeway through the center, State Route (SR) 55 to the west, SR 261 to the east, and the I-405 freeway to the south, as illustrated in Figure 3-1, *Regional Location*.

The Project site includes 76.9 acres and is generally bounded by Myford Road to the northwest, Bryan Avenue to the northeast, Jamboree Road to the southeast and I-5 (Santa Ana Freeway) to the southwest. The local vicinity of the Project site is illustrated in Figure 3-2, *Local Vicinity*. The 18 acres of the Project site that have been identified as suitable for housing development are comprised of Assessor's Parcel Numbers (APNs) 500-291-06, -07, -11, -12, and -25 and 500-312-03 and -10.

1.3 PROJECT DESCRIPTION SUMMARY

Pursuant to Housing Element Program 1.1f, the City is proposing to zone an 18-acre portion of The Market Place to allow residential only development. This action requires a General Plan Amendment (GPA) to establish that higher density residential uses are allowed in the Planned Community Commercial/ Business Designation when prescribed by a Housing Overlay (HO) district or a Specific Plan (SP). It also requires a Specific Plan Amendment (SPA) to identify "High Density Residential" as a new residential density category available within the plan. Additionally, the SPA would identify "High Density Residential" as an allowable use within the Market Place properties, which are currently designated MU land use by the ETSP. The SPA would designate the 18-acre site (full and partial APNs 500-291-06, -07, -11, -12, and -25 and 500-312-03 and -10) with the "High Density Residential" use.

The Project implements the City's General Plan Housing Element, which identifies the Project site as having a capacity of up to 900 housing units on 18 acres within seven parcels (APNs 500-291-06, -07, -11, -12, and -25 and 500-312-03 and -10). The anticipated development density was determined through the Housing Element process and is a conservative estimate based on trends in nearby communities. The anticipated development does not rely on the demolition of any existing buildings, but rather focuses on areas currently used for surface parking. In addition to analyzing 900 future residential units on the 18-acres rezone site, the EIR will also analyze the remaining development potential of The Market Place, which is 13,032 SF of nonresidential land uses (i.e. retail, restaurant, office, etc.). This 13,032 of additional nonresidential development is the residual development capacity already entitled but not constructed. No development is proposed as part of this Project; however, the Initial Study and the forthcoming EIR will analyze anticipated impacts associated with the construction and operation of all potential future residential and nonresidential development.

1.4 PROJECT OBJECTIVES

CEQA Guidelines §15124(b) (Title 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 primary purpose and goal of the Project is to accommodate the City's 6th Cycle RHNA identified within the City of Tustin 2021-2029 Housing Element. The Project would achieve this goal through the following objectives:

- Rezoning to allow residential development at densities that achieve the estimated capacities determined in the Housing Element, and without inhibitors to residential development, such as overly stringent standards.
- Increase the number of housing opportunities available in Tustin to ensure the City provides its fair share of housing units within a variety of income categories.
- Increase flexibility in allowed uses and development potential in the City of Tustin.
- Promote a diverse housing stock with products that are offered at a wide range of sizes and affordability.

1.5 SUMMARY OF ALTERNATIVES

Section 8.0, *Alternatives*, of this EIR analyzes a range of reasonable alternatives to the proposed Project. The alternatives that are analyzed in detail in Section 8.0 are summarized below.

- **Alternate Site Alternative.** An alternate site for the Project was eliminated from further consideration. Any alternate site would need to occur within the City of Tustin. The City is required by state law to rezone housing shortfall sites according to what has been approved under the certified Housing Element (Government Code § 65583.2, Senate Bill 197). The site identified within the City's 2021-2029 Housing Element is The Market Place (Project site), and an alternate site would fail to meet most of the project objectives, is infeasible, and would not be compliant with state law of the certified City's Housing Element. Additionally, if the Project were to occur on an alternate site and rezoning were conducted within a different commercial center in the city, similar impacts would result and comparable mitigation would be required; therefore, it is likely that impacts would not be reduced under such an alternative. Therefore, this alternative has been determined infeasible.
- **No Project/Buildout of Existing Land Use Alternative.** Similarly, the No Project/Buildout of Existing Land Use Alternative was eliminated from further consideration. The City is required by state law to rezone housing shortfall sites according to what has been approved under the certified Housing Element (Government Code § 65583.2, Senate Bill 197). The site identified within the City's 2021-2029 Housing Element is The Market Place (Project site) and failing to rezone the site for future housing would fail to meet all of the project objectives, which would therefore render the alternative as infeasible, and further, would not be compliant with state law or the City's Housing Element.
- **Reduced Project Development.** The Reduced Project Development alternative would redesignate the Project site to allow for development of future residential and additional square footage of nonresidential development, similar to the proposed Project. However, Project buildout would be reduced by 63 percent, limiting the overall future buildout to a maximum of 330 residential units and 4,787 SF of new nonresidential development. This alternative would still require Specific Plan Amendment (SPA) to the East Tustin Specific Plan (ETSP), a General Plan Amendment (GPA), and development of Objective Design Standards (ODS). This alternative would eliminate the Project's significant and unavoidable GHG impact by reducing GHG emissions 63 percent from 8,166.9 MT

CO2e/yr to 2,999 MT CO2e/yr, proportional to the proposed reduction in development. However, under this alternative, only 330 dwelling units would be allowed to be constructed and the City would have a 570 dwelling unit deficit in meeting their state mandated RHNA fair share. Because this alternative would not meet the City's legal obligation to rezone the site to meet the necessary residential capacity consistent with the City's certified Housing Element Update, this alternative has been rendered infeasible and is rejected from further consideration.

1.6 SUMMARY OF IMPACTS

Table 1-1 summarizes the conclusions of the environmental analysis contained in this Draft EIR. Section 7.0, *Effects Not Found Significant*, establishes that the proposed Project would not result in impacts related to certain thresholds from CEQA Appendix G, including Aesthetics, Agricultural Resources, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Mineral Resources, and Wildfire. Thus, no further assessment of those impacts was required in the Draft EIR. Therefore, the numbering of impacts shown in Table 1-1 reflects the omission of further evaluation for certain thresholds.

Relevant standard conditions of approval are identified, and mitigation measures are provided for all potentially significant impacts. The level of significance of impacts after applying the proposed mitigation measures are identified as either significant and unavoidable, less than significant, or no impact.

Table 1-1: Summary of Impacts

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.1 Air Quality				
Impact AQ-1: Would the Project conflict with or obstruct implementation of the applicable air quality plan?		No Impact	None required	No impact
Impact AQ-2: Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or State ambient air quality standard?	**PPP AQ-1: Rule 403.** The Project is required to comply with the provisions of South Coast Air Quality Management District (SCAQMD) Rule 403, which includes the following: • All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 mph per SCAQMD guidelines in order to limit fugitive dust emissions. • The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the project are watered, with complete coverage of disturbed areas, at least 3 times daily during dry weather; preferably in the mid-morning, afternoon, and after work is done for the day. The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are	Less than Significant	None required	Less than Significant

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	reduced to 15 miles per hour or less.			
Impact AQ-3: Would the Project expose sensitive receptors to substantial pollutant concentrations?	**PPP AQ-1: Rule 403.** As listed above. **PPP AQ-2: Rule 1113.** The Project is required to comply with the provisions of South Coast Air Quality Management District Rule (SCAQMD) Rule 1113. Only "Low-Volatile Organic Compounds" paints (no more than 50 gram/liter of VOC) and/or High Pressure Low Volume (HPLV) applications shall be used.	Less than Significant	None required	Less than Significant
Impact AQ-4: Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	**PPP AQ-4: Rule 402.** The Project is required to comply with the provisions of South Coast Air Quality Management District (SCAQMD) Rule 402. The Project shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.	Less than Significant	None required	Less than Significant
Cumulative	**PPP AQ-1: Rule 403.** As listed above. **PPP AQ-2: Rule 1113.** As listed above.	Less than Significant	None required	Less than Significant

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	PPP-AQ-3: Rule 402. As listed above.			
5.2 Energy				
Impact ENE-1: Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	**PPP E-1: CalGreen Compliance:** The Project is required to comply with the CalGreen Building Code to ensure efficient use of energy. CalGreen specifications are required to be incorporated into building plans as a condition of building permit approval.	Less than Significant	None required	Less than Significant
Impact ENE-2: Would the Project conflict with or obstruct a State or local plan for renewable energy or energy efficiency?	**PPP E-1: CalGreen Compliance.** As listed above.	Less than Significant	None required	Less than Significant
Cumulative	**PPP E-1: CalGreen Compliance.** As listed above.	Less than Significant	None required	Less than Significant
5.3 Greenhouse Gas Emissions				
Impact GHG-1: Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	**PPP E-1: CALGreen Compliance.** As listed above.	Potentially Significant	**Mitigation Measure GHG-1.** Prior to discretionary approval by the City of Tustin (City) for residential development projects subject to California Environmental Quality Act (CEQA) review, project applicants shall prepare and submit a technical assessment evaluating potential project-related greenhouse gas (GHG) impacts to the City for review and approval. The evaluation shall be prepared in conformance with South Coast Air Quality Management District (SCAQMD) methodology. If project-related	Significant and Unavoidable

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			GHG emissions exceed applicable SCAQMD thresholds of significance and/or Statewide GHG reduction targets, the City shall require that applicants for new development projects incorporate mitigation measures to reduce GHG emissions. Mitigation measures could include, but are not limited, to energy efficiency measures, water conservation and efficiency measures, solid waste measures, and transportation and motor vehicles measures. The identified measures shall be included as part of the conditions of approval.	
Impact GHG-2: Would the Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	**PPP E-1: CALGreen Compliance.** As listed above.	Potentially Significant	**Mitigation Measure GHG-1.** As listed above.	Significant and Unavoidable
Cumulative	**PPP E-1: CALGreen Compliance.** As listed above.	Potentially Significant	**Mitigation Measure GHG-1.** As listed above.	Significant and Unavoidable
5.4 Land Use and Planning				
Impact LU-2: Would the Project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	**PPP GEO-1: CBC Title 24, Part 2.** Structures built in the City are required to be built in compliance with the CBC (California Code of Regulations, Title 24, Part 2) that provides provisions for earthquake safety based on factors including building occupancy type, the types of soils onsite, and the probable strength	Less than Significant	**Refer to all mitigation measures presented in this Draft EIR.**	Less than Significant

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	of ground motion. Compliance with the CBC would require the incorporation of 1) seismic safety features to minimize the potential for significant effects as a result of earthquakes; 2) proper building footings and foundations; and 3) construction of the building structure so that it would withstand the effects of strong ground shaking. Implementation of CBC standards would be verified by the City during the plan check and permitting process. **PPP HYD-1: SWPPP.** Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB). The permit requirement applies to grading and construction sites of one acre or larger. The Project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site. **PPP HYD-2: City of Tustin Grading Manual.** All future			

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	projects are required to comply with the City of Tustin Grading Manual (1990). Implementation of grading manual standards would be verified by the City during the plan check and permitting process. **PPP HYD-3: WQMP.** Prior to the approval of the Grading Plan and issuance of Grading Permits a completed Water Quality Management Plan (WQMP) shall be prepared by the Project applicant and submitted to and approved by the City Public Works Department. The WQMP shall identify all Post-Construction, Site Design. Source Control, and Treatment Control Best Management Practices (BMPs) that will be incorporated into the development Project in order to minimize the adverse effects on receiving waters. **PPP T-1: Sidewalk Standards.** Sidewalks shall be provided on a private street for attached and detached residential products in accordance with Standard B102 of the City's Construction Standards, Storm Drain and On-Site Private Improvements, and is subject to compliance with applicable accessibility requirements of the American Disabilities Act, Title 24 of the Uniform Building Code as locally amended, and the Department of Housing and Urban			

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	Development's Fair Housing Accessibility Guidelines. **PPP T-2: Traffic Control/Utilities.** All future development constructed under the Project shall be subject to the traffic control standards specified by the City's latest Standard Plans and Design Standards, which includes the requirement for Traffic Control Plan during construction, the process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design.			
Cumulative	**PPP GEO-1: CBC Title 24, Part 2.** As listed above. **PPP HYD-1: SWPPP.** As listed above. **PPP HYD-2: City of Tustin Grading Manual.** As listed above. **PPP HYD-3: WQMP.** As listed above. **PPP T-1: Sidewalk Standards.** As listed above. **PPP T-2: Traffic Control/Utilities.** As listed above.	Less than Significant	**Mitigation Measure GEO-1.** As listed above. **Mitigation Measure CUL-1: Inadvertent Discovery.** As listed above. **Mitigation Measure NOI-1.** As listed below.	Less than Significant
5.5 Noise				
Impact NOI-1: Would the Project result in generation of a substantial temporary or permanent increase in ambient	**PPP NOI-1: Construction Hours.** Per the Tustin City Code Section 4616, construction activities are allowed only between the hours	Potentially Significant	**Mitigation Measure NOI-1:** All future development shall prepare a project-specific Final Acoustical Report to confirm whether any	Less than Significant

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	of 7:00 AM and 6:00 PM, Monday through Friday and between 9:00 AM to 5:00 PM on Saturdays, with no activity allowed on Sundays and City-observed federal holidays.		proposed exterior noise sensitive areas would experience noise levels greater than 65 dBA CNEL and whether interior noise levels would exceed 45 dBA CNEL and identify any noise reduction features for the proposed development (e.g. upgraded windows with Sound Transmission Class (STC) ratings of 30–35). Additionally, the Final Acoustical Report shall confirm that proposed siting of noise-generating stationary sources, if any, will not result in an exceedance of applicable noise thresholds at surrounding land uses.	
Impact NOI-2: Would the Project result in generation of excessive groundborne vibration or groundborne noise levels?	**PPP NOI-1: Construction Hours.** As listed above.	Less than Significant	None required	Less than Significant
Impact NOI-3: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?		No Impact	None required	No Impact
Cumulative		Potentially Significant	**Mitigation Measure NOI-1.** As listed above.	Less than Significant
5.6 Population and Housing				
Impact POP-1: Would the Project induce substantial unplanned population growth in		Less than Significant	None required	Less than Significant

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				
Impact POP-2: Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?		Less than Significant	None required	Less than Significant
Cumulative		Less than Significant	None required	Less than Significant
5.7 Public Services				
Impact PS-1: Would the Project 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 any of the public services: (i) Fire protection? (ii) Police protection? (iii) Schools? (iv) Parks? (v) Other public facilities?	**PPP PS-1:** OCFA Fire Prevention Guideline B-09, Fire Master Plans for Commercial and Residential Development. **PPP PS-2 :** Tustin Code of Ordinances Chapter 8100; Building and Construction Codes Adopted by Reference. **PPP PS-3:** Government Code Section 65995(b).	Less than Significant	None required	Less than Significant
Cumulative	**PPP PS-1:** As listed above. **PPP PS-2 :** As listed above.	Less than Significant	None required	Less than Significant

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	PPP PS-3: As listed above.			
5.8 Recreation				
Impact REC-1: Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	**PPP R-1: City Park Requirements.** Tustin City Code Section 9331 – Dedications, Reservations and Development Fees. All future development shall be consistent with this standard. **PPP R-2: ETSP Park Requirements.** Section 2.8 of the ETSP specifies percentage allocations to various parkland categories. The ETSP standard for park space is that 50 percent of total required park space is implemented as community park and 50 percent is implemented as neighborhood park. No more than 25 percent of total required neighborhood park space shall be private. All future development shall be consistent with this standard.	Less than Significant	None required	Less than Significant
Impact REC-2: Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	**PPP R-1: City Park Requirements.** As listed above. **PPP R-2: ETSP Park Requirements.** As listed above.	Less than Significant	None Required	Less than Significant
Cumulative	**PPP R-1: City Park Requirements.** As listed above. **PPP R-2: ETSP Park Requirements.** As listed above.	Less than Significant	None required	Less than Significant
5.9 Transportation				

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact TRA-1: Would the Project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?		No Impact	None required	No Impact
Impact TRA-2: Would the Project conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?		Less than Significant	None required	Less than Significant
Impact TRA-3: Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	**PPP T-1: Sidewalk Standards.** Sidewalks shall be provided on a private street for attached and detached residential products in accordance with Standard B102 of the City's Construction Standards, Storm Drain and On-Site Private Improvements, and is subject to compliance with applicable accessibility requirements of the American Disabilities Act, Title 24 of the Uniform Building Code as locally amended, and the Department of Housing and Urban Development's Fair Housing Accessibility Guidelines. **PPP T-2: Traffic Control/Utilities.** All future development constructed under the Project shall be subject to the traffic control standards specified by the City's latest *Standard Plans and Design Standards*, which includes the requirement for Traffic Control Plan during construction, the process prior to commencing	Less than Significant	None required	Less than Significant

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
	construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design.			
Impact TRA-4: Would the Project result in inadequate emergency access?	**PPP T-1: Sidewalk Standards.** As listed above. **PPP T-2: Traffic Control/Utilities.** As listed above.	Less than Significant	None required	Less than Significant
Cumulative	**PPP T-1: Sidewalk Standards.** As listed above. **PPP T-2: Traffic Control/Utilities.** As listed above.	Less than Significant	None required	Less than Significant
5.10 Tribal Cultural Resources				
Impact TCR-1: Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 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: (i) 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)? (ii) A resource determined by the lead agency, in its discretion and supported by substantial	**PPP TCR-1**: Native American historical and cultural resources and sacred sites are protected under PRC Sections 5097.9 to 5097.991, which require that descendants be notified when Native American human remains are discovered and provide for treatment and disposition of human remains and associated grave goods. **PPP CUL-1: Human Remains.** Should human remains or funerary objects be discovered during Project construction, the Project would be required to comply with State Health and Safety Code Section 7050.5, which states that no further disturbance may occur in the vicinity of the body (within a 100-foot buffer of the find) until the County Coroner has made a	Potentially Significant	**Mitigation Measure TCR-1: Retain a Native American Monitor Prior to Commencement of Ground-Disturbing Activities.** a. Prior to the issuance of demolition or grading permits for any projects that would disturb previously undisturbed soils (native soils) or soils that have native fill, the project applicant/developer shall retain a Native American Monitor, with first preference given to the Gabrieleño Band of Mission Indians – Kizh Nation, who responded to the City's request for consultation on November 14, 2023 (first preference Tribe, Tribe). The applicant/developer shall allow 45 days from the initial	Less than Significant

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission, which will determine the identity of and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD must complete the inspection within 48 hours of notification by the NAHC.		contact with the first preference tribe to enter into a contract for monitoring services. If the applicant/developer is unable to contact the Kizh Nation after three documented attempts or is unable to secure an agreement, the applicant shall report to the lead agency, and the lead agency will contact the Kizh Nation to validate that the parties were unable to enter into an agreement. The applicant/developer shall have made three documented attempts to directly contact the Kizh Nation to enter into a tribal monitoring agreement. If the applicant/developer can demonstrate they were unable to secure an agreement with the first preference tribe, as validated and documented by the Community Development Department in writing, or if the contracted tribe fails to fulfill its obligation under the contract terms, then the applicant/developer may retain an alternative qualified tribal monitor from a culturally	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			affiliated tribe if approved by the City. The monitor shall be retained prior to the issuance of a demolition permit or grading permit, and the commencement of any development related "ground-disturbing activity" for the subject project at all project locations (i.e., both on-site and any off-site locations that are included in the project description/definition and/or required in connection with the project, such as public improvement work). "Ground-disturbing activity" shall include, but is not limited to, demolition, pavement removal, auguring, grubbing, boring, grading, excavation, drilling, and trenching for the purposes of reconstruction and new development. "Ground-disturbing activity" shall not include minor maintenance activities such as potholing, tree removal, and parking lot maintenance. This mitigation measure does not apply to projects that would only disturb soils made up of artificial fill, as verified by a soils or geotechnical report.	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			b. A copy of the executed monitoring agreement shall be submitted to the lead agency prior to the commencement of any ground-disturbing activity, or the issuance of any permit necessary to commence a ground-disturbing activity. c. The monitor will complete daily monitoring logs that will provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the Kizh Nation. Monitor logs will identify and describe any discovered TCRs, including but not limited to, Native American cultural and historical artifacts, remains, places of significance, etc., (collectively, tribal cultural resources, or "TCR"), as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs will be provided to the project applicant/lead agency upon written request to the	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			consulting tribe. If a monitor is selected from a tribe other than the Kizh Nation, the Kizh Nation shall be contacted if any discoveries are found. d. On-site tribal monitoring shall conclude upon the latter of the following (1) written confirmation to the consulting tribe from a designated point of contact for the project applicant/lead agency that all ground-disturbing activities and phases that may involve ground-disturbing activities and that have the potential to impact local TCRs on the project site or in connection with the project are complete. **Mitigation Measure TCR-2: Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial):** Upon discovery of any TCRs, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 50 feet) and shall not resume until the discovered TCR has been fully assessed by the tribal monitor and consulting archaeologist. If the consulting tribe is other than the Gabrieleño Band of Mission Indians – Kizh Nation, the Kizh Nation shall be	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			contacted and the consulting tribe will recover and retain all discovered TCRs in the form and/or manner the Kizh Nation deems appropriate, in the Kizh Nation sole discretion, and for any purpose the Kizh Nation deems appropriate, including for educational, cultural and/or historic purposes. **Mitigation Measure TCR-3: Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects** a. Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in Public Resources Code Section 5097.98, are also to be treated according to this statute. b. If Native American human remains and/or grave goods are discovered or recognized on the project site, then Public Resource Code 5097.9 as well as Health and Safety Code Section 7050.5 shall be followed.	

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
			c. Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2). d. Preservation in place (i.e., avoidance) is the preferred manner of treatment for discovered human remains and/or burial goods. e. Any discovery of human remains/burial goods shall be kept confidential to prevent further disturbance.	
Cumulative	**PPP TCR-1**: As listed above. **PPP CUL-1: Human Remains.** As listed above.	Potentially Significant	**Mitigation Measure TCR-1: Retain a Native American Monitor Prior to Commencement of Ground-Disturbing Activities.** As listed above. **Mitigation Measure TCR-2: Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial).** As listed above. **Mitigation Measure TCR-3: Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects.** As listed above.	Less than Significant
5.11 Utilities and Service Systems				
Impact UT-1: Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater	**PPP HYD-1: SWPPP.** As listed above. **PPP T-2: Traffic Control/Utilities.** As listed above.	Potentially Significant	**Mitigation Measure UT-1:** Future proposed Projects shall prepare capacity analyses of existing sewer and water utilities in the area to ensure conveyance and	Less than Significant

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	**PPP UT-1: California Building Code.** All future development constructed under the Project shall be subject to the latest version of the California Building Code (CBC) which outlines regulations for building planning and construction in the state, including occupancy classification, structural design, building materials, infrastructure needs and fire-resistance requirements.		pressure is adequate for future projects proposed. The developer shall then identify infrastructure improvements necessary for the proposed development. The developer will be responsible for preparing a capacity analysis and submitting it to IRWD in coordination with the City. The capacity analysis and infrastructure improvements shall be reviewed and approved by IRWD and the City prior to approval of the construction permit.	
Impact UT-2: Would the Project have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years?		Less than Significant	None Required	Less than Significant
Impact HYD-1: Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?		Less than Significant	None Required	Less than Significant
Impact HYD-2: Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?		Less than Significant	None Required	Less than Significant

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact UT-3: Would the Project require or result in the construction of new wastewater facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects?	**PPP HYD-1: SWPPP.** As listed above. **PPP T-2: Traffic Control/Utilities.** As listed above. **PPP UT-1: California Building Code.** As listed above.	Potentially Significant	**Mitigation Measure UT-1:** As listed above.	Less than Significant
Impact UT-4: Would the Project result in a determination by the wastewater treatment provider, which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?		Potentially Significant	**Mitigation Measure UT-1:** As listed above.	Less than Significant
Impact UT-5: Would the Project require or result in the relocation or construction of new drainage facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects.	**PPP HYD-1: SWPPP.** As listed above. **PPP HYD-3: WQMP.** As listed above. **PPP T-2: Traffic Control/Utilities.** As listed above.	Less than Significant	None Required	Less than Significant
Impact UT-6: Would the Project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	**PPP HYD-1: SWPPP.** As listed above. **PPP HYD-3: WQMP.** As listed above. **PPP T-2: Traffic Control/Utilities.** As listed above.	Less than Significant	None Required	Less than Significant
Impact UT-7: Would the Project comply with federal, State, and local management and reduction statutes and regulations related to solid waste?	**PPP HYD-1: SWPPP.** As listed above. **PPP HYD-3: WQMP.** As listed above. **PPP T-2: Traffic Control/Utilities.** As listed above.	Less than Significant	None Required	Less than Significant

Impact	Applicable Standard Condition, Plan, Program, or Policy (PPP), or Project Design Feature (PDF)	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact UT-8: Would the Project require or result in the relocation or construction of a new or expanded electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects?		Less than Significant	None Required	Less than Significant
Cumulative	**PPP HYD-1: SWPPP.** As listed above. **PPP HYD-3: WQMP.** As listed above. **PPP T-2: Traffic Control/Utilities.** As listed above. **PPP UT-1: California Building Code.** As listed above.	Potentially Significant	**Mitigation Measure UT-1:** As listed above.	Less than Significant

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2. Introduction

This Draft Environmental Impact Report (EIR) is an informational document that evaluates the environmental effects that may result from the planning, construction, and operation of the proposed Market Place Rezone Project (Project), which requires approval of a Specific Plan Amendment to the East Tustin Specific Plan (ETSP), General Plan Amendment, and adoption of Objective Design Standards for residential development.

2.1 PURPOSE OF THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

The California Environmental Quality Act (CEQA) requires that all State and local governmental agencies consider the environmental consequences of projects over which they have discretionary authority prior to taking action on those projects. The CEQA Guidelines provide the following information regarding the purpose of an EIR:

- **Project Information and Environmental Effects.** An EIR is an informational document that will inform public agency decision makers and the public of the potential significant environmental effect(s) of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information that may be presented to the agency (State CEQA Guidelines Section 15121(a)).
- **Standards for Adequacy of an EIR.** An EIR should be prepared with a sufficient degree of analysis to enable decision makers to make an intelligent decision that takes into account 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 the 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 looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure (State CEQA Guidelines Section 15151).

As a public disclosure document, the purpose of an EIR is not to recommend either approval or denial of a project, but to provide information regarding the physical environmental changes that would result from an action being considered by a public agency to aid in the agency's decision-making process.

2.2 LEGAL AUTHORITY

This Draft EIR has been prepared in accordance with all criteria, standards, and procedures of CEQA (California Public Resource Code Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Section 15000 et seq.).

Pursuant to CEQA Section 21067 and State CEQA Guidelines Article 4 and Section 15367, the City of Tustin is the Lead Agency under whose authority this Draft EIR has been prepared. "Lead Agency" refers to the public agency that has the principal responsibility for carrying out or approving a project. Serving as the Lead Agency and before taking action on any approvals for the Project, the City of Tustin has the obligation to: (1) ensure that this Draft EIR has been completed in accordance with CEQA; (2) review and consider the information contained in this Draft EIR as part of its decision-making process; (3) make a statement that this Draft EIR reflects the City of Tustin's independent judgment; (4) ensure that all significant effects on the environment are eliminated or substantially lessened where feasible; and, if necessary, (5) make written findings for each unavoidable significant environmental effect stating the reasons why mitigation measures or Project alternatives identified in this Draft EIR are infeasible and citing the specific benefits of the proposed Project that outweigh its unavoidable adverse effects (State CEQA Guidelines Sections 15090 through 15093).

Pursuant to State CEQA Guidelines Sections 15040 through 15043, and upon completion of the CEQA review process, the City of Tustin will have the legal authority to do any of the following:

- Approve the Project;
- Require feasible changes in any or all activities involved in the Project in order to substantially lessen or avoid significant effects on the environment;
- Disapprove the Project, if necessary, in order to avoid one or more significant effects on the environment that would occur if the Project was approved as proposed; or
- Approve the Project even though the Project would cause a significant effect on the environment if the City of Tustin makes a fully informed and publicly disclosed decision that: (1) there is no feasible way to lessen the effect or avoid the significant effect; and (2) expected benefits from the Project will outweigh significant environmental impacts of the Project.

2.3 EIR SCOPE AND CONTENT

Impacts Found to be Potentially Significant. The City prepared an Initial Study and determined that an EIR should be prepared for the Project. As a result, an Initial Study (IS) and Notice of Preparation (NOP) was prepared and circulated between February 22, 2024, and March 27, 2024, for the required 30-day public review period. The purpose of the NOP was to solicit early comments from public agencies with expertise in subjects that are discussed in this Draft EIR and to solicit comments from the public regarding potential Project environmental impacts. The IS, NOP, and written responses to the NOP are contained in Appendix A of this Draft EIR. Topics requiring a detailed level of analysis evaluated in this Draft EIR have been identified based upon the responses to both the IS/NOP and a review of the Project by the City. The City determined through the initial review process that impacts related to the following topics are potentially significant as discussed in the Initial Study and require a detailed level of analysis in this Draft EIR.

- Air Quality
- Energy
- Greenhouse Gas Emissions
- Land Use and Planning
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems

Impacts Found Not to be Significant. CEQA Guidelines Section 15126.2(a) states that "[a]n EIR shall identify and focus on the significant effects on the environment." Topics that have been determined not to be significant and are therefore not discussed in detail in the Draft EIR were identified based upon the responses to the Initial Study/NOP and a review of the Project by the City. As further detailed in Section 7, Impacts Found Not to Be Significant, of this Draft EIR, the City determined through the initial review process that impacts related to the following topics are not potentially significant as discussed in the IS and are not required to be analyzed in this Draft EIR.

- Aesthetics
- Agriculture and Forestry Resources
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Mineral Resources
- Hydrology and Water Quality
- Wildfire

2.4 EIR PROCESS

2.4.1 Notice of Preparation/Initial Study

Pursuant to the requirements of CEQA, the City prepared an IS/NOP for the proposed Project, which was distributed on February 26, 2024, for a 30-day public review and comment period that ended on March 27, 2024. The NOP requested members of the public and public agencies to provide input on the scope and content of environmental impacts that should be included in the Draft EIR being prepared. Comments received on the Initial Study/NOP are included in Appendix A and summarized in Table 2-1, which also includes a reference to the Draft EIR section(s) in which issues raised in the comment letters are addressed.

Table 2-1: Summary of NOP Comment Letters

Comment Letter and Commet	Relevant Draft EIR Sections
State and Local Agencies	
Native American Heritage Commission (NAHC), February 26, 2024	
The comment includes a description of requirements regarding requirements for preparation of an Environmental Impact Report (EIR) pursuant to CEQA Guidelines Section 15064. Additionally, the commenter provides requirements and project applicability under Assembly Bill 52 (AB 52) and Senate Bill 18 (SB 18). The commenter recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed project as early as possible. The commenter provides a summary of requirements for AB 52 and SB 18 process.	Section 5.9, Tribal Cultural Resources.
California Department of Transportation (Caltrans), March 18, 2024	
The comment requests preparation of a Traffic Impact Study and coordination with Caltrans District 12 if impacts are found to be significant. The commenter provides reference to the guidance on preparing vehicle miles traveled analysis. Additionally, the commenter suggests discussion of multimodal transportation in the EIR. The commenter also notes that any work performed within the Caltrans right-of-way is subject to discretionary review and approval by Caltrans and an encroachment permit issued by Caltrans prior to construction.	Section 5.8, Transportation.
Organization Comments	
Irvine Company, March 27, 2024	
This comment states that physical and operational constraints may impact potential future buildout of the Project and suggest that the proposed Rezone allow housing on any part of the 18-acre Market Place site.	Section 3.0, Project Description.

2.4.2 Public Scoping Meeting

Pursuant to Section 15082(c)(1) of the CEQA Guidelines, the City of Tustin hosted a public scoping meeting for members of the public and public agencies to provide input as to the scope and content of the environmental information and analysis to be included in the Draft EIR for the Project. A scoping meeting

was held on March 13, 2024, at the Community Center at The Market Place (2961 El Camino Real, Tustin, CA 92782).

2.4.3 Public Review of the Draft EIR

The City of Tustin has filed a Notice of Completion (NOC) with the Governor's Office of Planning and Research State Clearinghouse, indicating that this Draft EIR has been completed and is available for review and comment. The Project requires a General Plan Amendment; thus, the Project meets the definition of a project of statewide, regional, or areawide significance pursuant to Section 15206 of the CEQA Guidelines and is subject to noticing requirements accordingly. A Notice of Availability (NOA) of the Draft EIR was published concurrently with distribution of this document. The Draft EIR is being circulated for review and comment by the public and other interested parties, agencies, and organizations for 45 days in accordance with State CEQA Guidelines Sections 15087 and 15105. During the 45-day review period, the Draft EIR is available for public review digitally on the City of Tustin's website at:

https://www.tustinca.org/HousingElementRezone

And a physical copy is available for review at the following locations:

City of Tustin
300 Centennial Way
Tustin, CA 92780

Orange County Library – Tustin Branch
345 E. Main Street
Tustin, CA 92780

Written comments related to environmental issues in the Draft EIR should be addressed to:

Samatha Beier, Senior Planner
City of Tustin
300 Centennial Way
Tustin, CA 92780
(714) 573-3354
HousingElementRezone@tustinca.org

2.4.4 Final EIR

Upon completion of the 45-day review period of the Draft EIR, written responses to all comments related to the environmental issues in the Draft EIR will be prepared and incorporated into a Final EIR. Written responses to comments will be made available at least 10 days prior to the public hearing at which the certification of the Final EIR will be considered by the City Council. These comments, and their responses, will be included in the Final EIR for consideration by the City of Tustin, as well as other responsible and trustee agencies per CEQA. The Final EIR may also contain corrections and additions to the Draft EIR and other information relevant to the environmental issues associated with the Project. The Final EIR will be available for public review prior to its certification by the City of Tustin. Notice of the availability of the Final EIR will be sent to all who comment on the Draft EIR.

2.5 ORGANIZATION OF THIS DRAFT EIR

This Draft EIR is organized into the following Sections. To help the reader locate information of interest, a brief summary of the contents of each chapter is provided.

- **Section 1, Executive Summary:** This section provides a brief summary of the Project area, the Project, and alternatives. This section also provides a summary of the potential environmental impacts and mitigation measures, applicable Project design features, applicable regulatory requirements, and the

level of significance after implementation of the mitigation measure. The level of significance after implementation of the proposed mitigation measure(s) will be characterized as either *less than significant* or *significant and unavoidable*.

- **Section 2, Introduction:** This section provides an overview of the purpose and use of the EIR, the scope of this Draft EIR, a summary of the legal authority for the Draft EIR, a summary of the environmental review process, and the general format of this document.
- **Section 3, Project Description:** This section provides a detailed description of the Project, its objectives, and a list of Project-related discretionary actions.
- **Section 4, Environmental Setting:** This section provides a discussion of the existing conditions within the Project area.
- **Section 5, Environmental Impact Analysis:** This section is divided into sub-sections for each environmental impact area. Each section includes a summary of the existing statutes, ordinances, and regulations that apply to the environmental impact area being discussed; the analysis of the Project's direct and indirect environmental impacts on the environment, including potential cumulative impacts that could result from the Project; applicable Project design features, standard conditions, and plans, policies, and programs that could reduce potential impacts; and feasible mitigation measures that would reduce or eliminate the significant adverse impacts identified. Impacts that cannot be mitigated to *less than significant* are identified as *significant and unavoidable*.
- **Section 6, Other CEQA Considerations:** This section summarizes the significant and unavoidable impacts that would occur from implementation of the Project and provides a summary of the environmental effects of the implementation of the Project that were found not to be significant. Additionally, this section provides a discussion of various CEQA-mandated considerations including growth-inducing impacts and the identification of significant irreversible changes that would occur from implementation of the Project. In addition, this section provides a discussion of impacts found not to be significant.
- **Section 7, Effects Found Not to be Significant:** This section summarizes the potential environmental effects related to the Project that were determined not to be significant during preparation of this EIR.
- **Section 8, Alternatives:** This section describes and analyzes a reasonable range of alternatives to the Project. The CEQA-mandated No Project Alternative is included along with alternatives that would reduce one or more significant effects of the proposed Project. As required by the CEQA Guidelines, the environmentally superior alternative is also identified.
- **Section 9, Report Preparation and Persons Contacted:** This section lists authors of the Draft EIR and City of Tustin staff that assisted with the preparation and review of this document. This section also lists other individuals and/or organizations that were contacted for information included in this Draft EIR document.

2.6 INCORPORATION BY REFERENCE

State CEQA Guidelines Section 15150 allows for the incorporation "by reference all or portions of another document… most appropriate for including long, descriptive, or technical materials that provide general background but do not contribute directly to the analysis of a problem at hand." The purpose of incorporation by reference is to assist the Lead Agency in limiting the length of this Draft EIR. Where this Draft EIR incorporates a document by reference, the document is identified in the body of the Draft EIR, citing the appropriate section(s) of the incorporated document and describing the relationship between the incorporated part of the referenced document and this Draft EIR.

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3. Project Description

"Project," as defined by the State CEQA Guidelines, means "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and that is any of the following: (1)… enactment and amendment of zoning ordinances, and the adoption and amendment of local General Plans or elements thereof pursuant to Government Code Sections 65100–65700." (14 California Code of Regulations [CCR] Section 15378(a).)

The Project analyzed in this Draft EIR does not propose any development. The Draft EIR analyzes buildout at a programmatic level of detail, based upon the maximum future buildout anticipated by the City of Tustin per the City's certified 2021-2029 Housing Element Update (HEU), compared to the site's existing conditions.

3.1 PROJECT LOCATION

The Project site is located within the City of Tustin, which is in the central portion of Orange County and is surrounded by the cities of Irvine to the south and east, Santa Ana to the west, and Orange and unincorporated Orange County to the north. Major freeways and highways within or bordering the City of Tustin are the I-5 freeway through the center, State Route (SR) 55 to the west, SR 261 to the east, and the I-405 freeway to the south, as illustrated in Figure 3-1, *Regional Location*.

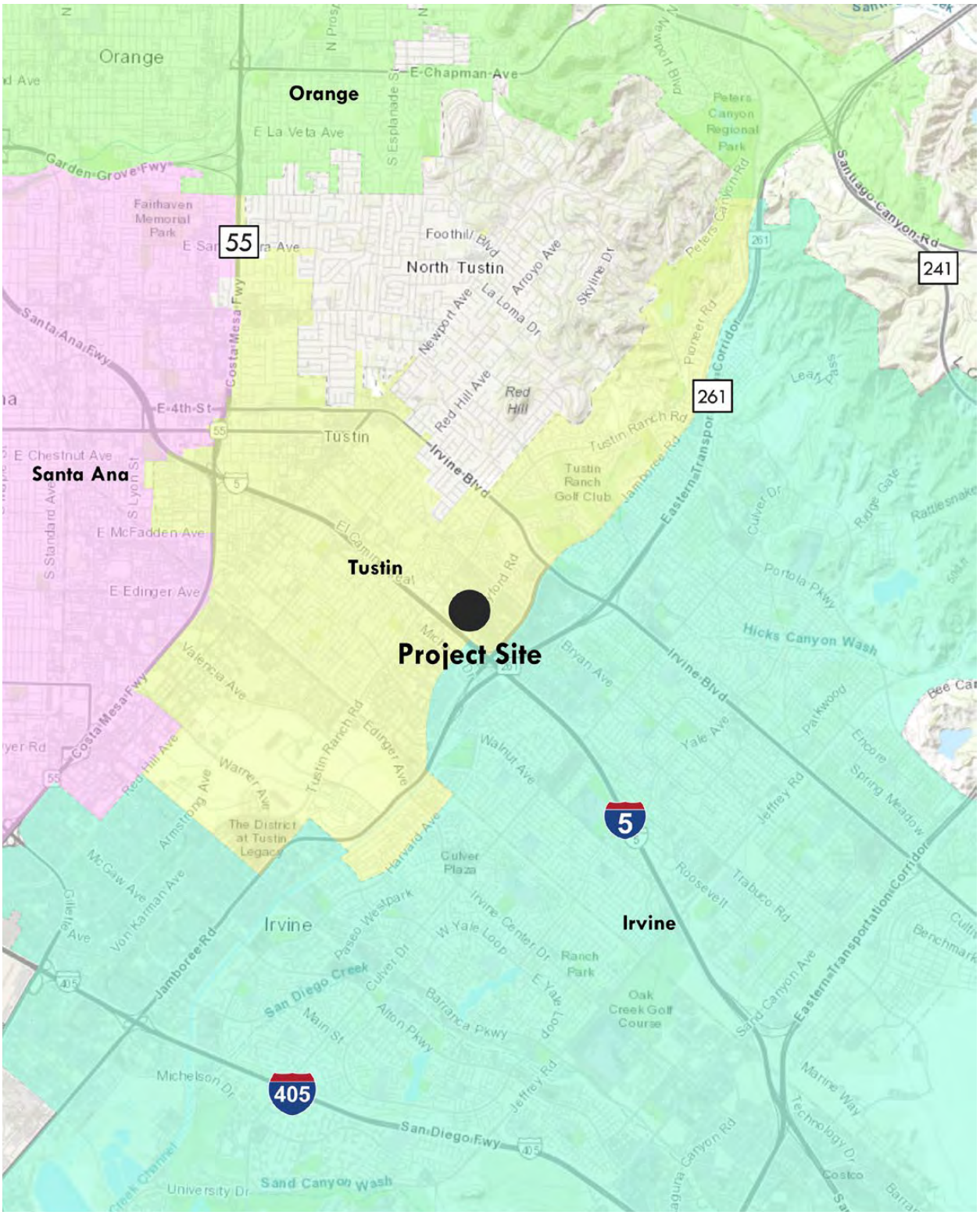
The Project site includes 76.9 acres and is generally bounded by Myford Road to the northwest, Bryan Avenue to the northeast, Jamboree Road to the southeast and I-5 (Santa Ana Freeway) to the southwest. The local vicinity of the Project site is illustrated in Figure 3-2, *Local Vicinity*. The 18 acres of the Project site that have been identified as suitable for housing development are comprised of Assessor's Parcel Numbers (APNs) 500-291-06, -07, -11, -12, and -25 and 500-312-03 and -10.

3.2 EXISTING CONDITIONS

The Market Place is currently developed with 747,165 square feet (SF) of commercial business, including restaurants, retail, and service commercial uses, and has approximately 13,032 SF of additional square footage entitled for the commercial uses, though no plans have been submitted to date. The site also includes surface parking and ornamental landscaping along the perimeter and throughout the parking areas. Figure 3-3, *Aerial View*, illustrates the Project site in its current condition. Figure 3-4, *Project Site APNs*, depicts the Project site parcels.

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Regional Location



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Local Vicinity

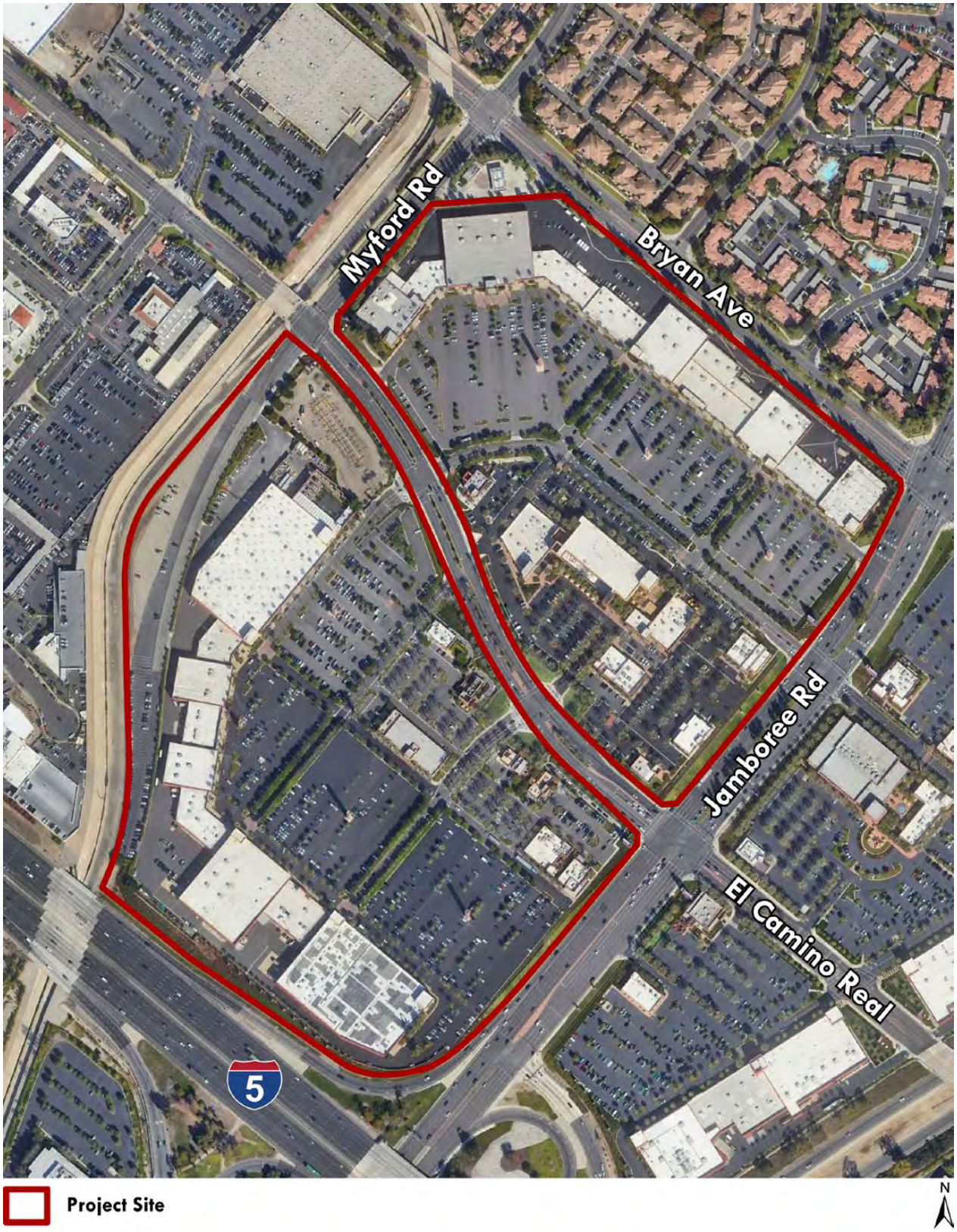


The Market Place Rezone Project
City of Tustin

Figure 3-2

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Aerial View



The Market Place Rezone Project
City of Tustin

Figure 3-3

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Project Site APNs



The Market Place Rezone Project
City of Tustin

Figure 3-4

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3.2.1 Existing Land Use and Zoning

The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of East Tustin Specific Plan – SP-8 (ETSP). The Project site is identified Mixed Use (MU) within the ETSP. Accordingly, the site is intended for development of planned retail commercial, office, and industrial/research and development land uses of an intensity compatible with neighboring residential and the Auto Center land uses; and the intent of Mixed Use zoning is to provide an opportunity for development to respond to future changes in economic and market forces. The Project site's existing General Plan land use and zoning designations are shown in Figure 3-*5*, *Existing General Plan Land Use* and Figure 3-6, *Existing Zoning*.

3.2.2 Surrounding General Plan and Zoning Designations

The Project site is located within a developed area. The surrounding land uses and their designations are described in Table 3-1.

Table 3-1: Surrounding Existing Land Use and Zoning Designations

	Existing Land Use	General Plan Designation	Zoning Designation
Northeast	Bryan Avenue followed by multi-family and condominium residential uses	Planned Community Residential (PCR)	Planned Community Residential (PC RES), ETSP (SP-8)
Southeast	Jamboree Road followed by Tustin City Limits and the continuation of The Market Place in Irvine	City of Irvine: Regional Commercial (RGC)	City of Irvine: 4.9 – LPC Regional Commercial
Southwest	Interstate 5, followed by industrial and office uses in the cities of Tustin and Irvine.	Planned Community Commercial/Business (PCCB) City of Irvine: Community Commercial (COC) and Research/Industrial (REI)	Planned Community Industrial (PC IND) City of Irvine: 4.2E – Community Commercial
Northwest	Myford Road followed by El Modena-Tustin Channel and commercial uses	Planned Community Commercial/Business (PCCB)	ETSP (SP 8), Mixed Use (MU)

3.3 PROJECT OBJECTIVES

CEQA Guidelines §15124(b) (Title 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 primary purpose and goal of the Project is to accommodate the City's 6th Cycle RHNA identified within the City of Tustin 2021-2029 Housing Element. The Project would achieve this goal through the following objectives:

- Rezoning to allow residential development at densities to achieve the estimated capacities determined in the Housing Element, and without inhibitors to residential development, such as overly stringent standards.
- Increase the number of housing opportunities available in Tustin to ensure the City provides its fair share of housing units within a variety of income categories.
- Increase flexibility in allowed uses and development potential in the City of Tustin.

- Promote a diverse housing stock with products that are offered at a wide range of sizes and affordability.

3.4 DESCRIPTION OF THE PROJECT

3.4.1 Project Overview

Pursuant to Housing Element Program 1.1f, the City is proposing to zone an 18-acre portion of The Market Place to allow residential only development. This action requires a General Plan Amendment (GPA) to establish that higher density residential uses are allowed in the Planned Community Commercial Business Designation when prescribed by a Housing Overlay (HO) district or a Specific Plan (SP). It also requires a Specific Plan Amendment (SPA) to identify "High Density Residential" as a new residential density category available within the plan. Additionally, the SPA would identify "High Density Residential" as an allowable use within the MU land use of the ETSP. The SPA would designate an 18-acre site (full and partial APNs 500-291-06, -07, -11, -12, and -25 and 500-312-03 and -10) with the "High Density Residential" use.

The Project implements the City's General Plan Housing Element, which identifies the Project site as having a capacity of up to 900 housing units on 18 acres within seven parcels (APNs 500-291-06, -07, -11, -12, and -25 and 500-312-03 and -10). The anticipated development density was determined through the Housing Element process and is a conservative estimate based on trends in nearby communities. The anticipated development does not rely on the demolition of any existing buildings, but rather focuses on areas currently used for surface parking. In addition to analyzing 900 future residential units on the 18-acres rezone site, the EIR will also analyze the remaining development potential of The Market Place, which is 13,032 SF of nonresidential land uses (i.e. retail, restaurant, office, etc.). This 13,032 of additional nonresidential development is the residual development capacity already entitled but not constructed. No development is proposed as part of this Project; however, this EIR will analyze anticipated impacts associated with the construction and operation of all potential future residential and nonresidential development. Table 3-2 lists the existing and proposed Project site characteristics.

Table 3-2: Existing and Proposed Project Site Characteristics

	Existing			Proposed			
	GP Land Use	**Zoning Designation**	**Maximum Allowable Units**	**GP Land Use**	**Zoning Designation**	**Maximum Residential Acreage**	**Maximum Allowable Units**
The Market Place	PCCB	SP-8 (MU)	0	PCCB	SP-8 (MU)	18	900

3.4.2 General Plan Amendment

As described above, the Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB). The PCCB designation is one of several "PC" designations in the City's General Plan, which are intended to provide for a mix of commercial and office uses, such as hotel/motels, commercial centers, research and development, and professional offices. The Planned Community designations may also permit other uses, such as residential uses, which support this land use proposal. However, the overall population density range for residential uses within the PCCB designation is currently limited to 2 to 54 persons per acre. Therefore, the General Plan Amendment (GPA) will establish that a higher density of residential uses is allowed in the PCCB designation, subject to density limits established by a Housing Overlay (HO) district, or as established by a specific plan.

3.4.3 Specific Plan Amendment

Residential

As described above, within the ETSP, the Project site is designated as Mixed Use (MU), which is intended for development of planned retail commercial, office, and industrial/research and development land uses of an intensity compatible with neighboring residential and the Auto Center land uses. Residential uses are not currently permitted on the Project site within the ETSP. During the Housing Element process, the City identified The Market Place as a suitable commercial site for rezoning to allow higher density housing.

Consistent with the requirements of Government Code § 655832(h), seven parcels (whole or partial) are proposed to be rezoned exclusively for residential use (non-residential uses are prohibited), allowing for 18-acres of the Project Site to be developed with housing, as identified in the Housing Element (inclusive of APNs 500-291-06, -07, -11, -12, and -25 and 500-312-03 and -10). Through a SPA to the ETSP, the new High Density Residential (HDR) designation would allow for up to 900 dwelling units within the Project site.

The ETSP would also be amended to implement objective design standards (ODS) related to architecture, parking, height, site design, and other design criteria applicable to residential development. The ODS would be used during design review to ensure future project consistency with City design standards and would guide overall compatibility of future development with the surrounding area. Residential projects proposed in compliance with the ETSP regulations and adopted ODS would be approved ministerially.

Nonresidential

The remaining portion of the Project site, approximately 58 acres, would remain designated as nonresidential land use within the ETSP. There is currently 13,032 SF of remaining commercial capacity within the nonresidential-designated area of the Project site. Therefore, the Project anticipates the future nonresidential capacity buildout of 13,032 SF within a portion of the Project site that allows non-residential development. Future nonresidential projects proposed pursuant to the remaining development capacity would be required to comply with the existing MU development standards, and the City's plan review process. Future nonresidential development considered as part of the EIR is anticipated to be developed within exiting undeveloped areas, and this Project does not assume demolition of existing structures. No development is proposed as part of this Project.

3.4.4 Housing Element Programs

The 2021-2029 Housing Element included several housing programs to be implemented during the 2021-2029 planning period. The discussion below outlines programs that are applicable to the proposed Project.

Program 1.2a

Program 1.2a provides that the City will amend its Zoning Code to remove subjective design guidance in TCC Section 9272 (Design Review) and adopt new ODS to ensure that the City can provide clear guidance on design to streamline the approval of high-quality residential development. The ODS would include provisions consistent with the requirements of Senate Bill (SB) 35. Program 1.2a, as applies to the Housing Site Inventory, is anticipated to be complete in October 2024.

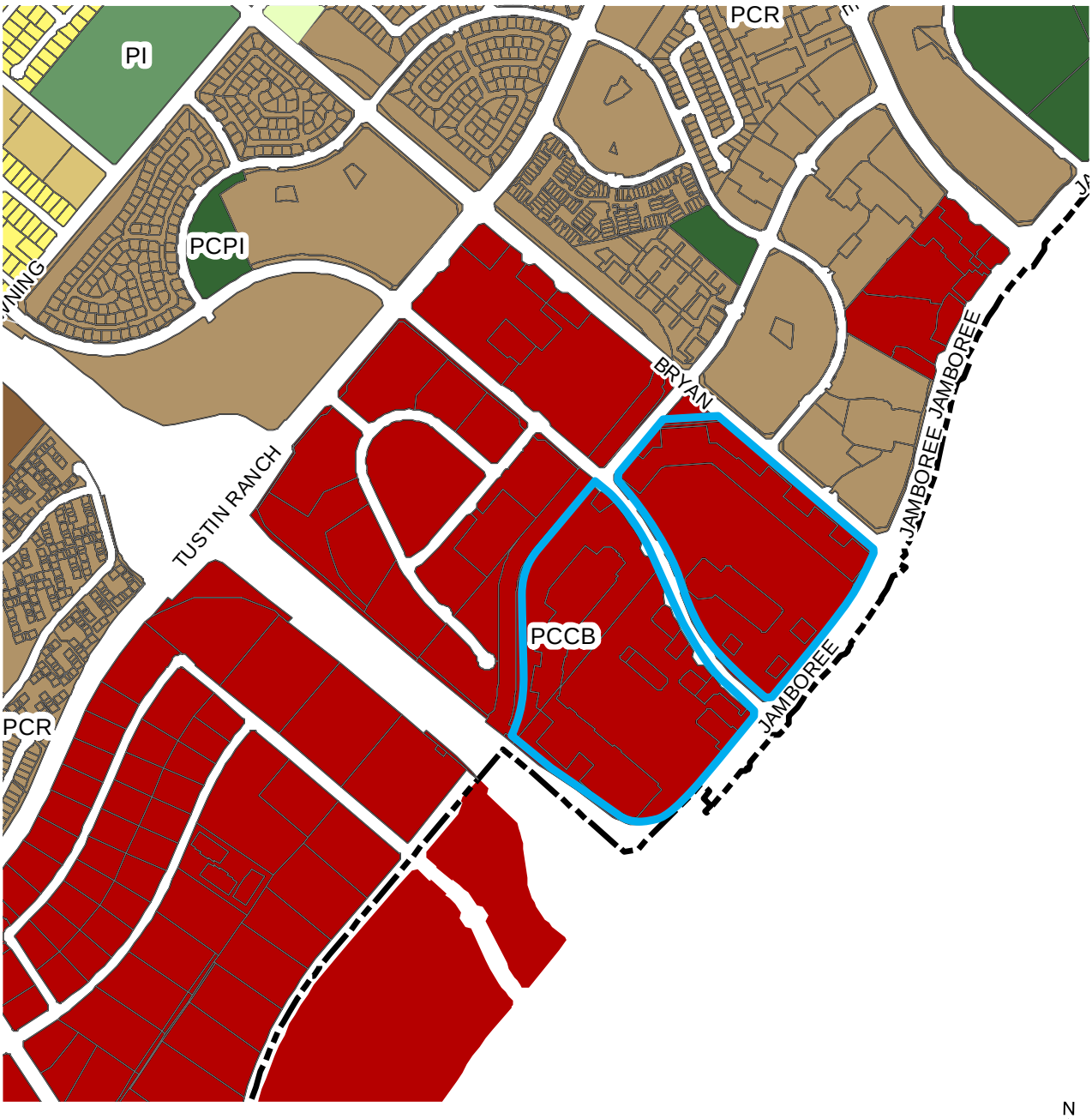
As discussed above, the ETSP would include ODS as a result of Housing Element Program 1.2a that would apply to residential projects proposed within the residential-designated areas of the Project site.

Program 1.2c

Program 1.2c directs the City to develop parking standards to facilitate residential housing production as part of mixed-use developments, adaptive reuse projects, and new residential developments. The program provides that parking displaced as a result of redevelopment may be replaced with vertical parking structures, as needed, to provide required parking. Additionally, the parking standards would incentivize creative parking strategies such as parking credits for transit rich development and allowance of parking structures and parking lifts, by right, and subject to ODS.

The proposed Project would utilize these future parking standards to replace displaced parking as a result of future development within The Market Place.

Existing General Plan Land Use Designation

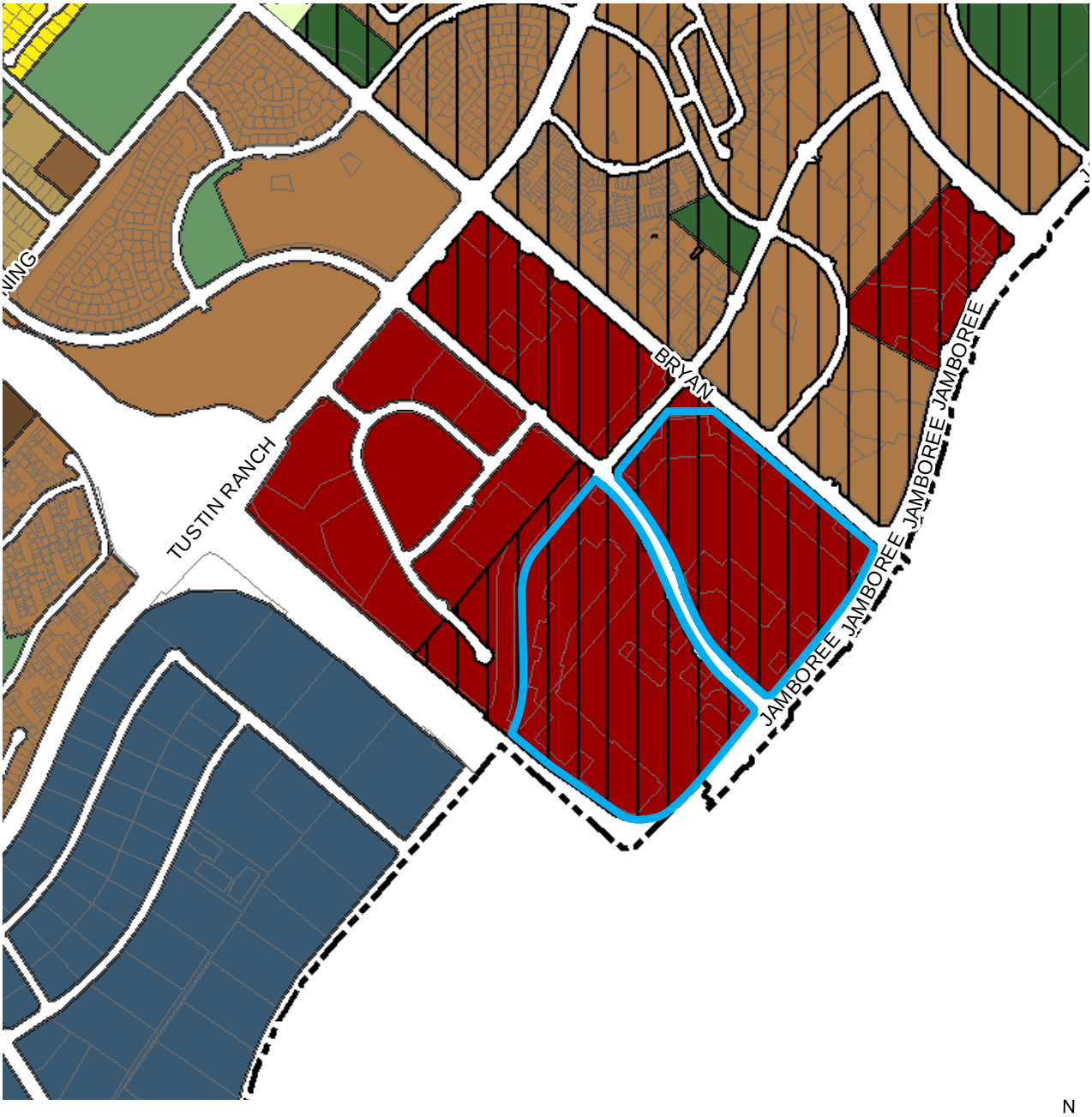


The Market Place Rezone Project
City of Tustin

Figure 3-5

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Existing Zoning



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3.4.5 Construction Assumptions

Roadways and utilities may be required to support development of projects within the rezone site. Future onsite infrastructure improvements that may be necessary for residential development within The Market Place would include storm drains, wastewater, water (potable and reclaimed), and dry utilities that would connect to existing facilities within the Project site or adjacent to the Project area. Specific infrastructure improvements required to support residential development within The Market Place are not known at this time and will not be known until a development project is proposed.

For purposes of this analysis, several assumptions have been made regarding the construction of future projects. Future development of the additional 900 units and remaining commercial buildout capacity associated with the proposed project has been assumed to occur anytime between October 2024 and October 2029. The Project conservatively assumes 18 acres of existing parking lot area would be developed with housing, and the remaining commercial buildout capacity would occur on existing parking, but outside the 18 acres to be designated for housing. No demolition of existing buildings has been assumed as part of the analysis.

3.5 DISCRETIONARY APPROVALS AND PERMITS

The City of Tustin has primary approval responsibility for the Project. As such, the City serves as the Lead Agency for the Project's EIR pursuant to CEQA Guidelines §15050. The Tustin Planning Commission will evaluate the EIR and the Project and make a recommendation to the City Council as to whether the Project should be approved, and the EIR certified. The City Council is the decision-making authority for the Project and will consider the Project along with the Planning Commission's recommendations, and will make a final decision to approve, approve with changes, or deny the Project. The City, including the Planning Commission and the City Council, will consider the information in the EIR and the Project's administrative record in its decision-making processes. In the event of approval of the Project and certification of the EIR, the City would conduct administrative and discretionary review (if applicable) and grant ministerial and discretionary permits and approvals to implement Project requirements, conditions of approval, and future developments within The Market Place, as applicable. Approval and implementation of the Project requires City approval of the following discretionary actions:

- Certification of the EIR
- Specific Plan Amendment to the East Tustin Specific Plan
- Adoption of Objective Design Standards for residential development;
- General Plan Amendment

The Project's EIR may be used by various governmental decisionmakers for discretionary permits and actions that are necessary or may be requested in connection with implementation of future development projects pursuant to the Project. Additional discretionary, administrative, and/or ministerial actions may be necessary from other responsible agencies to fully implement the Project.

The state or local agencies that may rely upon the information contained in this EIR when considering approval of permits may include, but are not limited to, the following:

- Irvine Ranch Water District for approval of the Water Supply Assessment
- Tustin Unified School District

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4. Environmental Setting

The purpose of this section is to provide a description of the environmental setting of the Project site and surrounding area as it existed at the time of the Notice of Preparation (NOP) was published, from both a local and regional perspective. In addition to the summary below, detailed environmental setting descriptions are provided in each subsection of Section 5 of this Draft EIR.

4.1 REGIONAL SETTING

The proposed Project is located in the City of Tustin. The City of Tustin encompasses approximately 11.08 square miles and is surrounded by the cities of Irvine to the south and east, Santa Ana to the west, and Orange and unincorporated Orange County to the north. Regional access is provided by Interstate (I-) 5 freeway through the center, State Route (SR) 55 to the west, SR-261 to the east, and I-405 to the south.

4.2 LOCAL SETTING AND PROJECT LOCATION

The Project site includes 76.9 acres and is generally bounded by Myford Road to the northwest, Bryan Avenue to the northeast, Jamboree Road to the southeast and I-5 (Santa Ana Freeway) to the southwest. The 18 acres of the Project site that have been identified as suitable for housing development are comprised of Assessor's Parcel Numbers (APNs) 500-291-06, -07, -11, -12, and -25 and 500-312-03 and -10.

The Marketplace is currently developed with 747,165 square feet (SF) of commercial business, including restaurants, retail, and service commercial uses, and has approximately 13,032 SF of additional square footage entitled for the commercial uses, though no plans have been submitted to date. The site also includes surface parking and ornamental landscaping along the perimeter and throughout the parking areas. Figure 3-3, *Aerial View*, illustrates the Project site in its current condition. Figure 3-4, *Project Site APNs*, depicts the Project site parcels.

4.3 EXISTING LAND USE AND ZONING

The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of East Tustin Specific Plan – SP-8 (ETSP). The Project site is identified Mixed Use (MU) within the ETSP. Accordingly, the site is intended for development of planned retail commercial, office, and industrial/research and development land uses of an intensity compatible with neighboring residential and the Auto Center land uses; and the Mixed Use zoning is intent of provide an opportunity for development to respond to future changes in economic and market forces. The Project site's existing General Plan land use and zoning designations are shown in Figure 3-5, *Existing General Plan Land Use* and Figure 3-6, *Existing Zoning*.

4.4 SURROUNDING GENERAL PLAN AND ZONING DESIGNATIONS

The Project site is located within a developed area. The surrounding land uses and their designations are described in Table 4-1.

Table 4-1: Surrounding Existing Land Use and Zoning Designations

	Existing Land Use	General Plan Designation	Zoning Designation
Northeast	Bryan Avenue followed by multi-family and condominium residential uses	Planned Community Residential (PCR)	Planned Community Residential (PC RES), ETSP (SP-8)
Southeast	Jamboree Road followed by Tustin City Limits and the continuation of The Market Place in Irvine	City of Irvine: Regional Commercial (RGC)	City of Irvine: 4.9 – LPC Regional Commercial
Southwest	Interstate 5, followed by industrial and office uses in the cities of Tustin and Irvine	Planned Community Commercial/ Business (PCCB) City of Irvine: Community Commercial (COC) and Research/Industrial (REI)	Planned Community Industrial (PC IND) City of Irvine: 4.2E – Community Commercial
Northwest	Myford Road followed by El Modena-Tustin Channel and commercial uses	Planned Community Commercial/Business (PCCB)	ETSP (SP 8), Mixed Use (MU),

4.5 PHYSICAL ENVIRONMENTAL CONDITIONS

CEQA Guidelines Section 15125(a)(1) states that the physical environmental condition in the vicinity of the Project as it existed at the time the EIR's NOP was released for public review normally be used as the comparative baseline for the EIR. The NOP for this EIR was released for public review on February 26, 2024. The following pages include a description of the physical environmental conditions ("existing conditions") on a regional and local basis at the approximate time the NOP was released. More information regarding the Project site's environmental setting is provided in the specific subsections of EIR Section 5, *Environmental Analysis*.

4.5.1 Air Quality

The Project area is located within the South Coast Air Basin (Basin), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The Basin is a 6,600-square-mile coastal plain bounded by the Pacific Ocean to the southwest and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes the non-desert portions of Los Angeles, Riverside, and San Bernardino counties, and all of Orange County.

The ambient concentrations of air pollutants are determined by the amount of emissions released by sources and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and sunlight. Therefore, existing air quality conditions in the area are determined by such natural factors as topography, meteorology, and climate, in addition to the amount of emissions released by existing air pollutant sources.

Atmospheric conditions such as wind speed, wind direction, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants. The topography and climate of Southern California combine to make the Basin an area of high air pollution potential. The Basin is a coastal plain connecting broad valleys and low hills, bounded by the Pacific Ocean to the west and high mountains around the rest of the perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. The usually mild climatological pattern is disrupted occasionally by periods of extremely hot weather, winter storms, or Santa Ana winds. During the summer months, a warm air mass frequently descends over the cool, moist marine layer produced by the interaction between the ocean's

surface and the lowest layer of the atmosphere. The warm upper layer forms a cap over the cool marine layer and inhibits the pollutants in the marine layer from dispersing upward. In addition, light winds during the summer further limit ventilation. Furthermore, sunlight triggers the photochemical reactions which produce ozone.

Air quality monitoring stations are located throughout the nation and are maintained by the local air pollution control district and State air quality regulating agencies. The SCAQMD, together with the CARB, maintains ambient air quality monitoring stations in the Basin. The air quality monitoring station closest to the Project site is located at 1630 Pampas Lane in Anaheim, California.

Pollutant monitoring results for years 2020 to 2022 at the Anaheim ambient air quality monitoring station, shown in Table 5.1-4, indicate that air quality in the area has generally been moderate. As indicated in the monitoring results, the federal PM10 standard was not exceeded during the 3-year period. The State PM10 standard was exceeded 5 times in 2020, once in 2021, and once in 2022. Similarly, the federal PM2.5 standard had 12 exceedances in 2020, 10 exceedances in 2021, and no exceedances in 2022. The State 1-hour ozone standards were exceeded 6 times in 2021, no times in 2021, and once in 2022. The State 8-hour ozone standards were exceeded 16 times in 2020, no times in 2021, and once in 2022. The federal 8-hour standards were exceeded 15 times in 2021, no times in 2021, and once in 2022. The CO and NO2 standards were not exceeded in this area during the 3-year period. SO2 data was not available from 2020 to 2022 at air quality monitoring stations in Orange County.

Sensitive Land Uses

For the purposes of this analysis, sensitive receptors are areas of population that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include residences, schools, daycare centers, hospitals, parks, and similar uses which are sensitive to air quality. Impacts on sensitive receptors are of particular concern because they are the population most vulnerable to the effects of air pollution. The Project site is surrounded primarily by residential, commercial, and office uses. The areas adjacent to the Project site include residential uses to the northeast, commercial uses to the southeast, industrial and office uses to the southwest, and commercial uses to the northwest.

The closest sensitive receptors to the Project site are residential uses, located approximately 110 feet northeast of the Project site (see Figure 2-3, *Aerial View*).

4.5.2 Energy

Electricity

The Southern California Edison Company (SCE) is the electrical purveyor in the City of Tustin. SCE provides electricity service to more than 14 million people in a 50,000 square-mile area of central, coastal and Southern California. California utilities are experiencing increasing demands that require modernization of the electric distribution grid to, among other things, accommodate two-way flows of electricity and increase the grid's capacity. SCE is in the process of implementing infrastructure upgrades to ensure the ability to meet future demands. In addition, as described by the Edison International 2022 Annual Report, the SCE electrical grid modernization effort supports implementation of California requirements to achieve carbon neutrality by 2045. The State has set Renewables Portfolio Standards that require retail sellers of electricity to provide 60 percent of power from renewable resources by 2030. The State also requires sellers of electricity to deliver 100 percent of retail sales from carbon-free sources by 2045, including interim targets of 90 percent by 2035 and 95 percent by 2040. In 2022, approximately 48 percent of power that SCE delivered to customers came from carbon-free resources (Southern California Edison, 2022).

The Project site is currently served by the electricity distribution systems that exist along the roadways adjacent to the Project site.

Natural Gas

The Southern California Gas Company (SoCalGas) is the natural gas purveyor in the City of Tustin and is the principal distributor of natural gas in Southern California. SoCalGas estimates that gas demand will decline at an annual rate of 1.5 percent from 2022 to 2035 due to modest economic growth, mandated energy efficiency standards and programs, renewable electricity goals, and fuel substitution (Southern California Gas Company, et. al., 2022). The gas supply available to SoCalGas is regionally diverse and includes supplies from California sources (onshore and offshore), Southwestern U.S. supply sources, the Rocky Mountains, and Canada. SoCalGas designs its facilities and supplies to provide continuous service during extreme peak demands and has identified the ability to meet peak demands through 2035.

The Project is within the service area of Southern California Gas Company (SoCal Gas).

4.5.3 Greenhouse Gas Emissions

Gases that trap heat in the atmosphere are called greenhouse gases (GHGs). The major concern with GHGs is that increases in their concentrations are contributing to global climate change. Global climate change is a change in the average weather on Earth that can be measured by wind patterns, storms, precipitation, and temperature. Although there is disagreement as to the rate of global climate change and the extent of the impacts attributable to human activities, most in the scientific community agree that there is a direct link between increased emissions of GHGs and long-term global temperature increases.

The principal GHGs are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), perfluorocarbons (PFCs), and hydrofluorocarbons (HFCs). Because different GHGs have different warming potential, and CO_2 is the most common reference gas for climate change, GHG emissions are often quantified and reported as CO_2 equivalents (CO_2e). For example, SF_6 is a GHG commonly used in the utility industry as an insulating gas in circuit breakers and other electronic equipment. SF_6, while comprising a small fraction of the total GHGs emitted annually world-wide, is a much more potent GHG, with 22,800 times the global warming potential as CO_2. Therefore, an emission of one metric ton (MT) of SF_6 could be reported as an emission of 22,800 MT of CO_2e. Large emission sources are reported in million metric tons (MMT) of CO_2e. The principal GHGs are described below, along with their global warming potential.

The State emitted approximately 381.3 MMT CO2e emissions in 2021, 12.1 MMT CO2e higher than 2020 levels and 49.7 MMT CO2e below the 2020 GHG limit of 431 MMT CO2e. The California Air Resources Board (CARB) estimates that transportation was the source of approximately 38 percent of the State's GHG emissions in 2021. The next largest sources included industrial sources at approximately 19 percent and electricity generation at 16 percent. The remaining sources of GHG emissions were commercial and residential activities at 10 percent, agriculture at 8 percent, high GWP at 6 percent, and waste at 2 percent.

4.5.4 Land Use and Planning

The Project site is located within the City of Tustin, which is in the central portion of Orange County and is surrounded by the cities of Irvine to the south and east, Santa Ana to the west, and Orange and unincorporated Orange County to the north. An 18-acre portion of the Project site has been identified as suitable for housing development and consists of the following APNs 500-291-06, -07, -11, -12, and -25 and 500-312-03 and -10. The Project site has a General Plan designation of PCCB and a zoning designation East Tustin Specific Plan – SP-8 (ETSP). The Project site is identified Mixed Use (MU) within the ETSP. Accordingly, the site is intended for development of planned retail commercial, office, and industrial/research and development land uses of an intensity compatible with neighboring residential and

the Auto Center land uses. The Mixed Use zoning is intended to provide an opportunity for development to respond to future changes in economic and market forces.

The Marketplace is currently developed with 747,165 square feet (SF) of commercial business, including restaurants, retail, and service commercial uses, and has approximately 13,032 SF of additional square footage entitled for the commercial uses, though no plans have been submitted to date. The site also includes surface parking and ornamental landscaping along the perimeter and throughout the parking areas.

4.5.5 Noise

Existing Noise Levels

To assess existing noise levels of the environment, long-term (24-hour) noise level measurements were conducted on January 23 and 24, 2024, at two locations as shown on Figure 5.5-1. The background ambient noise levels in the Project area are dominated by the transportation-related noise associated with surface streets and Interstate-5. Table 5.5-4 *Summary of 24-Hour Ambient Noise Level Measurements*, in Section 5.05, provides a summary of the measured hourly noise levels and calculated CNEL level from the long-term noise level measurements. As shown in Table 5.5-4, the calculated CNEL levels range from 67.2 dBA CNEL to 73.8 dBA CNEL.

Existing Vibration

Aside from periodic construction work that may occur in the vicinity of the Project area, the Project site and adjacent land uses are not currently exposed to sources of groundborne vibration.

Existing Airport Noise

John Wayne Airport (SNA) is located approximately 4.8 miles southwest of the Project site. The Project site is located outside of the airport's 60 CNEL noise contour. In addition, the General Aviation Noise Ordinance restricts airport operations between 11:00 p.m. and 7:00 a.m., to limit the hours of noise generated by SNA.

Sensitive Receivers

Noise sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include residences, schools, hospitals, and recreation areas.

Existing offsite sensitive noise receptors where someone can remain for 24-hours in the vicinity of the Project site consists of residences. The closest offsite residences are located 110 feet northeast of the site as listed in Table 5.5-5, *Closest Sensitive Receptors to the Project Site*, included within Section 5.05.

4.5.6 Population and Housing

The Project site consists of approximately 76.9 acres that are developed with existing commercial uses, including restaurant, retail, and office establishments, a paved parking lot, and landscaping. The area proposed for future implementation of residential uses is limited to 18 acres of the existing parking lot area over seven parcels (APNs 500-291-06, -07, -11, -12, and -25 and 500-312-03 and -10) within the Project site.

The Project includes a GPA to establish that higher density residential uses are allowed in the PCCB land use designation when prescribed by a Housing Overlay (HO) district or a Specific Plan (SP). The Project also

includes a SPA to modify the site's ETSP designation of PCMU to allow high density residential uses on the 18-acre site; and to establish a new High Density Residential specific plan zoning designation.

Population

According to the California Department of Finance (DOF), the City of Tustin had a population of 79,558 in 2023 (California Department of Finance, 2023). The SCAG estimates that the City of Tustin had a population of 80,400 persons in 2019 and estimates that the City's population will increase to 93,317 by 2050, which is a 16.1 percent increase[1]. In comparison, the County of Orange is projected to have a 7.8 percent increase in population between 2019 and 2050 (Southern California Association of Governments, 2024).

Housing

The California DOF estimates that the City of Tustin contained 28,405 housing units in 2023. The housing types in the City of Tustin compared to those in the entire County are provided in Table 5.6-3. As shown, the County has a higher percentage of detached single-family housing units and a lower percentage of single-family attached and multi-family housing units than the City. In addition, the California DOF details that the City had an average household size of 2.88 persons per household. In comparison, the County had an average household size of 2.83 persons per household.

The California DOF population and housing estimates for 2023 detail that the City of Tustin has a vacancy rate of 3.4 percent. In comparison, the vacancy rate Countywide is higher at 5.1 percent.

The SCAG estimates that between 2019 and 2050, the number of housing units in the City will increase by 25.9 percent while the number of housing units in the County will increase by 17.2 percent.

Employment

The City of Tustin is estimated to contain 51,700 employment opportunities as of 2019. The SCAG regional growth projections anticipate the number of jobs in the City of Tustin to increase by 37.9 percent to 71,300 jobs in the year 2050. In comparison, the County is projected to see a 11.9 percent increase in the number of jobs by 2050.

The SCAG 2019 Local Profile for Tustin identifies that 7.3 percent of Tustin residents work and live in the City, while 92.7 percent commute to other places (Southern California Association of Governments, 2019). Of the commuters residing in Tustin, the largest percentage commute to the City of Irvine (18.6 percent), Santa Ana (10.4 percent), Anaheim (5.5 percent), and Orange (5.2 percent).

Jobs-Housing Ratio

The jobs-housing ratio is a general measure of the total number of jobs and housing units in a defined geographic area, without regard to economic constraints or individual preferences. SCAG applies the jobs-housing ratio at the regional and subregional levels to analyze the fit between jobs, housing, and infrastructure. A major focus of SCAG's regional planning efforts has been to improve this balance. SCAG defines the jobs-housing balance as follows:

> Jobs and housing are in balance when an area has enough employment opportunities for most of the people who live there and enough housing opportunities for most of the people who work there. The region as a whole is, by definition, balanced…. Job-rich subregions

[1] The 2050 population estimate was derived using the methodology presented in Section 4.5 of the SCAG Demographics & Growth Forecast which states an estimate of the future City-level population based on Connect SoCal's household forecast can be derived using a county-level Population:Housing ratio from TABLE 12 and applying it to the City's future household growth (Southern California Association of Governments, 2024).

> have ratios greater than the regional average; housing-rich subregions have ratios lower than the regional average. Ideally, job-housing balance would… assure not only a numerical match of jobs and housing but also an economic match in type of jobs and housing.

There is no ideal ratio adopted in state, regional, or city policies. However, the American Planning Association includes recommends a target ratio of 1.5 jobs per housing unit; communities with more than 1.5 jobs per dwelling unit are considered jobs-rich; those with fewer than 1.5 are "housing rich," meaning that more housing is provided than employment opportunities in the area (Weitz, 2003). A job-housing imbalance can indicate potential air quality and traffic problems associated with commuting. The projected 2050 jobs-to-housing ratios for the City of Tustin and Orange County are 2.1 and 1.61, respectively. This indicates that both the City of Tustin and Orange County are jobs-rich.

4.5.7 Public Services

Fire Protection Services

Fire protection and emergency medical services in the City of Tustin are provided by the OCFA through a contract for services. The OCFA provides fire suppression, emergency medical, rescue, fire prevention, hazardous materials coordination, and wildland management services. OCFA serves 23 cities in Orange County and all unincorporated areas. Within the City of Tustin, OCFA provides services from three fire stations.

Police Services

The Tustin Police Department provides police services throughout the City. Police Department headquarters are located at 300 Centennial Way, Tustin, CA 92780, which is approximately 1.8 miles northwest of the Project site. As of 2019, the Tustin Police Department has nearly 100 Sworn Police Officers and 55 Civilian Support Personnel (City of Tustin, 2019). According to the California Department of Finance, the City of Tustin had a population of 78,559 residents in 2023 (California Department of Finance, 2023). Based on this population estimate, the City's sworn officer to population ratio is 1.3 officers per 1,000 population.

School Services

The Project site is located within the Tustin Unified School District (TUSD) boundary which includes the City of Tustin, portions of the City of Irvine and portions of unincorporated areas of Orange County. TUSD has a total of 29 schools including: 16 elementary schools, two Kindergarten through 8th-grade schools, one Kindergarten through 12th-grade online school, four middle schools, one 6th-grade through 12th-grade academy, four high schools, and one adult education school.

Other Public Facilities

The Orange County Public Library (OCPL) provides library services to the City, including the Project site. OCPL has 33 branch libraries in 24 incorporated cities and unincorporated areas of Orange County and has a system-wide collection of approximately 2.5 million items (Orange County Public Libraries, 2020). The City of Tustin has one branch library operated by OCPL, the Tustin Library, located at 345 East Main Street, approximately 1.8 miles northwest of the Project site. The OCPL also operates the Katie Wheeler Library, which is located in the City of Irvine at 13109 Old Myford Road, approximately 0.5 miles north of the Project site.

4.5.8 Recreation

According to the City's General Plan, in 2011, the City had 113 acres of existing local and community parks, but needed an additional 114 acres to serve its population based on a standard of 3 acres per 1,000 persons and the January 2011 City population of 75,781 (City of Tustin, 2018). According to the City Parks and Recreation Director, Chad Clanton, the City of Tustin currently has 183.2 acres of parkland (C. Clanton, personal communication, 2024). As discussed in Section 5.10, *Population and Housing,* the City had a population of 77,558 in 2023. Therefore, the City has approximately 2.36 acres of public park and/or recreational space per 1,000 residents. Thus, the City of Tustin is currently parkland deficient and is not meeting its City standard of three acres of parkland per 1,000 residents. However, the City is currently in the design phase for a new joint-use park at Heideman School (15571 Williams Street) that is expected to be completed in 2026 that will contribute to the City's existing parkland (C. Clanton, personal communication, 2024).

There are no existing parks within the Project site. The closest existing park and recreation facilities to the Project site (within 2 miles) in the City of Tustin are listed in Table 5.8-1. As shown, the City currently has six existing parks that provide 45.3 acres of parkland within 2 miles of the Project site.

4.5.9 Transportation

Existing Roadway Network

The existing roadway network in the vicinity of the Project site includes the following:

- **Myford Road** is a five-lane undivided roadway oriented in the northeast and southwest direction that extends from I-5 to Irvine Boulevard in the City of Tustin. In the City of Tustin General Plan, the specific designation for Myford Road is a secondary arterial; which includes an overcrossing of the I-5 Freeway. Although the overcrossing is not existing, it is still on the City's Circulation Element and right-of-way was reserved for its construction should the need for such a facility be established in the future. The sections of roadway north and south of the freeway are on the City's Arterial Highway Plan. Myford Road has sidewalks on both sides of the roadway, has no bike lanes, and has a posting of 35 miles per hour (mph). On-street parking is not permitted on either side of this roadway. South of El Camino Real, Myford Road is a two-lane undivided roadway that has a partial sidewalk.
- **El Camino Real** is a four-lane divided roadway with a vegetated center median that runs adjacent to I-5 from 1st Street to just east of SR 261 and is designated as a secondary arterial within the Project site per the City of Tustin General Plan. The roadway is oriented in the northwest and southeast direction, has sidewalks on both sides, has no bike lanes, and has a posting of 35 mph. On-street parking is not permitted on either side of the roadway.
- **Bryan Avenue** is a four-lane divided roadway from Newport Avenue to Jeffery Road with sidewalks on both sides that is designated as a secondary arterial between Newport Avenue to Browning Avenue and a primary arterial between Browning Avenue to Jamboree Road in the City of Tustin General Plan. Bryan Avenue is oriented in the northwest and southeast direction, has bike lanes, and has a posting of 35 mph. On-street parking is not permitted on either side of this roadway.
- **Jamboree Road** is an eight- to nine-lane divided roadway with a vegetated center median that runs from Highway 1 (Pacific Coast Highway) to Irvine Regional Park and is designated as a major arterial in the City of Tustin General Plan. The roadway has sidewalks on both sides. Jamboree Road is oriented in the northeast and southwest direction, has bike lanes in the City of Tustin north of El Camino Real, and has a posting of 40 mph. On-street parking is not permitted on either side of the roadway.

- **1-5 Freeway** is a 12-lane divided roadway oriented regionally in the north-south direction. The posted speed limit is 65 mph and it is classified as a freeway. On-street parking is not permitted along this roadway.

Existing Site Access

Vehicular access to the northern and southern portion of the Project site is currently provided via signalized driveways, West Drive and East Drive, and on El Camino Real. West Drive wraps around to the north and connects to Jamboree Road within the northeast portion of the site. Additional access is available via Myford Road, which provides access to the parking areas in the western portion of the Project site, south of El Camino Real.

Existing Transit Service

Public transit bus service for the City is provided by the Orange County Transportation Authority (OCTA). The Project site includes a bus stop at the intersection of Bryan Avenue and Myford Road for Route 79 with bus service every 30 minutes. Route 79 (Larwin Square) provides service from Newport Transportation Center, along Culver Boulevard, to Bryan Avenue, finally terminating at the commercial center located at East 1ST Street and Newport Avenue (Larwin Square).

The Metrolink Orange County Line and Inland Empire-Orange County commuter lines travel through Tustin, with stops at the Tustin Metrolink Station, located approximately1.5 miles south of the Project site. In addition, passenger rail service is provided from two Amtrak depots in neighboring cities; Irvine to the east and Santa Ana to the west, which connects travelers to neighboring communities throughout Los Angeles and San Diego counties.

Existing Bicycle and Pedestrian Facilities

Class II bicycle lanes currently exist along Bryan Avene and Jamboree Road (City of Tustin, 2018). Class II bike lanes provide a restricted right-of-way on a roadway's shoulder designated for the exclusive or semi-exclusive use of bicycles with thru travel by motor vehicles or pedestrians prohibited. Sidewalks currently exist on both sides of all roadways that border and transect the Project site. Sidewalks currently exist on both sides of all roadways that border and transect the Project site. The Project site is highly urbanized and walkable, providing access to adjacent commercial and residential uses.

Existing Vehicle Miles Traveled

As identified in Section 3.0, *Project Description*, the existing land uses that were modeled consist of The Marketplace that is currently developed with 747,205 square feet (sf) of commercial business uses, including 57,456 sf of restaurant use, 23,662 sf of community center use, 24,483 sf of retail use, 5,559 sf of office use, and surface parking lots. The analysis was conducted using land use codes *High Turnover (Sit Down Restaurant), Strip Mall, General Office Building*, *Health Club,* and *Parking Lot*. Trip generation rates used in CalEEMod for the existing uses were based on the trip generation rate of 31,374 average daily trips (ADT).

Low vehicle miles traveled (VMT) generating areas are defined as traffic analysis zones (TAZs) with a total daily VMT per capita or VMT per employee that is less than the base level for the city. The Project is not located in a low VMT area per capita (residential); however, the Project site is located in a low VMT area per employee (nonresidential). The City of Tustin average city-wide VMT under the 2016 Base Model Year is 15.0 home-based VMT per capita. As detailed in Table 5.9-2, *Proposed Project Trip Generation*, in Section 5.9.6, *Environmental Impacts*, the Project site currently has a VMT of 8.9 per capita.

4.5.10 Tribal Cultural Resources

A records search from the South Central Coastal Information Center (SCCIC) at California State University, Fullerton was completed and encompassed the Project site and a 500-foot buffer surrounding the Project (BFSA Environmental Services, 2024). Based on the records search results, no resources are recorded within the Project site or within the 500-foot search buffer. Additionally, the records search revealed that the Project site was partially overlapped by five previous cultural resource studies. However, none of the studies are directly related to the Project site. Four of the studies surveyed the southern corner of the Project area and were focused on the Interstate 5 exchange. The fifth study surveyed an 11-mile-long and two-to-three-mile-wide section of land from Interstate 5 to Highway 91. Further, the records search identified an additional eleven previous studies within the 500-foot buffer search radius. However, none of these studies overlap with the Project area.

Sacred Lands File Search

TCRs can include archaeological sites, built environment resources, locations of events or ceremonies, resource procurement areas, and natural landscape features with special significance to one or more indigenous groups. The City requested a Sacred Lands File (SLF) Search from the NAHC and received the results on October 19, 2023. The SLF returned negative results, indicating that no known tribal resources are located within the Project area.

4.5.11 Utilities and Service Systems

Water Supply and Demand

A site-specific WSA was prepared for the proposed Project to identify the water demand of existing buildout of the site without the proposed Project, buildout of the site with the proposed Project, and future cumulative buildout during normal, dry and multiple dry years. As shown in Table 5.15-2, the WSA determined that the proposed Project would result in an increase of one acre-foot per year (AFY) during normal, dry, and multiple dry year scenarios. Additionally, as shown in Table 5.15-2 *IRWD Supply and Demand with Project Buildout During Normal, Dry, and Multiple Dry Year Scenarios (AF)*, in Section 5.11, the WSA determined that with buildout of the Project, Irvine Ranch Water District (IRWD) would have sufficient water supplies to serve the Project and cumulative development during normal, dry, and multiple dry year scenarios through 2044.

Wastewater

IRWD collects and treats nearly all the sewage generated within the IRWD service area, including for the Project site. Wastewater from the Project site is treated at the Michelson Water Recycling Plant (MWRP). In 2020, MWRP collected 22,575 acre-feet (AF) (or 20.2 million gallons per day [mgd]) for treatment (Irvine Ranch Water District, 2021). Therefore, the MWRP has a residual capacity of 7.8 mgd.

Site Drainage

The Project site currently drains into the City's stormwater sewer system via a series of culverts and drains and catch basins. Stormwater drains confluence at the southwest corner of the site and discharge into the existing Orange County Flood Control District (OCFCD) facility, El Modena-Tustin Channel, a concrete lined channel that runs along the west side of the Project site. Because the site is currently almost entirely paved, future development would increase intensity of development, but would not result in additional impervious surfaces that could increase the volume and velocity of stormwater runoff.

Solid Waste

The two closest landfills to the Project site are the Frank R. Bowerman Landfill in Irvine and the Olinda Alpha Sanitary Landfill in Brea. The Frank Bowerman Landfill is permitted to accept 11,500 tons per day of solid waste and is permitted to operate through 2053. In January 2024, the maximum tonnage received was 8,710.78 tons. Thus, the facility had additional capacity of 2,789.22 tons per day (CalRecycle, 2024). Per a Solid Waste Facility Permit (SWFP) issued on July 8, 2021, the Olinda Alpha Sanitary Landfill is permitted to receive 10,000 tons per day for 36 days of the year in the and is permitted allowed to receive 8,000 tons per day for the other 271 days of the year. The Olinda Alpha Sanitary Landfill is permitted to operate through 2036. In January 2024, the maximum tonnage received was 8,404 tons, which is below the 10,000 tons per day that the facility is allowed to receive for 36 days of the year (CalRecycle, 2024).

Electrical, Natural Gas, and Telecommunications Facilities

Electricity

Electricity is provided to the Project by Southern California Edison (SCE). SCE provides electric power to more than 15 million persons within its 50,000 square mile service area. According to SCE's 2022 Power Content Label Mix, SCE derives electricity from varied energy resources including: biomass and biowaste, geothermal, hydroelectric, solar, wind, nuclear, and natural gas. SCE also purchases power from independent power producers and utilities, which includes out-of-state providers (California Energy Commission, 2022).

Natural Gas

Natural gas would be provided to the Project by the Southern California Gas Company (SoCal Gas). SoCalGas provides natural gas to more than 21 million persons within its 24,000 square mile service area (SoCalGas, 2024).

Telecommunications

Telecommunications would be provided to the Project by AT&T and Cox Communications.

4.6 REFERENCES

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5. Environmental Impact Analysis

This chapter examines the environmental setting of the Project, analyzes its effects and the significance of its impacts, and recommends mitigation measures to reduce or avoid impacts. This chapter is divided into subsections for each environmental issue area that was determined to need further study in the Draft EIR through the NOP review and comment process (see Appendix A). Environmental topic areas discussed in this Draft EIR include the following:

5.1 Air Quality
5.2 Energy
5.3 Greenhouse Gas Emissions
5.4 Land Use and Planning
5.5 Noise
5.6 Population and Housing
5.7 Public Services
5.8 Recreation
5.9 Transportation
5.10 Tribal Cultural Resources
5.11 Utilities and Service Systems

This Draft EIR evaluates the direct and indirect impacts resulting from the planning, construction, and operations of the Project. Under CEQA, EIRs are intended to focus their discussion on significant impacts and may limit discussion of other impacts to a brief explanation of why the impacts are not significant.

The Initial Study for the Project (Appendix A) determined that some specific issues under each of the environmental topics would not result in any new impacts or increase the severity of impacts due to implementation of the Project as compared to existing conditions. These findings are documented in Appendix A and summarized in Chapter 7, *Effects Found Not Significant*, of this Draft EIR. Pursuant to Public Resources Code Section 21166 and CEQA Guidelines Section 15162, these issues are not analyzed further in Chapter 5, *Environmental Analysis*, of this Draft EIR.

FORMAT OF ENVIRONMENTAL TOPIC SECTIONS

Each environmental topic section generally includes the following main subsections:

- **Introduction.** This describes the purpose of analysis for the environmental topic and referenced documents used to complete the analysis. This subsection may define terms used.
- **Regulatory Setting.** This subsection describes applicable federal, state, and local plans, policies, and regulations that the Project must address and may affect its implementation.
- **Environmental Setting.** This subsection describes the existing physical environmental conditions (environmental baseline) related to the environmental topic being analyzed.
- **Thresholds of Significance.** This subsection sets forth the thresholds of significance (significance criteria) used to determine whether impacts are "significant." The thresholds of significance used to assess the significant of impacts are based on those provided in Appendix G of the CEQA Guidelines.
- **Methodology.** This subsection provides a description of the methods used to analyze the impact and determine whether it would be significant or less than significant.
- **Environmental Impacts.** This subsection provides an analysis of the impact statements for each identified significance threshold. The analysis of each impact statement is organized as follows:
    - A statement of the CEQA threshold being analyzed.
    - The Draft EIR's conclusion as to the significance of the impact.
    - An impact assessment that evaluates the changes to the physical environment that would result from the Project.

  - An identification of significance comparing identified impacts of the Project to the significance threshold with implementation of existing regulations, prior to and after implementation of any required mitigation.

- **Cumulative Impacts.** This subsection describes the potential cumulative impacts that would occur from the Project's environmental effects in combination with other cumulative projects. This analysis considers Project impacts in combination with specific past, present and probable future projects and/or through consistency with projections contained in applicable planning documents (see Table 5-1).
- **Existing Regulations and Regulatory Requirements.** A list of applicable laws and regulations that would reduce potentially significant impacts.
- **Level of Significance Before Mitigation.** A determination of the significance of the impacts after the application of applicable existing regulations and regulatory requirements.
- **Mitigation Measures.** For each impact determined to be potentially significant after the application of applicable laws and regulations, feasible mitigation measure(s) to be implemented are provided. Mitigation measures include enforceable actions to:

  - Avoid a significant impact;
  - Minimize the severity of a significant impact;
  - Rectify an impact by repairing, rehabilitating, or restoring the effected physical environment;
  - Reduce or eliminate the impact over time through preservation and/or maintenance operations during the life of the Project; and/or
  - Compensating for the impact by replacing or providing substitute resources or environmental conditions.

- **Level of Significance After Mitigation.** This section provides the determination of the impact's level of significance after the application of regulations, regulatory requirements, and mitigation measures.

IMPACT SIGNIFICANCE CLASSIFICATIONS

The below classifications are used throughout the impact analysis in this Draft EIR to describe the level of significance of environmental impacts. Although the criteria for determining significance are different for each topic area, the environmental analysis applies a uniform classification of the impacts based on definitions consistent with CEQA and the CEQA Guidelines.

- **No Impact.** The Project would not change the environment.
- **Less Than Significant.** The Project would not cause any substantial, adverse change in the environment.
- **Less Than Significant with Mitigation Incorporated.** The Draft EIR includes mitigation measures that avoid substantial adverse impacts on the environment.
- **Significant and Unavoidable.** The Project would cause a substantial adverse effect on the environment, and no feasible mitigation measures are available to reduce the impact to a less than significant level.

CUMULATIVE IMPACTS

Cumulative impacts refer to the combined effect of the proposed Project's impacts with the impacts of other past, present, and reasonably foreseeable probable future projects. Both CEQA and the CEQA Guidelines require that cumulative impacts be analyzed in an EIR. As set forth in the CEQA Guidelines Section 15130(b), "the discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone." The CEQA Guidelines direct that the discussion should be guided by practicality and reasonableness and focus on the cumulative impacts that would result from the combination of the proposed

project and other projects, rather than the attributes of other projects which do not contribute to cumulative impacts.

According to Section 15355 of the CEQA Guidelines, "cumulative impacts" refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

a) The individual effects may be changes resulting from a single project or a number of separate projects.
b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

Therefore, the cumulative discussion in this Draft EIR focuses on whether the impacts of the proposed Project are cumulatively considerable within the context of impacts caused by other past, present, and reasonably foreseeable future projects. Additionally, pursuant to the CEQA Guidelines Section 15130(a)(1), an EIR should not discuss cumulative impacts that do not result, at least in part from the project being evaluated in the EIR. Thus, cumulative impact analysis is not provided for any environmental issue where the proposed Project would have no environmental impact. Analysis of cumulative impacts is, however, provided for all Project impacts that are evaluated within this Draft EIR.

CEQA Guidelines Section 15130(b)(1) states that the information utilized in an analysis of cumulative impacts should come from one of the following, or a reasonable combination of the two:

- A list of past, present, and probable future projects producing related or cumulative impacts, including those projects outside the control of the lead agency; or
- A summary of projections contained in an adopted local, regional, or statewide plan or related planning document that describes or evaluates conditions contributing to the cumulative effect.

The cumulative analysis for air quality, greenhouse gas emissions, and transportation relies on projections contained in adopted local, regional, or statewide plans or related planning documents, such as Southern California Regional Transportation Plan, Southern California Association of Governments (SCAG) growth projections, and the Orange County Transportation Analysis Model (OCTAM). The cumulative analyses for other environmental issues use the list of projects approach.

Different types of cumulative impacts occur over different geographic areas. For example, the geographic scope of the cumulative air quality analysis, where cumulative impacts occur over a large area, is different from the geographic scope considered for cumulative analysis of aesthetic resources, for which cumulative impacts are limited to project area viewsheds. Thus, in assessing aesthetic resources impacts, only development within and immediately adjacent to the Project area would contribute to a cumulative visual effect is analyzed, whereas cumulative transportation impacts are based upon annual growth projections and the other proposed and/or foreseeable development within the traffic study area of roadways and intersections. Because the geographic scope and other parameters of each cumulative analysis discussion can vary, the cumulative geographic scope, and the cumulative projects included in the geographic scope (when the list of projects approach is used), are described for each environmental topic. Table 5-1 provides a list of projects considered in this cumulative environmental analysis, which was compiled per information provided by each agency, and Figure 5-1 shows the locations.

Table 5-1: Cumulative Projects List

No.	Project	Address	Land Use	Size[2]
City of Santa Ana				
SA-1	Warner/Redhill (The Bowery) [1]	2300 Redhill Ave. Santa Ana, CA	Mixed Use (MFR & Commercial)	MFR: 1,100 DU Commercial: 80,000 SF
SA-2	PacifiCenter New Building [1]	1700 St. Andrew Place Santa Ana, CA	Industrial	161,500 SF
SA-3	Bristol Office Plaza New Building	1400 St. Gertrude Place Santa Ana, CA	Commercial	7,000 SF
SA-4	Anchor Stone Christian Church [1]	2938 Daimler Street Santa Ana, CA	Institution	3,843 SF
SA-5	Park 55 Development [1]	1221 Dyer Road Santa Ana, CA	Industrial	176,000 SF
City of Tustin				
T-1	Tustin Legacy Specific Plan Amendment	Portion of Neighborhood D & G Tustin, CA	SFR & MFR	4,466 DU
T-2	The Landing at Tustin Legacy	Portion of Neighborhood D South Tustin, CA	SFR & MFR	SFR: 114 DU MFR: 293 DU
T-3	ATEP - Goddard Preschool	1629 Victory Rd Tustin, CA	Institution	14,689 SF
T-4	ATEP - Saddleback Buildings	1634 Valencia Ave Tustin, CA	Institution	57,650 SF
T-5	ATEP - Advantech NA Campus	Red Hill Ave & Victory Rd Tustin, CA	Institution (Office & Warehouse)	Office: 109,117 SF Warehouse: 78,945 SF
T-6	ATEP - Legacy Medical Plaza	Red Hill Ave & Victory Rd Tustin, CA	Institution (Office & Warehouse)	Office: 108,942 SF Warehouse: 78,837 SF
T-7	The Hill Mixed Use Project	13751 & 13841 Red Hill Avenue Tustin, CA	Mixed Use (MFR & Commercial)	MFR: 137 Commercial: 7,000 SF
T-8	Farmers and Merchants Bank [1]	13612 Newport Ave Tustin, CA	Commercial	6,315 SF
T-9	City Ventures	14042 Newport Ave Tustin, CA	MFR	42 DU
T-10	Warner Corporate Plaza	1371 Warner Ave Tustin, CA	Business Park	19,000 SF
T-11	Centurion Plaza Redevelopment	15661 Red Hill Ave Tustin, CA	Warehouse	142,690 SF
T-12	New industrial buildings	1100 Valencia and 1101 Bell Tustin, CA	Industrial	311,770 SF
T-13	Panattoni 2 Industrial Building	14321 & 14351 Myford Tustin, CA	Industrial	148,437 SF
T-14	Conceptual Industrial Redevelopment	14511 Myford Tustin, CA	Industrial	103,480 SF
City of Irvine				
I-1	2602 McGaw Avenue	2602 McGaw Avenue Irvine, CA	MFR	184 DU

No.	Project	Address	Land Use	Size[2]
I-2	Westcliff University Childcare Facility	2941 Alton Parkway Irvine, CA	Institution (Office, Recreation, & Education)	22,367 SF

Notes: Multi-Family Residential (MFR). Single Family Residential (SFR). SF = square feet. DU = dwelling units.
[1] The project includes demolition and replacement of an existing use (non-vacant).
[2] Project size indicates the added units and/or square feet where expansion of existing facilities is proposed, not the total operational size.

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The Market Place Rezone Project
City of Tustin

Figure 5-1

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5.1 Air Quality

5.1.1 INTRODUCTION

This section provides an overview of the existing air quality within the Project site and surrounding region, a summary of applicable regulations, and analyses of potential short-term and long-term air quality impacts from implementation of the Project. This analysis is based on the following City documents and reports prepared by LSA and are included as appendices, specifically, Appendix B, to this Draft EIR:

- *City of Tustin General Plan* (including 2021-2029 Housing Element), adopted November 2018 and updated October 2022.
- *East Tustin Specific Plan*, adopted March 1986 and updated November 1997.
- *Tustin City Code*.
- *The Market Place Air Quality, Energy, and Greenhouse Gas Report*, LSA, April 2024, Appendix B.

5.1.2 REGULATORY SETTING

5.1.2.1 Federal Regulation

United States Environmental Protection Agency

Criteria Air Pollutants

At the federal level, the United States Environmental Protection Agency (USEPA) has been charged with implementing national air quality programs. The USEPA's air quality mandates are drawn primarily from the federal Clean Air Act (CAA), which was enacted in 1970. The most recent major amendments to the CAA were made by Congress in 1990.

The CAA requires the USEPA to establish National Ambient Air Quality Standards (NAAQS). The USEPA has established primary and secondary NAAQS for the following criteria air pollutants: ozone, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead. Table 5.1-1 shows the NAAQS for these pollutants. The CAA also requires each state to prepare an air quality control plan, referred to as a state implementation plan (SIP). The CAA Amendments of 1990 (CAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is modified regularly, intervals can vary between one to a few years, to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins, as reported by their jurisdictional agencies. The USEPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments, and to determine whether implementing the SIPs will achieve air quality goals. If the USEPA determines a SIP to be inadequate, a federal implementation plan that imposes additional control measures may be prepared for the nonattainment area.

The USEPA also has regulatory and enforcement jurisdiction over emission sources beyond state waters (outer continental shelf), and those that are under the exclusive authority of the federal government, such as aircraft, locomotives, and interstate trucking. The USEPA's primary role at the state level is to oversee state air quality programs. The USEPA sets federal vehicle and stationary source emissions standards and provides research and guidance in air pollution programs.

Hazardous Air Pollutants

The USEPA has programs for identifying and regulating hazardous air pollutants (HAPs). Title III of the CAAA directed the USEPA to promulgate national emissions standards for HAPs (NESHAP). The NESHAP may differ for major sources as opposed to area sources of HAPs. Major sources are defined as stationary sources with potential to emit more than 10 tons per year (tpy) of any HAP or more than 25 tpy of any combination of HAPs; all other sources are considered area sources. The emissions standards are to be promulgated in two phases. In the first phase (1992–2000), the USEPA developed technology-based emission standards designed to produce the maximum emission reduction achievable. These standards are generally referred to as requiring maximum achievable control technology (MACT). For area sources, the standards may be different, based on generally available control technology. In the second phase (2001–2008), the USEPA promulgated health-risk-based emissions standards that were deemed necessary to address risks remaining after implementation of the technology-based NESHAP standards.

Table 5.1-1: Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
Ozone	1 hour 8 hours	0.09 ppm 0.07 ppm	--- 0.075 ppm	High concentrations can directly affect lungs, causing irritation. Long-term exposure may cause damage to lung tissue.	Formed when ROG and NO_X react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial/industrial mobile equipment.
Carbon Monoxide (CO)	1 hour 8 hours	20 ppm 9.0 ppm	35 ppm 9 ppm	Classified as a chemical asphyxiant, carbon monoxide interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Internal combustion engines, primarily gasoline-powered motor vehicles.
Nitrogen Dioxide (NO_x)	1 hour Annual Arithmetic Mean	0.18 ppm 0.030 ppm	0.100 ppm 0.053 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown.	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.
Sulfur Dioxide (SO_2)	1 hour 3 hours 24 hours Annual Arithmetic Mean	0.25 ppm --- 0.04 ppm ---	75 ppb 0.50 ppm 0.14 ppm 0.03 ppm	Irritates upper respiratory tract, injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron, and steel. Limits visibility and reduces sunlight.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
Respirable Particulate Matter (PM_{10})	24 hours Annual Arithmetic Mean	50 µg/m³ 20 µg/m³	150 µg/m³ ---	May irritate eyes and respiratory tract, decreases in lung capacity, cancer and increased mortality. Produces haze and limits visibility.	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
Fine Particulate Matter ($PM_{2.5}$)	24 hours Annual Arithmetic Mean	--- 12 µg/m³	35 µg/m³ 12 µg/m³	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and results in surface soiling.	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including NO_X, sulfur oxides, and organics.
Lead (Pb)	30 Day Average	1.5 µg/m³	---	Disturbs gastrointestinal system, and causes anemia, kidney	*Present source:* lead smelters, battery manufacturing and

Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
	Calendar Quarter	---	1.5 µg/m³	disease, and neuromuscular and neurological dysfunction (in severe cases).	recycling facilities. Past source: combustion of leaded gasoline.
	Rolling 3-Month Average	---	0.15 µg/m³		
Hydrogen Sulfide	1 hour	0.03 ppm	…	Nuisance odor (rotten egg smell), headache and breathing difficulties (higher concentrations)	Geothermal power plants, petroleum production and refining
Sulfates (SO_4)	24 hours	25 µg/m³	…	Decrease in ventilatory functions; aggravation of asthmatic symptoms; aggravation of cardio-pulmonary disease; vegetation damage; degradation of visibility; property damage.	Industrial processes.
Visibility Reducing Particles	8 hours	Extinction of 0.23/km; visibility of 10 miles or more	…	Reduces visibility, reduced airport safety, lower real estate value, and discourages tourism.	See $PM_{2.5}$.

ppm = parts per million; ppb = parts per billion; µg/m³ = micrograms per cubic meter.

The CAAA also required the USEPA to promulgate vehicle or fuel standards containing reasonable requirements that control toxic emissions of, at a minimum, benzene and formaldehyde. Performance criteria were established to limit mobile-source emissions of toxics, including benzene, formaldehyde, and 1,3-butadiene. In addition, Section 219 required the use of reformulated gasoline in selected areas with the most severe ozone nonattainment conditions to further reduce mobile-source emissions.

5.1.2.2 State Regulations

Criteria Air Pollutants

The California Air Resources Board (CARB), a department of the California Environmental Protection Agency, oversees air quality planning and control throughout California. CARB is responsible for coordination and oversight of state and local air pollution control programs in California and for implementation of the California Clean Air Act (CCAA). The CCAA, which was adopted in 1988, requires CARB to establish the California Ambient Air Quality Standards (CAAQS). CARB has established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, visibility-reducing particulate matter, and the above-mentioned criteria air pollutants. Applicable CAAQS are shown in Table 5.1-1.

The CCAA requires all local air districts in the state to endeavor to achieve and maintain the CAAQS by the earliest practical date. The act specifies that local air districts shall focus particular attention on reducing the emissions from transportation and area-wide emission sources and provides districts with the authority to regulate indirect sources.

Among CARB's other responsibilities are overseeing compliance by local air districts with California and federal laws, approving local air quality plans, submitting SIPs to the USEPA, monitoring air quality, determining and updating area designations and maps, and setting emissions standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels.

The California Air Resources Board Handbook

CARB has developed an Air Quality and Land Use Handbook which is intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process (California Air Resources Board, 2005). According to the CARB Handbook, air pollution studies have shown an association between respiratory and other non-cancer health effects and proximity to high traffic roadways. Other studies have shown that diesel exhaust and other cancer-causing chemicals emitted from cars and trucks are responsible for much of the overall cancer risk from airborne toxins in California. The CARB Handbook recommends that county and city planning agencies strongly consider proximity to these sources when finding new locations for "sensitive" land uses such as homes, medical facilities, daycare centers, schools, and playgrounds.

Land uses that can produce air pollution sources of concern include freeways, rail yards, ports, refineries, distribution centers, chrome plating facilities, dry cleaners, and large gasoline service stations. Key recommendations in the CARB Handbook include taking steps to avoid siting new, sensitive land uses:

- Within 500 feet of a freeway, urban roads with 100,000 vehicles/day or rural roads with 50,000 vehicles/day;
- Within 1,000 feet of a major service and maintenance rail yard;
- Immediately downwind of ports (in the most heavily impacted zones) and petroleum refineries;
- Within 300 feet of any dry-cleaning operation (for operations with two or more machines, provide 500 feet); and
- Within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater).

The CARB Handbook specifically states that its recommendations are advisory and acknowledges land use agencies must balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

The recommendations are generalized and do not consider site-specific meteorology, freeway truck percentages, or other factors that influence risk for a particular Project site. The purpose of this guidance is to help land use agencies determine when to further examine Project sites for actual health risk associated with the location of new sensitive land uses.

Toxic Air Contaminants

Air quality regulations also focus on toxic air contaminants (TACs). In general, for those TACs that may cause cancer, there is no concentration that does not present some risk. In other words, there is no safe level of exposure. This contrasts with the criteria for air pollutants, for which acceptable levels of exposure can be determined and for which ambient standards have been established. Instead, the USEPA and CARB regulate HAPs and TACs, respectively, through statutes and regulations that generally require the use of the MACT or best available control technology (BACT) for toxins and to limit emissions. These statutes and regulations, in conjunction with additional rules set forth by the districts, establish the regulatory framework for TACs.

TACs in California are regulated primarily through the Tanner Air Toxics Act (Assembly Bill [AB] 1807 [Chapter 1047, Statutes of 1983]) (Health and Safety Code Section 39650 et seq.) and the Air Toxics Hot Spots Information and Assessment Act (Hot Spots Act) (AB 2588 [Chapter 1252, Statutes of 1987]) (Health and Safety Code Section 44300 et seq.). AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs and adopted the USEPA's list of HAPs as TACs. Most recently, diesel PM was added to the CARB list of TACs. Once a TAC is identified, CARB then adopts an airborne toxics control measure (ATCM) for sources that emit that particular TAC. If

there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate BACT to minimize emissions.

The Air Toxics Hot Spots Information and Assessment Act requires existing facilities emitting toxic substances above a specified level to prepare a toxic-emission inventory, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures.

CARB published the Air Quality and Land Use Handbook: A Community Health Perspective (Handbook), which provides guidance concerning land use compatibility with TAC sources. Although it is not a law or adopted policy, the Handbook offers advisory recommendations for the siting of sensitive receptors near uses associated with TACs, such as freeways and high-traffic roads, commercial distribution centers, rail yards, ports, refineries, dry cleaners, gasoline stations, and industrial facilities, to help keep children and other sensitive populations out of harm's way. Based on CARB's Community Health Air Pollution Information System (CHAPIS), no major TAC sources are located in proximity to the Project area. In addition, CARB has promulgated the following specific rules to limit TAC emissions:

- **CARB Rule 2485** (13 CCR, Chapter 10 Section 2485), Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- **CARB Rule 2480** (13 CCR Chapter 10 Section 2480), Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- **CARB Rule 2477** (13 CCR Section 2477 and Article 8), Airborne Toxic Control Measure for In-Use Diesel Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate

California Assembly Bill 1493– Pavley

In 2002, the California Legislature adopted AB 1493 requiring the adoption of regulations to develop fuel economy standards for the transportation sector. In September 2004, pursuant to AB 1493, the CARB approved regulations to reduce fuel use and emissions from new motor vehicles beginning with the 2009 model year (Pavley Regulations). CARB, EPA, and the U.S. Department of Transportation's National Highway Traffic and Safety Administration (NHTSA) have coordinated efforts to develop fuel economy standards for model 2017-2025 vehicles, which are incorporated into the "Low Emission Vehicle" (LEV) Regulations.

California Code of Regulations (CCR) Title 13, Motor Vehicles, Section 2449(d)(3)

No vehicle or engines subject to this regulation may idle for more than 5 consecutive minutes. The idling limit does not apply to:

- Idling when queuing,
- Idling to verify that the vehicle is in safe operating condition,
- Idling for testing, servicing, repairing or diagnostic purposes,
- Idling necessary to accomplish work for which the vehicle was designed (such as operating a crane),
- Idling required to bring the machine system to operating temperature, and
- Idling necessary to ensure safe operation of the vehicle.

Title 24 Energy Efficiency Standards and California Green Building Standards

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code (CalGreen) was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. CALGreen

is updated on a regular basis, with the most recently approved update consisting of the 2022 California Green Building Code Standards that became effective January 1, 2023.

The 2022 CALGreen standards that reduce air quality emissions and are applicable to the Project include, but are not limited to, the following:

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- Designated parking for clean air vehicles. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- EV charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided is contained within Table 5.106.5.3.3 (5.106.5.3). Additionally, Table 5.106.5.4.1 specifies requirements for the installation of raceway conduit and panel power requirements for medium- and heavy-duty electric vehicle supply equipment for warehouses, grocery stores, and retail stores.
- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Table 5.106.8 (5.106.8).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
    - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1).
    - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
    - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
    - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall

have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate of not more than 0.20 gallons per cycle (5.303.3.4.5).

- Outdoor potable water used in landscaped areas. Nonresidential developments shall comply with the local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 SF or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 SF. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 SF requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 SF and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

The 2022 CalGreen Building Standards Code has been adopted by the Tustin City Code pursuant to Ordinance No. 1529.

5.1.2.3 Local and Regional Regulations

South Coast Air Quality Management District

Criteria Air Pollutants

The South Coast Air Quality Management District (SCAQMD) attains and maintains air quality conditions in the Basin through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean air strategy of SCAQMD includes preparation of plans for attainment of ambient air quality standards, adoption and enforcement of rules and regulations concerning sources of air pollution, and issuance of permits for stationary sources of air pollution. SCAQMD also inspects stationary sources of air pollution and responds to citizen complaints; monitors ambient air quality and meteorological conditions; and implements programs and regulations required by the CAA, CAAA, and CCAA. Air quality plans applicable to the Project are discussed below.

Air Quality Management Plan

SCAQMD and the Southern California Association of Governments (SCAG) are responsible for preparing the air quality management plan (AQMP), which addresses federal and state CAA requirements. The AQMP details goals, policies, and programs for improving air quality in the Basin.

The 2012 AQMP was adopted by the SCAQMD Governing Board on December 12, 2012. The purpose of the 2012 AQMP for the Basin is to set forth a comprehensive and integrated program that will lead the region into compliance with the federal 24-hour $PM_{2.5}$ air quality standard, and to provide an update to the Basin's commitment towards meeting the federal 8-hour ozone standards. The AQMP would also serve to satisfy recent USEPA requirements for a new attainment demonstration of the revoked 1-hour ozone standard, as well as a vehicle mile travelled (VMT) emissions offset demonstration. The 2012 AQMP, as approved by CARB, serves as the official SIP submittal for the federal 2006 24-hour $PM_{2.5}$ standard. In addition, the AQMP updates specific new control measures and commitments for emissions reductions to

implement the attainment strategy for the 8-hour ozone SIP. The 2012 AQMP set forth programs which require integrated planning efforts and the cooperation of all levels of government: local, regional, state, and federal.

In March 2017 AQMD finalized the 2016 AQMP, which continued to evaluate integrated strategies and control measures to meet the NAAQS, as well as explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, state, and local levels. Similar to the 2012 AQMP, the 2016 AQMP incorporated scientific and technological information and planning assumptions, including the 2016 RTP/SCS and updated emission inventory methodologies for various source categories.

The 2022 AQMP was adopted by the SCAQMD Governing Board on December 2, 2022. The 2022 AQMP builds upon measures already in place from previous AQMPs. It also includes a variety of additional strategies such as regulation, accelerated deployment of available cleaner technologies (e.g., zero emissions technologies, when cost-effective and feasible, and low NOx technologies in other applications), best management practices, co-benefits from existing programs (e.g., climate and energy efficiency), incentives, and other CAA measures to achieve the 2015 federal 8-hour ozone standard. SCAQMD included a total of 49 control measures in the 2022 AQMP, including control measures focused on widespread deployment of zero emission and low NOx technologies through a combination of regulatory approaches and incentives.

The RTP/SCS also provides a combination of transportation and land use strategies that help the region achieve State GHG emissions reduction goals and Federal Clean Air Act requirements, preserve open space areas, improve public health and roadway safety, support our vital goods movement industry, and use resources more efficiently. GHG emissions resulting from development-related mobile sources are the most potent source of emissions.

SCAQMD Rules and Regulations

All projects are subject to SCAQMD rules and regulations. Specific rules applicable to the Project include the following:

Rule 401 – Visible Emissions. A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any 1 hour that is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines.

Rule 402 – Nuisance. A person shall not discharge from any source whatsoever such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any such persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule do not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

Rule 403 – Fugitive Dust. SCAQMD Rule 403 governs emissions of fugitive dust during and after construction. Compliance with this rule is achieved through application of standard Best Management Practices (BMP), such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites.

Rule 403 requires project applicants to control fugitive dust using the best available control measures such that dust does not remain visible in the atmosphere beyond the property line of the emission source. In

addition, Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating an offsite nuisance. Applicable Rule 403 dust suppression (and PM_{10} generation) techniques to reduce impacts on nearby sensitive receptors may include, but are not limited to, the following:

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
- Water active sites at least three times daily. Locations where grading is to occur shall be thoroughly watered prior to earthmoving.
- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 0.6 meters (2 feet) of freeboard (vertical space between the top of the load and top of the trailer) in accordance with the requirements of California Vehicle Code Section 23114.
- Reduce traffic speeds on all unpaved roads to 15 miles per hour (mph) or less.
- Suspend all grading activities when wind speeds (including instantaneous wind gusts) exceed 25 mph.
- Provide bumper strips or similar best management practices where vehicles enter and exit the construction site onto paved roads or wash off trucks and any equipment leaving the site each trip.
- Replant disturbed areas as soon as practical.
- Sweep onsite streets (and offsite streets if silt is carried to adjacent public thoroughfares) to reduce the amount of particulate matter on public streets. All sweepers shall be compliant with SCAQMD Rule 1186.1, Less Polluting Sweepers.

Rule 481 – Spray Coating. This rule applies to all spray painting and spray coating operations and equipment and states that a person shall not use or operate any spray painting or spray coating equipment unless one of the following conditions is met:

- The spray coating equipment is operated inside a control enclosure, which is approved by the Executive Officer. Any control enclosure for which an application for permit for new construction, alteration, or change of ownership or location is submitted after the date of adoption of this rule shall be exhausted only through filters at a design face velocity not less than 100 feet per minute nor greater than 300 feet per minute, or through a water wash system designed to be equally effective for the purpose of air pollution control.
- Coatings are applied with high-volume low-pressure, electrostatic and/or airless spray equipment.
- An alternative method of coating application or control is used which has effectiveness equal to or greater than the equipment specified in the rule.

Rule 1108 - Volatile Organic Compounds. This rule governs the sale, use, and manufacturing of asphalt and limits the volatile organic compound (VOC) content in asphalt used in the Basin. This rule also regulates the VOC content of asphalt used during construction. Therefore, all asphalt used during construction of the Project must comply with SCAQMD Rule 1108.

Rule 1113 – Architectural Coatings. No person shall apply or solicit the application of any architectural coating within the SCAQMD with VOC content in excess of the values specified in a table incorporated in the Rule.

Rule 1143 – Paint Thinners and Solvents. This rule governs the manufacture, sale, and use of paint thinners and solvents used in thinning of coating materials, cleaning of coating application equipment, and other solvent cleaning operations by limiting their VOC content. This rule regulates the VOC content of solvents used during construction. Solvents used during the construction phase must comply with this rule.

City of Tustin General Plan

The City's General Plan Conservation, Open Space, and Recreation Element contains the following goals and policies related to improving air quality and reducing particulate emissions.

Goal 1: **Reduce air pollution through proper land use, transportation and energy use planning.**

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.

Policy 1.2: Design safe and efficient vehicular access to commercial land uses from arterial streets to insure efficient vehicular ingress and egress.

Policy 1.3: Locate multiple family developments close to commercial areas to encourage pedestrian rather than vehicular travel.

Policy 1.7: Create the maximum possible opportunities for bicycles as an alternative transportation mode and recreational use.

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.**

Policy 2.1: Reduce vehicle trips through incentives, regulations and/or Transportation Demand Management (TDM) programs.

Policy 2.2: Reduce total vehicle miles traveled (VMT) through incentives, regulations and/or Transportation Demand Management.

Policy 2.6: Encourage non-motorized transportation through the provision of bicycle and pedestrian pathways.

Policy 2.7: Encourage employer rideshare and transit incentives programs by local businesses.

Policy 2.8: Manage non-residential parking supply to discourage auto use, while ensuring that economic development goals will not be sacrificed.

5.1.3 ENVIRONMENTAL SETTING

Climate and Meteorology

The Project area is located within the South Coast Air Basin (Basin), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The Basin is a 6,600-square-mile coastal plain bounded by the Pacific Ocean to the southwest and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes the non-desert portions of Los Angeles, Riverside, and San Bernardino counties, and all of Orange County.

The annual average temperature varies little throughout the Basin, ranging from the low to middle 60s°F. With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station closest to the site is the Tustin Irvine Ranch Station. The monthly average maximum temperature recorded at this station ranged from 66.8°F in January to 85.2°F in August, with an annual average maximum of 75.4°F. The monthly average minimum

temperature recorded at this station ranged from 40.2°F in January to 59.1°F in August, with an annual average minimum of 49.4°F.

Most of the annual rainfall in the Basin occurs between November and March. Summer rainfall is minimal and is generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern portion of the Basin and along the coastal side of the mountains. Average monthly rainfall at the Tustin Irvine Ranch Station varied from 0.01 inch in July to 2.67 inches in February, with an annual total of 12.86 inches. Patterns in monthly and yearly rainfall totals are unpredictable due to fluctuations in the weather.

The Basin experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the Pacific high pressure system. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in mid-afternoon to late afternoon on hot summer days when the air appears to clear up suddenly. Winter inversions frequently break by midmorning.

Winds in the project area blow predominantly from the south-southwest, with relatively low velocities. Wind speeds in the project area average about 5 miles per hour (mph). Summer wind speeds average slightly higher than winter wind speeds. Low average wind speeds, together with a persistent temperature inversion, limit the vertical dispersion of air pollutants throughout the Basin. Strong, dry, north, or northeasterly winds, known as Santa Ana winds, occur during the fall and winter months, dispersing air contaminants. The Santa Ana conditions tend to last for several days at a time.

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are the lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly on shore into Riverside and San Bernardino Counties. In the winter, the greatest pollution problems are CO and NO_X because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and brighter sunshine combine to cause a reaction between hydrocarbons and NO_X to form photochemical smog. Smog is a general term that is naturally occurring fog that has become mixed with smoke or pollution. In this context it is better described as a form of air pollution produced by the photochemical reaction of sunlight with pollutants that have been released into the atmosphere, especially by automotive emissions.

Criteria Air Pollutants

The California Air Resources Board (CARB) and the United States Environmental Protection Agency (USEPA) currently focus on the following air pollutants as indicators of ambient air quality: ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), respirable particulate matter with an aerodynamic diameter of 10 micrometers or less (PM_{10}), fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less ($PM_{2.5}$), and lead. These pollutants are referred to as "criteria air pollutants" because they are the most prevalent air pollutants known to be injurious to human health. Extensive health-effects criteria documents regarding the effects of these pollutants on human health and welfare have been prepared over the years.[1] Standards have been established for each criteria pollutant to meet specific public health and welfare criteria set forth in the federal Clean Air Act (CAA). California has generally adopted more stringent ambient air quality standards for the criteria air pollutants (referred to as State

[1] Additional sources of information on the health effects of criteria pollutants can be found at CARB and USEPA's websites at http://www.arb.ca.gov/research/health/health.htm and http://www.epa.gov/air/airpollutants.html, respectively.

Ambient Air Quality Standards, or state standards) and has adopted air quality standards for some pollutants for which there is no corresponding national standard, such as sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles.

Table 5.1-2 summarizes the sources and health effects of air pollutants discussed in this section.

Table 5.1-2: Sources and Health Effects of Air Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	● Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust ● Natural events, such as decomposition of organic matter	● Reduced tolerance for exercise ● Impairment of mental function ● Impairment of fetal development ● Death at high levels of exposure ● Aggravation of some heart diseases (angina)
Nitrogen Dioxide (NO_2)	● Motor vehicle exhaust ● High temperature stationary combustion ● Atmospheric reactions	● Aggravation of respiratory illness ● Reduced visibility ● Reduced plant growth ● Formation of acid rain
Ozone (O_3)	● Atmospheric reaction of organic gases with nitrogen oxides in sunlight	● Aggravation of respiratory and cardiovascular diseases ● Irritation of eyes ● Impairment of cardiopulmonary function ● Plant leaf injury
Lead (Pb)	● Contaminated soil	● Impairment of blood functions and nerve construction ● Behavioral and hearing problems in children
Suspended Particulate Matter ($PM_{2.5}$ and PM_{10})	● Stationary combustion of solid fuels ● Construction activities ● Industrial processes ● Atmospheric chemical reactions	● Reduced lung function ● Aggravation of the effects of gaseous pollutants ● Aggravation of respiratory and cardiorespiratory diseases ● Increased cough and chest discomfort ● Soiling ● Reduced visibility
Sulfur Dioxide (SO_2)	● Combustion of sulfur-containing fossil fuels ● Smelting of sulfur-bearing metal ores Industrial processes	● Aggravation of respiratory diseases (asthma, emphysema) ● Reduced lung function ● Irritation of eyes ● Reduced visibility ● Plant injury ● Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board (2015).

Ozone

Ozone, the main component of photochemical smog, is primarily a summer and fall pollution problem. Ozone is not emitted directly into the air; but is formed through a complex series of chemical reactions involving other compounds that are directly emitted. These directly emitted pollutants (also known as ozone precursors) include reactive organic gases (ROGs) or volatile organic compounds (VOCs), and oxides of nitrogen (NOx). While both ROGs and VOCs refer to compounds of carbon, ROG is a term used by CARB and is based on a list of exempted carbon compounds determined by CARB. VOC is a term used by the USEPA and is based on its own exempt list. The time period required for ozone formation allows the reacting compounds to spread over a large area, producing regional pollution problems. Ozone concentrations are the cumulative result of regional development patterns rather than the result of a few significant emission sources.

Once ozone is formed, it remains in the atmosphere for one or two days. Ozone is then eliminated through reaction with chemicals on the leaves of plants, attachment to water droplets as they fall to earth ("rainout"), or absorption by water molecules in clouds that later fall to earth with rain ("washout").

Short-term exposure to ozone can irritate the eyes and cause constriction of the airways. In addition to causing shortness of breath, ozone can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

Carbon Monoxide

CO is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone, motor vehicles operating at slow speeds are the primary source of CO in the Basin. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.

Particulate Matter

Particulate matter (PM) is the term used for a mixture of solid particles and liquid droplets found in the air. Coarse particles are those that are 10 microns or less in diameter, or PM10. Fine, suspended particulate matter with an aerodynamic diameter of 2.5 microns or less, or PM2.5, is not readily filtered out by the lungs. Nitrates, sulfates, dust, and combustion particulates are major components of PM10 and PM2.5. These small particles can be directly emitted into the atmosphere as byproducts of fuel combustion; through abrasion, such as tire or brake lining wear; or through fugitive dust (wind or mechanical erosion of soil). They can also be formed in the atmosphere through chemical reactions. Particulates may transport carcinogens and other toxic compounds that adhere to the particle surfaces and can enter the human body through the lungs.

Nitrogen Dioxide

NO_2 is a reddish-brown gas that is a by-product of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Combustion devices emit primarily nitric oxide (NO), which reacts through oxidation in the atmosphere to form NO_2. The combined emissions of NO and NO_2 are referred to as NOx, which are reported as equivalent NO_2. Aside from its contribution to ozone formation, NO_2 can increase the risk of acute and chronic respiratory disease and reduce visibility. NO_2 may be visible as a coloring component of a brown cloud on high pollution days, especially in conjunction with high ozone levels.

Sulfur Dioxide

Sulfur dioxide (SO2) is a colorless, irritating gas formed primarily from incomplete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous SO2 levels in the region. SO2 irritates the respiratory tract, can injure lung tissue when combined with fine particulate matter, and reduces visibility and the level of sunlight.

Lead

Lead is a metal found naturally in the environment and present in some manufactured products. There are a variety of activities that can contribute to lead emissions, which are grouped into two general categories, stationary and mobile sources. On-road mobile sources include light-duty automobiles; light-, medium-, and heavy-duty trucks; and motorcycles.

Emissions of lead have dropped substantially over the past 40 years. The reduction before 1990 is largely due to the phase-out of lead as an anti-knock agent in gasoline for on-road automobiles. Substantial emission reductions have also been achieved due to enhanced controls in the metals processing industry. In the Basin, atmospheric lead is generated almost entirely by the combustion of leaded gasoline and contributes less than one percent of the material collected as total suspended particulates.

Volatile Organic Compounds

Volatile organic compounds (VOCs) (also known as reactive organic gases [ROGs] and reactive organic compounds [ROCs]) are formed from the combustion of fuels and the evaporation of organic solvents. VOCs are not defined as criteria pollutants, however, because VOCs accumulate in the atmosphere more quickly during the winter, when sunlight is limited and photochemical reactions are slower, they are a prime component of the photochemical smog reaction. There are no attainment designations for VOCs.

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are injurious in small quantities and are regulated by the USEPA and the CARB. Some examples of TACs include benzene, butadiene, formaldehyde, and hydrogen sulfide. The identification, regulation, and monitoring of TACs is relatively recent compared to that for criteria pollutants.

TACs do not have ambient air quality standards (AAQS), but are regulated by the USEPA, the CARB, and the SCAQMD. In 1998, the CARB identified particulate matter from diesel-fueled engines as a TAC. The CARB has completed a risk management process that identified potential cancer risks for a range of activities using diesel-fueled engines. High-volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic (e.g., distribution centers and truck stops) were identified as posing the highest risk to adjacent receptors. Other facilities associated with increased risk include warehouse distribution centers, large retail or industrial facilities, high-volume transit centers, and schools with a high volume of bus traffic. Health risks from TACs are a function of both concentration and duration of exposure.

Unlike TACs emitted from industrial and other stationary sources noted above, most diesel particulate matter (DPM) is emitted from mobile sources—primarily "off-road" sources such as construction and mining equipment, agricultural equipment, and truck-mounted refrigeration units, as well as "on-road" sources such as trucks and buses traveling on freeways and local roadways.

Although not specifically monitored, recent studies indicate that exposure to DPM may contribute significantly to a cancer risk (a risk of approximately 500 to 700 in 1,000,000) that is greater than all other measured TACs combined. The technology for reducing DPM emissions from heavy-duty trucks is well established, and both State and federal agencies are moving aggressively to regulate engines and emission control systems to reduce and remediate diesel emissions. The CARB anticipated that by 2020, average statewide DPM concentrations will decrease by 85 percent from levels in 2000 with full implementation of the CARB's Diesel Risk Reduction Plan, meaning that the statewide health risk from DPM is expected to decrease from 540 cancer cases in 1,000,000 to 21.5 cancer cases in 1,000,000. The CARB 2000 Diesel Risk Reduction Plan is still the most recent version and has not been updated.

CO Hotspots

An adverse CO concentration, known as a "hot spot" is an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SCAB is now designated as attainment.

Odorous Emissions

Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). Offensive odors are unpleasant and can lead to public distress generating citizen complaints to local governments. Although unpleasant, offensive odors rarely cause physical harm. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source, wind speed, direction, and the sensitivity of receptors.

Existing Conditions

The State emitted approximately 381.3 MMT CO_2e emissions in 2021, 12.1 MMT CO_2e higher than 2020 levels and 49.7 MMT CO_2e below the 2020 GHG limit of 431 MMT CO_2e (California Air Resources Basin, 2023). CARB estimates that transportation was the source of approximately 38 percent of the State's GHG emissions in 2021. The next largest sources included industrial sources at approximately 19 percent and electricity generation at 16 percent. The remaining sources of GHG emissions were commercial and residential activities at 10 percent, agriculture at 8 percent, high GWP at 6 percent, and waste at 2 percent. GHG is discussed further in Section 5.3.

Air quality monitoring stations are located throughout the nation and are maintained by the local air pollution control district and State air quality regulating agencies. The SCAQMD, together with the CARB, maintains ambient air quality monitoring stations in the Basin. The air quality monitoring station closest to the Project site is located at 1630 Pampas Lane in Anaheim, California.

Attainment Status

Regional Air Quality

The CARB is required to designate areas of the state as "attainment", "nonattainment", or "unclassified" for all State standards. An *attainment* designation for an area signifies that pollutant concentrations did not violate the standard for that pollutant in that area. A *nonattainment* designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. An *unclassified* designation signifies that data do not support either an attainment or nonattainment status. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The USEPA designates areas for O_3, CO, and NO_2 as either "does not meet the primary standards", "cannot be classified", or "better than national standards". For SO_2, areas are designated as "does not meet the primary standards", "does not meet the secondary standards", "cannot be classified", or "better than national standards".

Table 5.1-3 provides a summary of the attainment status for the Basin with respect to NAAQS and CAAQS.

Table 5.1-3: SCAQMD Regional Air Quality Thresholds

Pollutant	State	Federal
O3 1 hour	Nonattainment	Extreme Nonattainment
O3 8 hour	Nonattainment	Extreme Nonattainment
PM10	Nonattainment	Attainment/Maintenance
PM2.5	Nonattainment	Serious Nonattainment
CO	Attainment	Attainment/Maintenance

NO2	Attainment	Attainment/Maintenance
SO2	N/A	Attainment/Unclassified
Lead	Attainment	Attainment1
All others	Attainment/Unclassified	Attainment/Unclassified

Source: South Coast Air Quality Management District (2018).
[1] Except in Los Angeles County.
CO = carbon monoxide
N/A = not applicable
NO_2 = nitrogen dioxide
O_3 = ozone
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
SO_2 = sulfur dioxide

Local Air Quality

Pollutant monitoring results for the years 2020 to 2022 at the Anaheim ambient air quality monitoring station, shown in Table 5.1-4, indicate that air quality in the area has generally been moderate. As indicated in the monitoring results, the federal PM_{10} standard was not exceeded during the 3-year period. The State PM_{10} standard was exceeded 5 times in 2020, once in 2021, and once in 2022. Similarly, the federal $PM_{2.5}$ standard had 12 exceedances in 2020, 10 exceedances in 2021, and no exceedances in 2022. The State 1-hour ozone standards were exceeded 6 times in 2021, no times in 2021, and once in 2022. The State 8-hour ozone standards were exceeded 16 times in 2020, no times in 2021, and once in 2022. The federal 8-hour standards were exceeded 15 times in 2021, no times in 2021, and once in 2022. The CO and NO_2 standards were not exceeded in this area during the 3-year period. SO_2 data was not available from 2020 to 2022 at air quality monitoring stations in Orange County.

Table 5.1-4: Ambient Air Quality at the Nearby Monitoring Station

Pollutant	Standard	2020	2021	2022
Carbon Monoxide (CO)				
Maximum 1-hour concentration (ppm)		2.3	2.1	2.4
Number of days exceeded:	State: > 20 ppm	0	0	0
	Federal: > 35 ppm	0	0	0
Maximum 8-hour concentration (ppm)		1.7	1.5	1.4
Number of days exceeded:	State: > 9 ppm	0	0	0
	Federal: > 9 ppm	0	0	0
Ozone (O3)				
Maximum 1-hour concentration (ppm)		0.142	0.089	0.102
Number of days exceeded:	State: > 0.09 ppm	6	0	1
Maximum 8-hour concentration (ppm)		0.098	0.068	0.077
Number of days exceeded:	State: > 0.07 ppm	16	0	1
	Federal: > 0.07 ppm	15	0	1
Coarse Particulates (PM10)				
Maximum 24-hour concentration (µg/m3)		74.8	63.6	67.0
Number of days exceeded:	State: > 50 µg/m3	5	1	1
	Federal: > 150 µg/m3	0	0	0
Annual arithmetic average concentration (µg/m3)		30.8	23.4	20.9
Exceeded for the year:	State: > 20 µg/m3	Yes	Yes	Yes
	Federal: > 50 µg/m3	No	No	No
Fine Particulates (PM2.5)				

Pollutant	Standard	2020	2021	2022
Maximum 24-hour concentration (µg/m3)		64.8	54.4	33.1
Number of days exceeded:	Federal: > 35 µg/m3	12	10	0
Annual arithmetic average concentration (µg/m3)		12.4	11.6	9.9
Exceeded for the year:	State: > 12 µg/m3	Yes	No	No
	Federal: > 12 µg/m3	No	No	No
Nitrogen Dioxide (NO2)				
Maximum 1-hour concentration (ppm)		0.071	0.067	0.053
Number of days exceeded:	State: > 0.250 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.013	0.012	0.012
Exceeded for the year:	Federal: > 0.053 ppm	No	No	No
Sulfur Dioxide (SO2)				
Maximum 1-hour concentration (ppm)		ND	ND	ND
Number of days exceeded:	State: > 0.25 ppm	ND	ND	ND
Maximum 24-hour concentration (ppm)		ND	ND	ND
Number of days exceeded:	State: > 0.04 ppm	ND	ND	ND
	Federal: > 0.14 ppm	ND	ND	ND
Annual arithmetic average concentration (ppm)		ND	ND	ND
Exceeded for the year:	Federal: > 0.030 ppm	ND	ND	ND

Sources: CARB (2023) and USEPA (2023).
[a] On February 7, 2024, the federal annual $PM_{2.5}$ standard was revised from 12.0 µg/m^3 to 9.0 µg/m^3. However, since the data presented in Table 3.C-1 is through 2022, it uses the 12.0 µg/m^3 standard that was in effect through 2022.
µg/m^3 = micrograms per cubic meter
CARB = California Air Resources Board
ND = No data. There were insufficient (or no) data to determine the value.
ppm = parts per million
USEPA = United States Environmental Protection Agency

Sensitive Land Uses

For the purposes of this analysis, sensitive receptors are areas of population that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include residences, schools, daycare centers, hospitals, parks, and similar uses which are sensitive to air quality. Impacts on sensitive receptors are of particular concern because they are the population most vulnerable to the effects of air pollution. The Project site is surrounded primarily by residential, commercial, and office uses. The areas adjacent to the Project site include residential uses to the northeast, commercial uses to the southeast, industrial and office uses to the southwest, and commercial uses to the northwest.

The closest sensitive receptors to the Project site are residential uses, located approximately 110 feet northeast of the Project site (see Figure 2-3, Aerial View).

5.1.4 THRESHOLDS OF SIGNIFICANCE

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Appendix G of State CEQA Guidelines indicates that a Project could have a significant effect if it were to:

AQ-1 Conflict with or obstruct implementation of the applicable air quality plan.

AQ-2 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

AQ-3 Expose sensitive receptors to substantial pollutant concentrations.

AQ-4 Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Regional Significance Thresholds

The SCAQMD's most recent regional significance thresholds from March 2023 for regulated pollutants are listed in Table 5.1-5. The SCAQMD's CEQA air quality methodology provides that any projects that result in daily emissions that exceed any of the thresholds in Table 5.1-5 would be considered to have both an individually (project-level) and cumulatively significant air quality impact.

Table 5.1-5: SCAQMD Regional Air Quality Thresholds

Pollutant	Construction	Operations
NOx	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
SO_x	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day

Local Significance Thresholds

The SCAQMD published its *Final Localized Significance Threshold Methodology* in July 2008, recommending that all air quality analyses include an assessment of air quality impacts to nearby sensitive receptors. This guidance was used to analyze potential localized air quality impacts associated with construction of the Project. Localized significance thresholds (LSTs) are developed based on the size or total area of the emission source, the ambient air quality in the source receptor area, and the distance to the project. Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to adverse air quality.

LSTs are based on the ambient concentrations of that pollutant within the project Source Receptor Area (SRA) and the distance to the nearest sensitive receptor. For the Project, the appropriate SRA for the LST is the nearby Central Orange County (SRA 17). SCAQMD provides LST screening tables for 25-, 50-, 100-, 200-, and 500-meter source-receptor distances. As identified above, the closest sensitive receptors to the Project site include residential uses, located approximately 110 feet northeast of the Project's site boundary. As such, a distance of 34 meters (110 feet) was conservatively used for the "worst case scenario". Based on the anticipated construction equipment, it is assumed that the maximum daily disturbed acreage during construction would be 3.5 acres. The 5-acre thresholds were used for Project operation. Table 5.1-6 lists the conservative emissions thresholds that apply during potential future Project construction and operation.

Table 5.1-6: SCAQMD Localized Significance Thresholds

Emissions Source	Pollutant Emissions Threshold (lbs/day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
Construction	146.0	1,129.0	17.0	6.2

Emissions Source	Pollutant Emissions Threshold (lbs/day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
Operations	177.0	1,426.0	5.5	2.4

Source: South Coast Air Quality Management District (2008).
CO = carbon monoxide
lbs/day = pounds per day
NO_x = nitrogen oxides
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size

Local Microscale Concentration Standards

The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project are above or below State and federal CO standards. Because ambient CO levels are below the standards throughout the Basin, a project would be considered to have a significant CO impact if project emissions result in an exceedance of one or more of the 1-hour or 8-hour standards. The following are applicable local emission concentration standards for CO:

- California State 1-hour CO standard of 20 parts per million (ppm)
- California State 8-hour CO standard of 9 ppm

5.1.5 METHODOLOGY

This analysis focuses on the nature and magnitude of the change in the air quality environment that could potentially occur through future buildout of the Project, based on the maximum development assumptions that are outlined in Section 3.0*, Project Description*. Therefore, the following analysis provides a conservative assumption of emissions that represent "worst case scenario".

Air pollutant emissions associated with the Project would result from construction equipment usage and from construction-related traffic. Additionally, emissions would be generated from operations of the future warehouses and from traffic volumes generated by this new use. The net increase in emissions generated by these activities and other secondary sources have been quantitatively estimated and compared to the applicable thresholds of significance recommended by SCAQMD.

AQMP Consistency

SCAQMD's CEQA Handbook suggests an evaluation of the following two criteria to determine whether a project involving a legislative land use action (such as the proposed General Plan land use and zoning designation changes) would be consistent or in conflict with the AQMP:

1. The project would not generate population and employment growth that would be inconsistent with SCAG's growth forecasts.
2. The project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

Consistency Criterion No. 1 refers to the SCAG's growth forecast and associated assumptions included in the AQMP. The future air quality levels projected in the AQMP are based on SCAG's growth projections, which are based, in part, on the general plans of cities and counties located within the SCAG region, and, in part, on SCAG's three Land Development Categories. Therefore, if the level of housing or employment related to the Project are consistent with the applicable assumptions used in the development of the AQMP, the Project would not jeopardize attainment of the air quality levels identified in the AQMP.

Consistency Criterion No. 2 refers to the California Ambient Air Quality Standards (CAAQS). An impact would occur if the long-term emissions associated with the Project would exceed SCAQMD's regional significance thresholds for operation-phase emissions.

Construction Emissions

Construction activities can generate a substantial amount of air pollution. Construction activities are considered temporary; however, short-term impacts can contribute to exceedances of air quality standards. Construction activities include demolition, site preparation, earthmoving, and general construction. The emissions generated from these common construction activities include fugitive dust from soil disturbance, fuel combustion from mobile heavy-duty diesel and gasoline powered equipment, portable auxiliary equipment, and worker commute trips.

The California Emissions Estimator Model version 2022.1 (CalEEMod) computer program was used to calculate emissions from on-site construction equipment and emissions from worker and vehicle trips to the site. Information regarding a specific development project is not yet known; however, for the purposes of this analysis, future development of the additional 900 units and remaining nonresidential buildout capacity associated with the existing Project site could occur anytime between October 2024 and October 2029. Therefore, to be conservative, this analysis assumes a project construction schedule based on a start date of October 2024 and a default construction duration in CalEEMod and assuming architectural coating would overlap with building construction activities. The analysis assumes that the Project would demolish the existing surface parking but would not demolish any existing buildings under potential future construction. This analysis also assumes that all development would comply with SCAQMD Rule 403 measures. In addition, this analysis assumes the use of Tier 2 construction equipment, which was also included in CalEEMod. All other construction details are not yet known; therefore, default assumptions (e.g., construction worker and truck trips and fleet activities) from CalEEMod were used.

Operational Emissions

The air quality analysis includes estimating emissions associated with long-term operation of full Project buildout. Consistent with the SCAQMD guidance for estimating emissions associated with land use development projects, the CalEEMod computer program was used to calculate the potential long-term operational emissions associated with the Project.

This analysis evaluates the buildout of 900 units and remaining nonresidential buildout capacity within the Project site and compares the potential impacts to impacts associated with the existing commercial uses as determined based on two CalEEMod runs.

As identified in the Project Description, the existing uses that were modeled consist of The Market Place that is currently developed with 747,205 sf of commercial business uses, including 57,456 sf of restaurant use, 23,662 sf of community center use, 24,483 sf of retail use, 5,559 sf of office use, and surface parking lots. The analysis was conducted using land use codes *High Turnover (Sit Down Restaurant), Strip Mall, General Office Building*, *Health Club,* and *Parking Lot*. Trip generation rates used in CalEEMod for the existing uses were based on the trip generation rate of 31,374 ADT.

The analysis of the future buildout of the Project site included the existing development, the buildout of 900 units, and the addition of the total remaining non-residential use including 13,032 sf of restaurant use. The analysis was conducted using land use codes *Apartments Mid Rise, High Turnover (Sit Down Restaurant), Strip Mall, General Office Building*, and *Health Club* assuming a total trip generation of 5,483 ADT. This analysis also assumes that the Project would not include any woodburning hearths or wood stoves. Where Project-specific data were not available, default assumptions (e.g., energy usage, water usage, and solid waste generation) from CalEEMod were used to estimate Project emissions.

5.1.6 ENVIRONMENTAL IMPACTS

IMPACT AQ-1: THE PROJECT WOULD NOT CONFLICT WITH OR OBSTRUCT IMPLEMENTATION OF THE APPLICABLE AIR QUALITY PLAN.

No Impact.

A consistency determination plays an essential role in local agency project review by linking local planning and unique individual projects to the air quality plans. A consistency determination fulfills the CEQA goal of fully informing local agency decision-makers of the environmental costs of the project under consideration at a stage early enough to ensure that air quality concerns are addressed. Only new or amended General Plan elements, Specific Plans, and significantly unique projects need to undergo a consistency review due to the air quality plan strategy being based on projections from local General Plans.

Consistency with the 2022 AQMP would be achieved if the project is consistent with the goals, objectives, and assumptions in this plan to achieve the federal and State air quality standards. Per SCAQMD's *CEQA Air Quality Handbook*, there are two main indicators of a project's consistency with the AQMP:

Indicator 1: Whether the project would result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of the ambient air quality standards or emission reductions in the AQMP.

> ***Indicator 1:*** As demonstrated below, the regional emissions generated by construction and operation of the Project would be less than the SCAQMD emissions thresholds. As such, the Project would not be inconsistent with Indicator 1.

Indicator 2: Whether the project would exceed the assumptions in the AQMP. The AQMP strategy is, in part, based on projections from local general plans.

> ***Indicator 2:*** The *CEQA Air Quality Handbook* indicates that consistency with AQMP growth assumptions must be analyzed for new or amended General Plan elements, Specific Plans, and significant projects. Significant projects include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and offshore drilling facilities.
>
> The Project includes a GPA to amend the City's existing General Plan to allow for a higher density of residential development in commercial land use designations than are currently allowed; and a Specific Plan Amendment (SPA) to create and apply a new High Density Residential Land Use District within the ETSP area. The Project would not directly result in physical development, but upon approval of the GPA and SPA the Project site could accommodate 900 units as a result of the changes in regulations. As such, this analysis evaluates whether the project would exceed the 2022 AQMP's assumptions.
>
> With respect to determining the Project's consistency with AQMP growth assumptions, the projections in the AQMP for achieving air quality goals are based on assumptions in SCAG's RTP/SCS regarding population, housing, and growth trends. According to SCAG's 2024-2050 RTP/SCS, the City's population, households, and employment are forecast to increase by approximately 12,919 residents, 7,000 households, and 19,600 jobs, respectively, between 2019 and 2050 (Southern California Association of Governments, 2024).
>
> As identified in the Project Description, the City's 2021–2029 Housing Element identifies several adequate sites that are able to accommodate the development of up to 900 additional housing units for the City to meet its estimated housing growth needs identified in the SCAG's RHNA

allocation. Of the Housing Element inventory sites, The Market Place (the Project site) was identified as necessary for rezoning under Housing Element Program 1.1f to allow for high density residential/mixed use development. The Project would accommodate up to 900 housing units to help the City meet its RHNA allocation.

The development of 900 housing units would result in approximately 2,592 additional residents based on the estimated 2.88 persons per household in Tustin (State of California Department of Finance, 2023). Future development implemented in accordance with the proposed Housing Overlay Zone would accommodate planned regional housing growth included in the SCAG RHNA and would be required to adhere to the General Plan. Therefore, since the purpose of the Project is to accommodate planned regional housing growth included in the SCAG RHNA, the Project would not exceed the growth assumptions in the SCAG's 2024-2050 RTP/SCS or the AQMP.

In addition, since the Project would not include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and offshore drilling facilities, the Project is not a significant project as defined by the SCAQMD *CEQA Air Quality Handbook*. Therefore, it is unlikely that the Project would interfere with SCAQMD's goals for improving air quality in the region. The Project would not conflict with the 2022 AQMP and, as such, would not jeopardize attainment of the CAAQS and NAAQS in the area under the jurisdiction of the SCAQMD. The Project is therefore considered consistent with Indicator 2.

Summary: Based on the discussion above, the Project would not conflict or obstruct implementation of applicable air quality plans under Indicator 1 because the Project would result in pollutant emissions below the SCAQMD's thresholds. The Project would also be consistent with the regional AQMP, since the purpose of the Project is to accommodate planned regional housing growth included in the SCAG RHNA. Therefore, the Project would result in no impact.

IMPACT AQ-2: THE PROJECT WOULD NOT RESULT IN A CUMULATIVELY CONSIDERABLE NET INCREASE OF ANY CRITERIA POLLUTANT FOR WHICH THE PROJECT REGION IS NON-ATTAINMENT UNDER AN APPLICABLE FEDERAL OR STATE AMBIENT AIR QUALITY STANDARD.

Less than Significant Impact.

The Basin is designated as non-attainment for O_3 and $PM_{2.5}$ for federal standards and non-attainment for O_3, PM_{10}, and $PM_{2.5}$ for State standards. The SCAQMD's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of AAQS. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the SCAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is unnecessary. The following analysis assesses the Project-level construction- and operation-related air quality impacts.

Construction

It is important to note that the Project would not, in and of itself entitle, propose, or otherwise require the construction of new development. The Project would allow for potential future development of residential and nonresidential development that would accommodate up to 900 units and 13,032 sf of nonresidential use.

Construction activities associated with the construction of 900 additional housing units and remaining commercial buildout capacity that could occur with implementation of the Project would be through the horizon year 2029, which would cause short-term emissions of criteria air pollutants. The primary source of emissions is the operation of construction equipment. Before development can take place, a project would be required to be analyzed for conformance with the General Plan, zoning requirements, and other applicable local and State requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits.

Construction activities would include demolition of existing parking lots and landscaping, site preparation, grading, building construction, architectural coating, and paving activities. Construction-related effects on air quality are typically greatest during the grading phase due to the disturbance of soil. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at construction sites. Unless properly controlled, vehicles leaving construction sites would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, whereas fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The SCAQMD has established Rule 403 (Fugitive Dust), which would require the contractor to implement measures that would reduce the amount of particulate matter generated during the construction period.

In addition to dust-related PM10 emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO2, NOX, VOCs and some soot particulate (PM2.5 and PM10) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles idle in traffic. These emissions would be temporary in nature and limited to the immediate area surrounding the construction site.

Construction emissions were estimated for development envisioned under the Project using CalEEMod. As described in the Methodology section above, information regarding a specific development project is not yet known; however, for the purposes of this analysis, future development of the additional 900 units and remaining commercial buildout capacity associated with the Project could occur anytime between October 2024 and October 2029. Therefore, to be conservative, this analysis assumes a Project construction schedule based on a start date of October 2024 and a default construction duration in CalEEMod. Table 5.1-7 lists the tentative schedule, and Table 5.1-8 lists the potential construction equipment to be used during project construction under each phase of construction. Construction-related emissions are presented in Table 5.1-9.

Table 5.1-7: Tentative Project Construction Schedule

Phase Number	Phase Name	Phase Start Date	Phase End Date	Number of Days/Week	Number of Days
1	Demolition	10/7/2024	11/16/2024	5	30
2	Site Preparation	11/5/2024	11/19/2024	5	10
3	Grading	11/20/2024	1/1/2025	5	30
4	Building Construction	1/2/2025	2/26/2026	5	300

5	Paving	2/27/2026	3/27/2026	5	20
6	Architectural Coating	12/8/2025	4/25/2026	5	100

Source: Compiled by LSA assuming construction would start October 2024 with a default construction duration in CalEEMod and assuming architectural coating would overlap with building construction activities. This analysis is also assumes demolition of the surface parking lot would occur over a 30-day period (February 2024).

Table 5.1-8: Diesel Construction Equipment Utilized by Construction Phase

Construction Phase	Off-Road Equipment Type	Off-Road Equipment Unit Amount	Hours Used per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	1	8	33	0.73
	Excavators	3	8	36	0.38
	Rubber Tired Dozers	2	8	367	0.4
Site Preparation	Rubber Tired Dozers	3	8	367	0.4
	Tractors/Loaders/Backhoes	4	8	84	0.37
Grading	Excavators	2	8	36	0.38
	Graders	1	8	148	0.41
	Rubber Tired Dozers	1	8	367	0.4
	Scrapers	2	8	423	0.48
	Tractors/Loaders/Backhoes	2	8	84	0.37
Building Construction	Cranes	1	7	367	0.29
	Forklifts	3	8	82	0.2
	Generator Sets	1	8	14	0.74
	Tractors/Loaders/Backhoes	3	7	84	0.37
	Welders	1	8	46	0.45
Paving	Pavers	2	8	81	0.42
	Paving Equipment	2	8	89	0.36
	Rollers	2	8	36	0.38
Architectural Coating	Air Compressors	1	6	37	0.48

Source: (LSA, 2024)
CalEEMod = California Emissions Estimator Model

Table 5.1-9: Project Construction Emissions

Year	Emissions (lbs/day)					
	VOCs	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2024	2.2	86.5	57.3	0.2	27.6	9.2
2025	58.8	48.9	53.9	0.1	11.8	3.3
2026	58.7	26.0	52.5	<0.1	11.9	3.4
2024	2.2	86.5	57.3	0.2	27.6	9.2
Maximum Daily Emissions	**58.8**	**86.5**	**57.3**	**0.2**	**27.6**	**9.2**
SCAQMD Thresholds	75.0	100.0	550.0	150.0	150.0	55.0

Exceeds?	**No**	**No**	**No**	**No**	**No**	**No**

Source: (LSA, 2024)
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOCs = volatile organic compounds

As shown in Table 5.1-9, construction emissions associated with future development as envisioned under the Project would not exceed the SCAQMD thresholds for VOCs, NOX, CO, sulfur oxides (SOX), PM2.5, or PM10 emissions. Future development projects would be required to comply with SCAQMD Rule 403: Fugitive Dust, which would further reduce construction-related emissions. Therefore, future construction of development projects consistent with the Project would not result in emissions that would result in significant impacts related to a net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or State ambient air quality standard.

Operation

Operational activities associated with the 900 additional housing units and 13,032 sf of remaining commercial buildout capacity of the Project site would result in long-term air pollutant emissions associated with mobile sources (e.g., vehicle trips), energy sources (e.g., natural gas), and area sources (e.g., architectural coatings and the use of landscape maintenance equipment). Before development can take place, a project would be required to be analyzed for conformance with the General Plan, zoning requirements, and other applicable local and State requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits.

PM10 emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways. Entrainment of PM10 occurs when vehicle tires pulverize small rocks and pavement, and the vehicle wakes generate airborne dust. The contribution of tire and brake wear is small compared to the other PM emission processes. Gasoline-powered engines have small rates of particulate matter emissions compared with diesel-powered vehicles. The existing uses generate approximately 31,374 ADT and full buildout of development consistent with the Project would generate approximately 36,857 ADT.

Energy source emissions result from activities in buildings for which electricity and natural gas are used. The quantity of emissions is the product of usage intensity (i.e., the amount of natural gas) and the emission factor of the fuel source. Major sources of energy demand for the Project could include building mechanical systems, such as heating and air conditioning. However, the Project would not be anticipated to include the use of natural gas for future residential development; although existing and future nonresidential development could continue to use natural gas. The residential units would be constructed in compliance with the version of the Title 24 energy standards and the CALGreen Code in effect at the time building permit applications are submitted.

Typically, area source emissions consist of direct sources of air emissions located at the Project site, including architectural coatings, consumer products, and the use of landscape maintenance equipment.

Long-term operation emissions associated with development consistent with the Project were calculated using CalEEMod. Model results are shown in Appendix B of this document.

The results shown in Table 5.1-10 indicate that the net new emissions associated with the future development of the Project would not exceed the significance criteria for VOCs, NOX, CO, SOX, PM10, or PM2.5 emissions; thus, the Project would not have a significant impact on regional air quality.

Table 5.1-10: Project Operational Emissions

Emission Type	Emissions (lbs/day)					
	VOCs	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Existing Uses						
Existing Uses Mobile Sources	104.0	79.2	799.0	1.9	171.0	44.2
Existing Uses Area Sources	23.3	<0.1	32.5	<0.1	0.1	<0.1
Existing Uses Energy Sources	0.2	3.1	2.6	<0.1	0.2	0.2
Total Existing Uses Emissions	127.5	82.3	834.1	1.9	171.3	44.4
Full Buildout of the Project site						
Project Buildout Mobile Sources	122.0	94.3	952.0	2.3	205.0	52.9
Project Buildout Area Sources	49.0	12.7	89.3	0.1	1.1	1.1
Project Buildout Energy Sources	0.3	6.1	4.1	<0.1	0.5	0.5
Total Project Buildout Emissions	171.3	113.1	1,045.4	2.4	206.6	54.5
Net New Emissions (Project Buildout – Existing Uses)	**43.8**	**50.8**	**211.3**	**0.5**	**35.3**	**10.1**
SCAQMD Thresholds	**55.0**	**55.0**	**550.0**	**150.0**	**150.0**	**55.0**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Source: (LSA, 2024)
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOCs = volatile organic compounds

IMPACT AQ-3: THE PROJECT WOULD NOT EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS.

Less than Significant Impact.

CO Hotspots

Vehicular trips associated with the Project would contribute to congestion at intersections and along roadway segments in the project vicinity. Localized air quality impacts would occur when emissions from vehicular traffic increase as a result of the Project. The primary mobile-source pollutant of local concern is CO, a direct function of vehicle idling time and, thus, of traffic flow conditions. CO transport is extremely limited; under normal meteorological conditions, CO disperses rapidly with distance from the source. However, under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels, affecting local sensitive receptors (e.g., residents, schoolchildren, the elderly, and hospital patients). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. In areas with high ambient background CO concentrations, modeling is recommended to determine a project's effect on local CO levels.

An assessment of project-related impacts on localized ambient air quality requires that future ambient air quality levels be projected. Existing CO concentrations in the immediate project vicinity are not available. Ambient CO levels monitored at the Anaheim monitoring station, the closest station to the City of Tustin, showed a highest recorded 1-hour concentration of 2.4 ppm (the State standard is 20 ppm) and a highest

8-hour concentration of 1.7 ppm (the State standard is 9 ppm) during the past 3 years. The highest CO concentrations would normally occur during peak traffic hours; hence, CO impacts calculated under peak traffic conditions represent a worst-case analysis.

Full buildout of development consistent with the Project would generate 5,483 net new ADT in the immediate vicinity of the Project site and would result in 458 net new AM peak-hour trips and 469 net new PM peak-hour trips. The Project would not result in any operational deficiencies to the surrounding roadway system. The evaluation of the study area intersections shows that the addition of traffic associated with new residential development allowed under the Project's Housing Overlay Zone is not expected to create significant level of service changes under project build out. Therefore, project traffic would not create any significant adverse impacts to nearby intersections.

Therefore, given the extremely low level of CO concentrations in the City, and lack of traffic impacts at any intersections, project-related vehicles are not expected to contribute significantly to, or result in CO concentrations exceeding the State or federal CO standards. Therefore, the Project would result in a less than significant impact.

Health Risk Assessment

The SCAQMD recommends the evaluation of localized air quality impacts to sensitive receptors such as residential land uses in the immediate vicinity of the Project site as a result of construction and operational activities. The thresholds are based on standards established by the SCAQMD in its Localized Significance Thresholds (LST) Methodology and are measured against construction and operational emissions that occur on a specific Project site (Southern California Air Quality Managment District, 2021). These emissions are primarily generated from heavy-duty construction equipment and demolition, grading, and trenching activities. Construction and operational activities associated with the construction of additional housing units and remaining commercial buildout capacity that could occur with implementation of the Project would have the potential to cause or contribute to significant localized air quality impacts to nearby residential land uses. Construction and operation emissions associated with development consistent with the Project were compared to the LST screening tables in SRA 17, based on a 34-meter source-receptor distance.

By design, the localized impacts analysis only includes on-site emission sources; however, the CalEEMod outputs do not separate on-site and off-site emissions for mobile sources. For a worst-case scenario assessment, the emissions (detailed in Table 5.1-12 below) assume all area and energy source emissions would occur on site, and 5 percent of the Project-related new mobile sources, which is an estimate of the amount of Project-related on-site vehicle travel, would occur on site. Given that the majority of vehicle travel would occur off site and considering the total overall VMT and trip length included in CalEEMod, assuming that 5 percent of the Project's VMT would occur on site is conservative. The results of the LST analysis, summarized in Tables 5.1-11 and 5.1-12, indicate that the Project would not result in an exceedance of the SCAQMD LSTs during project construction and operation.

Table 5.1-11: Project Localized Construction Emissions (lbs/day)

Source	NOx	CO	PM10	PM2.5
On-Site Project Construction Emissions	48.8	35.3	13.9	2.7
Localized Significance Threshold	146.0	1,129.0	17.0	6.2
Exceeds Threshold?	No	No	No	No

CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10}= particulate matter less than 10 microns in size

Table 5.1-12: Project Localized Operational Emissions (lbs/day)

Source	NOx	CO	PM10	PM2.5
On-Site Project Buildout Net New Emissions	16.5	66.0	3.0	1.8
Localized Significance Threshold	177.0	1,426.0	5.5	2.4
Exceeds Threshold?	No	No	No	No

CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10}= particulate matter less than 10 microns in size

It should be noted that the amount of emissions from a project does not necessarily correspond to the concentrations of air pollutants. A dispersion modeling analysis would be necessary to calculate health risk from project implementation. However, since it is not possible to translate the amount of an unknown future specific project's emissions to a particular concentration, it is not possible to calculate the risk factor for a particular health effect at the time of this analysis.

Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Particulate matter can also lead to a variety of health effects in people. These include premature death of people with heart or lung disease, heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms. Regional emissions of criteria pollutants contribute to these known health effects. The SCAQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals and that they are not exposed to elevated concentrations of criteria pollutants in the Basin. To achieve the health-based standards established by the USEPA, the SCAQMD prepared an AQMP that details regional programs to attain the ambient air quality standards.

The analysis for the Project identifies that construction and operational emissions associated with development envisioned as part of the Project would be less than significant under the SCAQMD's thresholds for VOCs, NOX, CO, SOX, PM2.5, and PM10 emissions. However, it should be noted that the SCAQMD's numeric regional mass daily thresholds does not necessarily correspond to a determination for health risk impacts to sensitive receptors. This is because the mass daily thresholds are in pounds per day emitted into the air, whereas health effects are determined based on the concentration of emissions in the air at a particular receptor (e.g., ppm by volume of air, or µg/m3 of air). State and federal ambient air quality standards were developed to protect the most susceptible population groups from adverse health effects and were established in terms of parts per million or micrograms per cubic meter for the applicable emissions.

However, the SCAQMD acknowledges that they have only been able to correlate potential health outcomes for very large emissions sources; specifically, 6,620 pounds per day (lbs/day) of NOX, and 89,180 lbs/day of VOCs were expected to result in approximately 20 premature deaths per year and 89,947 school absences due to ozone. As identified in Table 5.1-8 above, construction of the Project would generate a maximum of 86.5 lbs/day of NOX and 58.8 lbs/day of VOCs and as shown in Table 5.9-1above, operation of the Project would generate a maximum of 50.8 lbs/day of NOX and 43.8 lbs/day of VOCs. Therefore, it is not expected that any future development associated with the Project would generate 6,620 lbs/day of NOX or 89,180 lbs/day of VOC emissions.

Therefore, emissions associated with the Project are not sufficiently high enough to correlate health effects on a Basin-wide level.

Current scientific, technological, and modeling limitations prevent the relation of expected adverse air quality impacts to likely health consequences. For this reason, this discussion explains why it is not feasible to provide such an analysis. However, once a specific project is proposed, it would still be required to conduct

a site-specific localized impact analysis that evaluates potential project health impacts at a project level relative to immediately adjacent land uses.

In addition, the Project would be required to comply with SCAQMD standard conditions, including Rule 403 (Fugitive Dust) to control fugitive dust and Rule 1113 (Architectural Coatings) to control VOC emissions from paint. Furthermore, any necessary mitigation would be imposed at the project level once such future projects are proposed. Therefore, the Project would result in a less than significant health risk impact.

Asbestos

Naturally occurring asbestos (NOA) refers to the asbestos mineral as a natural component of soils or rocks, as opposed to asbestos in commercial products or other processing operations. Ultramafic rocks may contain asbestos or asbestos-like materials. Naturally occurring asbestos can be released from rocks or soils by routine human activities, such as construction, mining, agriculture, or natural weathering processes. If NOA is disturbed and fibers are released into the air it may become a health risk from inhalation. According to the California Geological Survey, no such rock has been identified in the Project vicinity (LSA, 2024). When demolition is proposed to accommodate construction, the demolition of existing buildings could expose asbestos used in building materials. The construction of development projects envisioned under the Project would only include the demolition of the existing surface parking; therefore, existing buildings on the Project site would not be demolished as part of the Project. Therefore, the potential risk for naturally occurring asbestos during potential future project construction is small and would be less than significant.

IMPACT AQ-4: THE PROJECT WOULD NOT RESULT IN OTHER EMISSIONS (SUCH AS THOSE LEADING TO ODORS) ADVERSELY AFFECTING A SUBSTANTIAL NUMBER OF PEOPLE.

Less than Significant Impact.

The proposed Project would not emit other emissions, such as those generating objectionable odors, which would affect a substantial number of people. The threshold for odor is identified by SCAQMD Rule 402, Nuisance, which states:

> *A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.*

The type of facilities that are considered to result in other emissions, such as objectionable odors, include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities.

During construction of future development allowed under the Project, some odors may be present due to diesel exhaust. However, these odors would be temporary and limited to the construction period. The Project would allow for the development of future residential and commercial uses and would not include any activities or operations that would generate objectionable odors once operational. Therefore, the proposed project would not result in other emissions (such as those leading to odors) affecting a substantial number of people.

5.1.7 CUMULATIVE IMPACTS

This section presents information regarding potential cumulative impacts associated with the proposed project. As defined in the State CEQA Guidelines, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area. Below is a list of cumulative projects; however, because of the lack of available emissions data for the cumulative projects, cumulative emissions were not evaluated quantitatively. Table 5-1 lists the cumulative projects and provides a brief description and the distances from the Project site and Figure 5-1 includes a map of the various cumulative projects considered. The list includes 5 projects within the City of Santa Ana, 14 projects within the City of Tustin, and 2 projects within the City of Irvine.

The SCAQMD 2022 AQMP evaluates regional conditions within the Basin and sets regional emission significance thresholds for both construction and operation of development projects that apply to project-specific impacts and cumulatively considerable impacts. Therefore, per SCAQMD's methodology, if an individual project would result in air emissions of criteria pollutants that exceeds the SCAQMD's thresholds for project-specific impacts, then it would also result in a cumulatively considerable net increase of these criteria pollutants.

As described in Impact AQ-2 above, emissions from construction and operation would not exceed SCAQMD's thresholds for any criteria pollutant at the regional or local level after implementation of existing regulations. Therefore, operational sources emissions would not be cumulatively considerable and would be less than significant.

As discussed in Impact AQ-3, the Project would not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction or operation activity. Therefore, impacts on human health risks would not be cumulatively considerable and would be less than significant.

As discussed in Impact AQ-4, the Project would not expose surrounding uses to objectionable odors. Thus, there is no potential for odors from the Project to combine with odors from surrounding development Projects and expose nearby sensitive receptors to offensive odors. Therefore, the Project would not result in significant cumulative impacts related to odors.

5.1.8 EXISTING REGULATIONS AND PLANS, PROGRAMS, OR POLICIES.

Existing Regulations

State

- California Green Building Standards Code (Code of Regulations, Title 24 Part 6)

Regional

- SCAQMD Rule 402: Nuisance Odors
- SCAQMD Rule 403: Fugitive Dust
- Rule 481 – Spray Coating
- Rule 1108 - Volatile Organic Compounds
- SCAQMD Rule 1113: Architectural Coatings
- Rule 1143 – Paint Thinners and Solvents

Plans, Programs, or Policies

These actions will be included in the Project's mitigation monitoring and reporting program (MMRP):

PPP AQ-1: Rule 403. The Project is required to comply with the provisions of South Coast Air Quality Management District (SCAQMD) Rule 403, which includes the following:

- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 mph per SCAQMD guidelines in order to limit fugitive dust emissions.
- The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the project are watered, with complete coverage of disturbed areas, at least 3 times daily during dry weather; preferably in the mid-morning, afternoon, and after work is done for the day.
- The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are reduced to 15 miles per hour or less.

PPP AQ-2: Rule 1113. The Project is required to comply with the provisions of South Coast Air Quality Management District Rule (SCAQMD) Rule 1113. Only "Low-Volatile Organic Compounds" paints (no more than 50 gram/liter of VOC) and/or High-Pressure Low Volume (HPLV) applications shall be used.

PPP AQ-4: Rule 402. The Project is required to comply with the provisions of South Coast Air Quality Management District (SCAQMD) Rule 402. The Project shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

5.1.9 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

The Project would result in no impact related to Impact AQ-1 and less than significant impacts related to Impacts AQ-2 through 4.

5.1.10 MITIGATION MEASURES

None required.

5.1.11 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Upon implementation of existing regulatory requirements, impacts related to air quality would be less than significant. No significant and unavoidable air quality impacts would occur.

5.1.12 REFERENCES

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5.2 Energy

5.2.1 INTRODUCTION

This section of the Draft EIR assesses the significance of the use of energy, including electricity, natural gas and gasoline, and diesel fuels, that would result from implementation of the Project. It discusses existing energy use patterns and examines whether the Project (including development and operation) would result in the consumption of large amounts of fuel or energy or use such resources in a wasteful manner.

Refer to Section 5.3, *Greenhouse Gas Emissions*, for a discussion of the relationship between energy consumption and greenhouse gas (GHG) emissions, and Section 5.11, *Utilities and Service Systems*, for a discussion of water consumption. This section includes data from the following City documents and report from LSA in Appendix B:

- *City of Tustin General Plan* (including 2021-2029 Housing Element), adopted November 2018 and updated October 2022.
- *East Tustin Specific Plan*, adopted March 1986 and updated November 1997
- *Tustin City Code*.
- *The Market Place Air Quality, Energy, and Greenhouse Gas Report*, LSA, April 2024, Appendix B.

5.2.2 REGULATORY SETTING

5.2.2.1 Federal Regulations

Energy Independence and Security Act, Corporate Average Fuel Efficiency Standards

On December 19, 2007, the Energy Independence and Security Act of 2007 was signed into law, requiring an increased Corporate Average Fuel Economy (CAFE) standard of 35 miles per gallon (mpg) for the combined fleet of cars and light trucks by the 2020 model year.

In addition to setting increased CAFE standards for motor vehicles, the Energy Independence and Security Act includes the following additional provisions:

- Renewable Fuel Standard (RFS) (Section 202)
- Appliance and Lighting Efficiency Standards (Sections 301–325)
- Building Energy Efficiency (Sections 411–441)

Additional provisions of the Act 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.

Energy Policy Act of 2005

The Energy Policy Act of 2005 seeks to reduce reliance on non-renewable energy resources and provide incentives to reduce current demand on these resources. For example, under this Act, consumers and businesses can obtain federal tax credits for purchasing fuel-efficient appliances and products (including hybrid vehicles), building energy-efficient buildings, and improving the energy efficiency of commercial buildings. Additionally, tax credits are available for the installation of qualified fuel cells, stationary microturbine power plants, and solar power equipment.

Corporate Average Fuel Economy (CAFE) Standards

On March 31, 2022, the National Highway Traffic Safety Administration (NHTSA) finalized the Corporate Average Fuel Economy (CAFE) standards for Model Years 2024–2026 Passenger Cars and Light Trucks. The amended CAFE standards would require an industry wide fleet average of approximately 49 mpg for passenger cars and light trucks in model year 2026, by increasing fuel efficiency by 8 percent annually for model years 2024–2025, and 10 percent annually for model year 2026. The final standards are estimated to save about 234 billion gallons of gas between model years 2030 to 2050.

5.2.2.2 State Regulations

Assembly Bill 1575, Warren-Alquist Act

In 1975, largely in response to the oil crisis of the 1970s, the State Legislature adopted Assembly Bill (AB) 1575 (also known as the Warren-Alquist Act), which created the California Energy Commission (CEC). The statutory mission of the CEC is to forecast future energy needs; license power plants of 50 megawatts (MW) 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 (PRC) Section 21100(b)(3) and *State CEQA Guidelines* Section 15126.4 to require Environmental Impact Reports (EIRs) to include, where relevant, mitigation measures proposed to minimize the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the State Resources Agency created Appendix F to the *State CEQA Guidelines*. Appendix F assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. Appendix F of the *State CEQA Guidelines* also states that the goal of conserving energy implies the wise and efficient use of energy and the means of achieving this goal, including (1) decreasing overall per capita energy consumption; (2) decreasing reliance on fossil fuels such as coal, natural gas, and oil; and (3) increasing reliance on renewable energy sources.

Senate Bill 1389, Energy: Planning and Forecasting

In 2002, the State Legislature passed Senate Bill (SB) 1389, which required the CEC to develop an integrated energy plan every 2 years for electricity, natural gas, and transportation fuels for the California Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero emission vehicles (ZEVs) and their infrastructure needs, and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

In compliance with the requirements of SB 1389, the CEC adopts an Integrated Energy Policy Report every 2 years and an update every other year. The most recently adopted report includes the *2023 Integrated Energy Policy Report*.[1] The *Integrated Energy Policy Report* covers a broad range of topics, including decarbonizing buildings, integrating renewables, energy efficiency, energy equity, integrating renewable energy, updates on Southern California electricity reliability, climate adaptation activities for the energy sector, natural gas assessment, transportation energy demand forecast, and the California Energy Demand Forecast. The *Integrated Energy Policy Report* provides the results of the CEC's assessments of a variety of

[1] California Energy Commission (CEC). 2023a. *2023 Integrated Energy Policy Report*. California Energy Commission. Docket Number: 23-IEPR-01.

energy issues facing California. Many of these issues will require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining energy reliability and controlling costs.

Renewable Portfolio Standard

SB 1078 established the California Renewable Portfolio Standards program in 2002. SB 1078 initially required that 20 percent of electricity retail sales be served by renewable resources by 2017; however, this standard has become more stringent over time. In 2006, SB 107 accelerated the standard by requiring that the 20 percent mandate be met by 2010. In April 2011, SB 2 required that 33 percent of electricity retail sales be served by renewable resources by 2020. In 2015, SB 350 established tiered increases to the Renewable Portfolio Standards of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. In 2018, SB 100 increased the requirement to 60 percent by 2030 and required that all the State's electricity come from carbon-free resources by 2045. SB 100 took effect on January 1, 2019.[2]

Title 24, California Building Code

Energy consumption by new buildings in California is regulated by the Building Energy Efficiency Standards, embodied in Title 24 of the California Code of Regulations (CCR), known as the California Building Code (CBC). The CEC first adopted the Building Energy Efficiency Standards for Residential and Non-residential Buildings in 1978 in response to a legislative mandate to reduce energy consumption in the State. The CBC is updated every 3 years, with the most recent update consisting of the 2022 CBC that became effective January 1, 2023. The efficiency standards apply to both new construction and rehabilitation of both residential and non-residential buildings, and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. The building efficiency standards are enforced through the local building permit process. Local government agencies may adopt and enforce energy standards for new buildings, provided these standards meet or exceed those provided in CCR Title 24.

California Green Building Standards Code (CALGreen Code)

In 2010, the California Building Standards Commission (CBSC) adopted Part 11 of the Title 24 Building Energy Efficiency Standards, referred to as the California Green Building Standards Code (CALGreen Code). The CALGreen Code took effect on January 1, 2011. The CALGreen Code is updated on a regular basis, with the most recent update consisting of the 2022 CALGreen Code standards that became effective January 1, 2023. The CALGreen Code established mandatory measures for residential and non-residential building construction and encouraged sustainable construction practices in the following five categories: (1) planning and design, (2) energy efficiency, (3) water efficiency and conservation, (4) material conservation and resource efficiency, and (5) indoor environmental quality. Although the CALGreen Code was adopted as part of the State's efforts to reduce greenhouse gas (GHG) emissions, the CALGreen Code standards have co-benefits of reducing energy consumption from residential and non-residential buildings subject to the standard.

California Energy Efficiency Strategic Plan

On September 18, 2008, the California Public Utilities Commission (CPUC) adopted California's first Long-Term Energy Efficiency Strategic Plan, presenting a roadmap for energy efficiency in California. The Plan articulates a long-term vision and goals for each economic sector and identifies specific near-term, mid-term, and long-term strategies to assist in achieving those goals. The plan also reiterates the following four specific

[2] California Public Utilities Commission (CPUC). 2019. Renewables Portfolio Standard Program. Website: cpuc.ca.gov/rps (accessed January 2024).

programmatic goals known as the "Big Bold Energy Efficiency Strategies" that were established by the CPUC in Decisions D.07-10-032 and D.07-12-051:

- All new residential construction will be zero net energy (ZNE) by 2020.
- All new commercial construction will be ZNE by 2030.
- 50 percent of commercial buildings will be retrofitted to ZNE by 2030.
- 50 percent of new major renovations of State buildings will be ZNE by 2025.

5.2.2.3 Local and Regional Regulations

City of Tustin General Plan

The City's General Plan Conservation, Open Space, and Recreation Element contains the following goals and policies related to reducing energy consumption.

Goal 4: **Reduce emissions through reduced energy consumption.**

Policy 4.1: Promote energy conservation in all sectors of the City including residential, commercial, and industrial.

Policy 4.2: Promote local recycling of wastes and the use of recycled materials.

Tustin City Code

Article 8 of the Tustin City Code, Section 8100, Building and Construction Codes Adopted by Reference, includes adoption of 2022 California Energy Code (Title 24, Part 6), The 2022 California Green Building Standards Code (Title 24, Part 11), and 2022 California Building Code (Title 24, Part 2), as well as other state standards by the City.

5.2.3 ENVIRONMENTAL SETTING

5.2.3.1 Electricity

The Southern California Edison Company (SCE) is the electrical purveyor in the City of Tustin. SCE provides electricity service to more than 14 million people in a 50,000 square-mile area of central, coastal and Southern California. California utilities are experiencing increasing demands that require modernization of the electric distribution grid to, among other things, accommodate two-way flows of electricity and increase the grid's capacity. SCE is in the process of implementing infrastructure upgrades to ensure the ability to meet future demands. In addition, as described by the Edison International 2022 Annual Report, the SCE electrical grid modernization effort supports implementation of California requirements to achieve carbon neutrality by 2045. The state has set Renewables Portfolio Standards that require retail sellers of electricity to provide 60 percent of power from renewable resources by 2030. The state also requires sellers of electricity to deliver 100 percent of retail sales from carbon-free sources by 2045, including interim targets of 90 percent by 2035 and 95 percent by 2040. In 2022, approximately 48 percent of power that SCE delivered to customers came from carbon-free resources (Southern California Edison, 2022).

The Project site is currently served by electricity distribution systems that exist along the roadways adjacent to the Project site.

5.2.3.2 Natural Gas

The Southern California Gas Company (SoCalGas) is the natural gas purveyor in the City of Tustin and is the principal distributor of natural gas in Southern California. SoCalGas estimates that gas demand will decline at an annual rate of 1.5 percent from 2022 to 2035 due to modest economic growth, mandated energy efficiency standards and programs, renewable electricity goals, and fuel substitution (Southern California Gas Company, et. al., 2022). The gas supply available to SoCalGas is regionally diverse and includes supplies from California sources (onshore and offshore), Southwestern U.S. supply sources, the Rocky Mountains, and Canada. SoCalGas designs its facilities and supplies to provide continuous service during extreme peak demands and has identified the ability to meet peak demands through 2035.

The Project is within the service area of Southern California Gas Company (SoCal Gas).

5.2.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a Project could have a significant effect if it were to:

ENE-1 Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

ENE-2 Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

5.2.5 METHODOLOGY

A number of factors are considered when weighing whether a project would use a proportionately large amount of energy or whether the use of energy would be wasteful in comparison to other projects. Factors such as the use of on-site renewable energy features, energy conservation features or programs, and relative use of transit are considered.

According to Appendix F of the CEQA Guidelines, conserving energy is defined as decreasing overall per capita energy consumption, decreasing reliance on natural gas and oil, and increasing reliance on renewable energy sources. Neither Appendix F of the CEQA Guidelines nor Public Resources Code Section 21100(b)(3) offer a numerical threshold of significance that might be used to evaluate the potential significance of energy consumption of a project. Rather, the emphasis is on reducing "the wasteful, inefficient, and unnecessary consumption of energy."

Construction activities would result in wasteful, inefficient, or unnecessary use of energy if construction equipment is old or not well maintained, if equipment is left to idle when not in use, if travel routes are not planned to minimize vehicle miles traveled, or if excess lighting or water is used during construction activities. Energy usage during project operation would be considered "wasteful, inefficient, and unnecessary" if the project were to violate federal, state, and/or local energy standards, including Title 24 of the California Code of Regulations, inhibit pedestrian or bicycle mobility, inhibit access to transit, or inhibit feasible opportunities to use alternative energy sources, such as solar energy, or otherwise inhibit the conservation of energy.

5.2.6 ENVIRONMENTAL IMPACTS

IMPACT ENE-1: THE PROJECT WOULD NOT RESULT IN POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACT DUE TO WASTEFUL, INEFFICIENT, OR UNNECESSARY CONSUMPTION OF ENERGY RESOURCES, DURING PROJECT CONSTRUCTION OR OPERATION.

Less than Significant Impact.

As identified in the Project Description, the existing uses that were modeled consist of The Market Place that is currently developed with 747,165 sf of commercial business uses, including 57,456 sf of restaurant use, 23,662 sf of community center use, 24,483 sf of retail use, 5,559 sf of office use, and surface parking lots. The analysis was conducted using land use codes *High Turnover (Sit Down Restaurant), Strip Mall, General Office Building*, *Health Club,* and *Parking Lot*. Trip generation rates used in CalEEMod for the existing uses were based on the trip generation rate of 31,374 ADT.

The analysis of the future buildout of the Project site included the existing development, the buildout of 900 units, and the addition of the total remaining non-residential use including 13,032 sf of restaurant use. The analysis was conducted using land use codes *Apartments Mid Rise, High Turnover (Sit Down Restaurant), Strip Mall, General Office Building*, and *Health Club* assuming a total trip generation of 5,483 ADT. This analysis also assumes that the Project would not include any woodburning hearths or wood stoves. Where Project-specific data were not available, default assumptions (e.g., energy usage, water usage, and solid waste generation) from CalEEMod were used to estimate Project impacts.

Potential future buildout of the Project would increase the demand for energy through day-to-day operations and fuel consumption associated with Project construction. This section discusses energy use resulting from buildout of the Project and evaluates whether the Project would result in the wasteful, inefficient, or unnecessary consumption of energy resources or conflict with any applicable plans for renewable energy and energy efficiency.

Construction

Construction activities associated with the construction of the 900 additional housing units and remaining commercial buildout capacity that could occur with implementation of the project would be through the horizon year 2029, which would cause fuel consumption associated with construction activities. The primary source of emissions is the operation of construction equipment. Before development can take place, a project will be required to be analyzed for conformance with the City's General Plan, zoning requirements, and other applicable local and State requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits.

Construction activities would include grading, site preparation, building construction, architectural coating, and paving activities. Construction activities require energy associated with the manufacture and transportation of building materials, grading activities, and building construction. Construction activities also typically require electricity to power construction-related equipment and do not involve the consumption of natural gas.

Transportation energy represents the largest energy use during construction and would be from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction worker vehicles that would use petroleum fuels (e.g., diesel fuel and/or gasoline). Therefore, the analysis of energy use during construction focuses on fuel consumption. Construction trucks and vendor trucks hauling materials to and from a site would be anticipated to use diesel fuel, whereas construction workers traveling to and from a site would be anticipated to use gasoline-powered vehicles. Fuel consumption from transportation uses depends on the type and number of trips, VMT, the fuel efficiency of the vehicles, and the travel mode.

Estimates of fuel consumption (diesel fuel and gasoline) from construction equipment, construction trucks, and construction worker vehicles were based on default construction equipment assumptions and trip estimates from CalEEMod and fuel efficiencies from EMFAC2021. Fuel consumption estimates are presented in Table 5.2-1. CalEEMod output sheets and detailed energy calculations are included in Appendix B.

Table 5.2-1: Energy Consumption Estimates during Construction

Energy Type	Total Energy Consumption	Percentage of Increase Countywide
Diesel Fuel (total gallons)	152,695.5	0.10
Gasoline (total gallons)	284,229.4	0.02

Source: Compiled by LSA (February 2024).

As indicated in Table 5.2-1, development envisioned under the Project would consume approximately 152,695.5 gallons of diesel fuel and approximately 284,229.4 gallons of gasoline during construction. Based on fuel consumption obtained from EMFAC2021, approximately 1.2 billion gallons of gasoline and approximately 157.1 million gallons of diesel will be consumed from vehicle trips in Orange County in 2024. Therefore, construction of future development as envisioned under the Project would increase the annual construction-generated fuel use in Orange County by approximately 0.10 percent for diesel fuel usage and by approximately 0.02 percent for gasoline fuel usage. As such, project construction would have a negligible effect on local and regional energy supplies. Furthermore, impacts related to energy use during construction would be temporary and relatively small in comparison to Orange County's overall use of the State's available energy resources. No unusual Project characteristics would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or the State. In addition, construction activities are not anticipated to result in an inefficient use of energy as gasoline and diesel fuel would be supplied by construction contractors who would conserve the use of their supplies to minimize their costs on the project. The Project would not cause or result in the need for additional energy facilities or an additional or expanded delivery system. For these reasons, fuel consumption during construction would not be inefficient, wasteful, or unnecessary.

Operation

Operational activities associated with the 900 additional housing units and remaining commercial buildout capacity consistent with the buildout envisioned as part of the Project would result in energy demand associated with natural gas use, electricity consumption, and fuel used for vehicle trips. Energy consumption was estimated for the Project using default energy intensities by land use type in CalEEMod. In addition, the Project would also result in energy usage associated with gasoline and diesel fuel consumed by project-related vehicle trips. Trip generation rates for the Project were based on the Project's trip generation estimates. The existing uses generate approximately 31,374 ADT and the Project would generate approximately 36,857 ADT. The amount of operational fuel use was estimated using CARB's EMFAC2021 model, which provided projections for typical daily fuel usage in Orange County. Electricity, natural gas, and fuel usage estimates associated with the Project are shown in Table 5.2-2.

Table 5.2-2: Energy Consumption Estimates during Operation

Energy Type	Annual Energy Consumption
Existing Uses	
Electricity Consumption (kWh/year)	8,568,072
Natural Gas Consumption (therms/year)	117,062
Gasoline (gallons/year)	3,214,938.2
Diesel Fuel (gallons/year)	271,574.4
Full Buildout of the Project Site	
Electricity Consumption (kWh/year)	12,545,608
Natural Gas Consumption (therms/year)	232,051
Gasoline (gallons/year)	3,850,324.6
Diesel Fuel (gallons/year)	325,462.8

Net New Energy Usage (Project Buildout – Existing Uses)	
Electricity Consumption (kWh/year)	3,977,536
Natural Gas Consumption (therms/year)	114,989
Gasoline (gallons/year)	635,386
Diesel Fuel (gallons/year)	53,888

Source: Compiled by LSA (February 2024).
Wh = kilowatt-hours

As shown in Table 5.2-2, the estimated potential increase in electricity demand associated with development consistent with the Project is 3,977,536 kWh per year. Total electricity consumption in Orange County in 2022 was 20,244 GWh (20,243,721,856 kWh). Therefore, operation of the Project would increase the annual electricity consumption in Orange County by approximately 0.02 percent.

Additionally, as shown in Table 5.2-2, the estimated potential increase in natural gas demand associated with development consistent with the Project is 114,989 therms per year. Total natural gas consumption in Orange County in 2022 was 573 million therms (572,454,744 therms). Therefore, operation of the Project would increase the annual natural gas consumption in Orange County by approximately 0.02 percent.

Electrical and natural gas demand associated with future operations would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. Furthermore, the Project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. All future development would be required to adhere to all federal, state, and local requirements for energy efficiency, including the latest Title 24 standards. Title 24 building energy efficiency standards establish minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting, which would reduce energy usage.

Construction of the 900 additional housing units and remaining commercial buildout capacity would also result in energy usage associated with gasoline and diesel fuel consumed by project-related vehicle trips. As shown in Table 5.2-2, the increase in fuel use associated with the vehicle trips generated by the Project is estimated at approximately 635,386 gallons of gasoline and 53,888 gallons of diesel fuel per year. Based on fuel consumption obtained from EMFAC2021, approximately 1.2 billion gallons of gasoline and approximately 157.1 million gallons of diesel will be consumed from vehicle trips in Orange County in 2024. Therefore, vehicle trips associated with the Project would increase the annual fuel use in Orange County by approximately 0.05 percent for gasoline fuel usage and approximately 0.03 percent for diesel fuel usage. Fuel consumption associated with vehicle trips generated by project operations would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

Although future development, as envisioned under the Project, would result in an increase in demand for electricity, this increase would not require SCE to expand or construct infrastructure that could cause substantial environmental impacts because the project site is already served by utilities or directly adjacent to existing urban development. Similarly, natural gas infrastructure is not anticipated due to cumulative development. Transportation energy use would also increase; however, this transportation energy use would not represent a major amount of energy use when compared to the amount of existing development or to the total number of vehicle trips and VMT throughout Orange County and the region. As such, the buildout associated with the Project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation.

IMPACT ENE-2: THE PROJECT WOULD NOT CONFLICT WITH OR OBSTRUCT A STATE OR LOCAL PLAN FOR RENEWABLE ENERGY OR ENERGY EFFICIENCY.

Less than Significant Impact.

In 2002, the Legislature passed SB 1389, which required the CEC to develop an integrated energy plan every 2 years for electricity, natural gas, and transportation fuels for the Integrated Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies several strategies, including assistance to public agencies and fleet operators in implementing incentive programs for ZEVs and their infrastructure needs, and encouragement of urban designs that reduce VMT and accommodate pedestrian and bicycle access.

The CEC's *2023 Integrated Energy Policy Report* provides the results of the CEC's assessments of a variety of energy issues facing California. As indicated above, energy usage on the project site during construction would be temporary in nature and would be relatively small in comparison to the overall use in the County. In addition, energy usage associated with operation of the proposed project would be relatively small in comparison to the overall use in Orange County, and the State's available energy resources. Therefore, energy impacts at the regional level would be negligible. Because California's energy conservation planning actions are conducted at a regional level, and because the proposed project's total impact on regional energy supplies would be minor, the proposed project would not conflict with or obstruct California's energy conservation plans as described in the CEC's Integrated Energy Policy Report. Additionally, as demonstrated above, the proposed project would not result in the inefficient, wasteful, and unnecessary consumption of energy.

5.2.7 CUMULATIVE IMPACTS

The geographic context for analysis of cumulative impacts regarding energy includes past, present, and future development within southern California because energy supplies (including electricity, natural gas, and petroleum) are generated and distributed throughout the southern California region.

All development projects throughout the region would be required to comply with the energy efficiency standards in the Title 24 requirements. Additionally, some of the developments could provide for additional reductions in energy consumption by use of solar panels, sky lights, or other LEED-type energy efficiency infrastructure. With implementation of the existing energy conservation regulations, cumulative electricity and natural gas consumption would not be cumulatively wasteful, inefficient, or unnecessary.

Transportation energy use and gasoline demand would also increase; however, this transportation energy use would not represent a major amount of energy use when compared to the amount of existing development or to the total number of vehicle trips and VMT throughout Orange County and the region. For these reasons, the consumption of petroleum would not occur in a wasteful, inefficient, or unnecessary manner and would be less than cumulatively considerable.

5.2.8 EXISTING REGULATIONS AND PLANS, PROGRAMS, OR POLICIES

Existing Regulations

State

- California Energy Code (Code of Regulations, Title 24 Part 6).
- 2022 California Green Building Standards Code (Code of Regulations, Title 24, Part 11)

Plans, Programs, or Policies

These actions will be included in the Project's mitigation monitoring and reporting program (MMRP):

PPP E-1: CalGreen Compliance: The Project is required to comply with the CalGreen Building Code to ensure efficient use of energy. CalGreen specifications are required to be incorporated into building plans as a condition of building permit approval.

5.2.9 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements, Impacts E-1and E-2 would be less than significant.

5.2.10 MITIGATION MEASURES

Impacts related to energy would be less than significant and no mitigation measures are required.

5.2.11 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts related to energy would be less than significant.

5.2.12 REFERENCES

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5.3 Greenhouse Gas Emissions

5.3.1 INTRODUCTION

This section of the Draft EIR evaluates greenhouse gas (GHG) emissions associated with the Project and its contribution to global climate change. Specifically, this section evaluates the extent to which GHG emissions from the Project contribute to elevated levels of GHGs in the Earth's atmosphere and consequently, contributes to climate change. This section also addresses the Project's consistency with applicable plans, policies, and public agency regulations adopted for the purpose of reducing the emissions of GHGs. The analysis within this section is based on the following City documents and technical report in Appendix B:

- *City of Tustin General Plan* (including 2021-2029 Housing Element), adopted November 2018 and updated October 2022.
- *East Tustin Specific Plan*, adopted March 1986 and updated November 1997.
- *Tustin City Code*.
- *The Market Place Air Quality, Energy, and Greenhouse Gas Report*, LSA, April 2024, Appendix B.

5.3.2 REGULATORY SETTING

5.3.2.1 State Regulations

California Assembly Bill 1493– Pavley

In 2002, the California Legislature adopted AB 1493 requiring the adoption of regulations to reduce GHG emissions in the transportation sector. In September 2004, pursuant to AB 1493, the CARB approved regulations to reduce GHG emissions from new motor vehicles beginning with the 2009 model year (Pavley Regulations). In September 2009, CARB adopted amendments to the Pavley Regulations to reduce GHG from 2009 to 2016. CARB, EPA, and the U.S. Department of Transportation's National Highway Traffic and Safety Administration (NHTSA) have coordinated efforts to develop fuel economy and GHG standards for model 2017-2025 vehicles. The GHG standards are incorporated into the "Low Emission Vehicle" (LEV) Regulations.

California Executive Order S-3-05 – Statewide Emission Reduction Targets

Executive Order S-3-05 was signed by Governor Arnold Schwarzenegger in June 2005. Executive Order S-3-05 establishes statewide emission reduction targets through the year 2050:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

Assembly Bill 1279

Assembly Bill (AB) 1279 requires the state to achieve net zero greenhouse gas emissions (GHG) as soon as possible, but no later than 2045, and to achieve and maintain net negative greenhouse gas emissions thereafter. The bill also requires California to reduce statewide GHG emissions by 85 percent compared to 1990 levels and directs the California Air Resources Board (CARB) to work with relevant state agencies to achieve these goals.

California Assembly Bill 32 (AB 32), Global Warming Solutions Act of 2006 (Chapter 488, Statutes of 2006)

In 2006, the Legislature passed the California Global Warming Solutions Act of 2006 [Assembly Bill 32 (AB 32)], which created a comprehensive, multi-year program to reduce greenhouse gas (GHG) emissions in California. AB 32 required the California Air Resources Board (CARB or Board) to develop a Scoping Plan that describes the approach California will take to reduce GHGs to achieve the goal of reducing emissions to 1990 levels by 2020. The Scoping Plan was first approved by the Board in 2008 and must be updated at least every five years. Since 2008, there have been two updates to the Scoping Plan. Each of the Scoping Plans has included a suite of policies to help the State achieve its GHG targets, in large part leveraging existing programs whose primary goal is to reduce harmful air pollution. The 2017 Scoping Plan identifies how the State can reach the 2030 climate target to reduce greenhouse gas (GHG) emissions by 40 percent from 1990 levels, and substantially advance toward the 2050 climate goal to reduce GHG emissions by 80 percent below 1990 levels.

The AB 32 Scoping Plan also anticipates that local government actions will result in reduced GHG emissions because local governments have the primary authority to plan, zone, approve, and permit development to accommodate population growth and the changing needs of their jurisdictions. The Scoping Plan also relies on the requirements of Senate Bill 375 (discussed below) to align local land use and transportation planning for achieving GHG reductions.

The Scoping Plan must be updated every five years to evaluate AB 32 policies and ensure that California is on track to achieve the 2020 GHG reduction goal. In 2014, CARB released the First Update to the Scoping Plan, which builds upon the Initial Scoping Plan with new strategies and recommendations. The First Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. This update defines CARB's climate change priorities for the next five years and sets the groundwork to reach long-term goals set forth in Executive Order S-3-05. The update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals in the original 2008 Scoping Plan. It also evaluates how to align the state's "longer-term" GHG reduction strategies with other state policy priorities for water, waste, natural resources, clean energy, transportation, and land use.

In 2017, CARB released the proposed Second Update to the Scoping Plan, which identifies the State's post-2020 reduction strategy. The Second Update would reflect the 2030 target of a 40 percent reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32.

On December 15, 2022, CARB adopted the 2022 Scoping Plan. The 2022 Scoping Plan builds on the 2017 Scoping Plan as well as the requirements set forth by AB 1279, which directs the state to become carbon neutral no later than 2045. To achieve this statutory objective, the 2022 Scoping Plan lays out how California can reduce GHG emissions by 85% below 1990 levels and achieve carbon neutrality by 2045. The Scoping Plan scenario to do this is to "deploy a broad portfolio of existing and emerging fossil fuel alternatives and clean technologies, and align with statutes, Executive Orders, Board direction, and direction from the governor." The 2022 Scoping Plan sets one of the most aggressive approaches to reach carbon neutrality in the world. Unlike the 2017 Scoping Plan, CARB advocates for compliance with a local GHG reduction strategy or climate action plan (CAP) consistent with CEQA Guidelines section 15183.5.

Senate Bill 375 (Chapter 728, Statutes of 2008)

In August 2008, the Legislature passed, and on September 30, 2008, Governor Schwarzenegger signed SB 375, which addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. Regional GHG reduction targets for the automobile and light-truck

sector for 2020 and 2035, as determined by CARB, are required to consider the emission reductions associated with vehicle emission standards (see SB 1493), the composition of fuels (see Executive Order S-1-07), and other CARB-approved measures to reduce GHG emissions. Regional metropolitan planning organizations (MPOs) will be responsible for preparing a Sustainable Communities Strategy (SCS) within their Regional Transportation Plan (RTP). The goal of the SCS is to establish a development plan for the region, which, after considering transportation measures and policies, will achieve, if feasible, the GHG reduction targets. If an SCS is unable to achieve the GHG reduction target, an MPO must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies. SB 375 provides incentives for streamlining CEQA requirements by substantially reducing the requirements for "transit priority projects," as specified in SB 375, and eliminating the analysis of the impacts of certain residential projects on global warming and the growth-inducing impacts of those projects when the projects are consistent with the SCS or Alternative Planning Strategy. On September 23, 2010, CARB adopted the SB 375 targets for the regional MPOs.

Executive Order B-30-15 – 2030 Statewide Emission Reduction Target

Executive Order B-30-15 was signed by Governor Jerry Brown on April 29, 2015, establishing an interim statewide GHG reduction target of 40 percent below 1990 levels by 2030, which is necessary to guide regulatory policy and investments in California in the midterm, and put California on the most cost-effective path for long-term emission reductions. Under this Executive Order, all state agencies with jurisdiction over sources of GHG emissions are required to continue to develop and implement emissions reduction programs to reach the state's 2050 target and attain a level of emissions necessary to avoid dangerous climate change. According to the Governor's Office, this Executive Order is in line with the scientifically established levels needed in the United States to limit global warming below 2°C - the warming threshold at which scientists say there will likely be major climate disruptions such as super droughts and rising sea levels.

Senate Bill 32 (Chapter 249, Statutes of 2016)

Senate Bill 32 was signed on September 8, 2016 by Governor Jerry Brown. SB 32 requires the state to reduce statewide GHG emissions to 40 percent below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal of 1990 levels by 2020 and provides an intermediate goal to achieving S-3-05, which sets a statewide GHG reduction target of 80 percent below 1990 levels by 2050. A related bill that was also approved in 2016, AB 197 (Chapter 250, Statutes of 2016) creates a legislative committee to oversee regulators to ensure that ARB is not only responsive to the Governor, but also the Legislature.

AB 398 – Extension of Cap and Trade Program to 2030 (**Chapter 617, Statutes of 2017**)

AB 398 was signed by Governor Brown on July 25, 2017 and became effective immediately as urgency legislation. AB 398, among other things, extended the cap and trade program through 2030.

Senate Bill 97 (Chapter 185, Statutes of 2007)

SB 97 (Health and Safety Code Section 21083.5) was adopted in 2007 and required the Office of Planning and Research to prepare amendments to the CEQA Guidelines for the mitigation of GHG impacts. The amendments became effective on March 18, 2010. The CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. A new section, CEQA Guidelines Section 15064.4, was added to assist agencies in determining the significance of GHG emissions. The CEQA Section gives discretion to the lead agency whether to: (1) use a model of methodology to quantify GHG emissions resulting from a project, and which model or methodology to use;

or (2) rely on a qualitative analysis or performance-based standards. CEQA does not provide guidance to determine whether the project's estimated GHG emissions are significant or cumulatively considerable.

Also amended were CEQA Guidelines Sections 15126.4 and 15130, which address mitigation measures and cumulative impacts respectively. However, GHG mitigation measures are referenced in general terms, and no specific measures are identified. Additionally, the revision to the cumulative impact discussion requirement (Section 15130) simply directs agencies to analyze GHG emissions in an EIR when a project's incremental contribution of emissions may be cumulatively considerable, however it does not answer the question of when emissions are cumulatively considerable.

The 2018 amendments to the CEQA Guidelines provided expanded guidance to lead agencies in evaluating GHG impacts, as outlined in Sections 15064.4 and 15064.7. A lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to evaluate a project's incremental contribution to climate change, provided that the model or methodology is supported by substantial evidence.

Section 15183.5 permits programmatic GHG analysis and later project-specific tiering, as well as the preparation of Greenhouse Gas Reduction Plans. Compliance with such plans can support a determination that a project's cumulative effect is not cumulatively considerable, according to Section 15183.5(b).

Title 24 Energy Efficiency Standards and California Green Building Standards

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code (CalGreen) is updated every three years. The most recent update was the 2022 California Green Building Code Standards that became effective on January 1, 2023.

The 2022 Energy Code encourages efficient electric heat pumps, establishes electric-ready requirements for new homes, expands solar photovoltaic and battery storage standards, and strengthens ventilation standards, among other requirements. The California Energy Commission anticipates that the 2022 Energy Code will provide $1.5 billion in consumer benefits and reduce GHG emissions by 10 million metric tons.

The 2022 CALGreen standards that reduce GHG emissions and are applicable to the Project include, but are not limited to, the following:

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- Designated parking for clean air vehicles. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- EV charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided for is contained in Table 5.106. 5.3.3 (5.106.5.3). Additionally, Table 5.106.5.4.1 specifies requirements for the installation of raceway conduit and panel power requirements for medium- and heavy-duty electric vehicle supply equipment for warehouses, grocery stores, and retail stores.
- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Table 5.106.8 (5.106.8).

- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reuse or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
    - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1)
    - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
    - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
    - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).
- Outdoor potable water uses in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 SF or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 SF. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 SF requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 SF and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

The 2022 CalGreen Building Standards Code has been adopted by the City of Tustin pursuant to Ordinance No. 1529.

5.3.2.2 Local and Regional Regulations

City of Tustin General Plan

The City's General Plan Conservation, Open Space, and Recreation Element contains the following goals and policies related to improving air quality and reducing particulate emissions.

Goal 1: **Reduce air pollution through proper land use, transportation and energy use planning.**

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.

Policy 1.2: Design safe and efficient vehicular access to commercial land uses from arterial streets to insure efficient vehicular ingress and egress.

Policy 1.3: Locate multiple family developments close to commercial areas to encourage pedestrian rather than vehicular travel.

Policy 1.7: Create the maximum possible opportunities for bicycles as an alternative transportation mode and recreational use.

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.**

Policy 2.1: Reduce vehicle trips through incentives, regulations and/or Transportation Demand Management (TDM) programs.

Policy 2.2: Reduce total vehicle miles traveled (VMT) through incentives, regulations and/or Transportation Demand Management.

Policy 2.6: Encourage non-motorized transportation through the provision of bicycle and pedestrian pathways.

Policy 2.7: Encourage employer rideshare and transit incentives programs by local businesses.

Policy 2.8: Manage non-residential parking supply to discourage auto use, while ensuring that economic development goals will not be sacrificed.

5.3.3 ENVIRONMENTAL SETTING

Gases that trap heat in the atmosphere are called GHGs. The major concern with GHGs is that increases in their concentrations are contributing to global climate change. Global climate change is a change in the average weather on Earth that can be measured by wind patterns, storms, precipitation, and temperature. Although there is disagreement as to the rate of global climate change and the extent of the impacts attributable to human activities, most in the scientific community agree that there is a direct link between increased emissions of GHGs and long-term global temperature increases.

The principal GHGs are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), perfluorocarbons (PFCs), and hydrofluorocarbons (HFCs). Because different GHGs have different warming potential, and CO_2 is the most common reference gas for climate change, GHG emissions are often quantified and reported as CO_2 equivalents (CO_2e). For example, SF_6 is a GHG commonly used in the utility industry as an insulating gas in circuit breakers and other electronic equipment. SF_6, while comprising a small fraction of the total GHGs emitted annually world-wide, is a much more potent GHG, with 22,800 times the global

warming potential as CO_2. Therefore, an emission of one metric ton (MT) of SF_6 could be reported as an emission of 22,800 MT of CO_2e. Large emission sources are reported in million metric tons (MMT) of CO_2e. The principal GHGs are described below, along with their global warming potential.

Carbon dioxide: Carbon dioxide (CO_2) is an odorless, colorless, natural GHG. Carbon dioxide's global warming potential is 1. Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic (manmade) sources are from burning coal, oil, natural gas, and wood.

Methane: Methane (CH_4) is a flammable gas and is the main component of natural gas. It has a lifetime of 12 years, and its global warming potential is 28. Methane is extracted from geological deposits (natural gas fields). Other sources are landfills, fermentation of manure, and decay of organic matter.

Nitrous oxide: Nitrous oxide (N_2O) (laughing gas) is a colorless GHG that has a lifetime of 121 years, and its global warming potential is 265. Sources include microbial processes in soil and water, fuel combustion, and industrial processes.

Sulfur hexafluoride: Sulfur hexafluoride (SF_6) is an inorganic, odorless, colorless, and nontoxic, nonflammable gas that has a lifetime of 3,200 years and a high global warming potential of 23,500. This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas.

Perfluorocarbons: Perfluorocarbons (PFCs) have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Their global warming potential ranges from 7,000 to 11,000. Two main sources of perfluorocarbons are primary aluminum production and semiconductor manufacturing.

Hydrofluorocarbons: Hydrofluorocarbons (HFCs) are a group of GHGs containing carbon, chlorine, and at least one hydrogen atom. Their global warming potential ranges from 100 to 12,000. Hydrofluorocarbons are synthetic manmade chemicals used as a substitute for chlorofluorocarbons in applications such as automobile air conditioners and refrigerants.

Some of the potential effects in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more forest fires, and more drought years. Globally, climate change has the potential to impact numerous environmental resources through potential, though uncertain, impacts related to future air temperatures and precipitation patterns. The projected effects of global warming on weather and climate are likely to vary regionally, but are expected to include the following direct effects:

- Higher maximum temperatures and more hot days over nearly all land areas;
- Higher minimum temperatures, fewer cold days and frost days over nearly all land areas;
- Reduced diurnal temperature range over most land areas;
- Increase of heat index over land areas; and
- More intense precipitation events.

There are also many secondary effects that are projected to result from global warming, including global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity. While the possible outcomes and the feedback mechanisms involved are not fully understood and much research remains to be done, the potential for substantial environmental, social, and economic consequences over the long term may be great.

GHGs are produced by both direct and indirect emissions sources. Direct emissions include consumption of natural gas, heating and cooling of buildings, landscaping activities and other equipment used directly by

land uses. Indirect emissions include the consumption of fossil fuels for vehicle trips, electricity generation, water usage, and solid waste disposal.

Global Emissions

Worldwide emissions of GHGs in 2020 totaled 22.9 billion metric tons (MT) of CO_2e. Global estimates are based on country inventories developed as part of the programs of the United Nations Framework Convention on Climate Change.[1]

United States Emissions

In 2021, the year for which the most recent data are available, the United States emitted about 5,586.0 million metric tons of CO_2e (MMT CO_2e) after accounting for sequestration from the land sector. Overall, emissions in 2021 increased by 6 percent since and were 17 percent lower than 2005 levels. The increase in total GHG emissions was driven by an increase in CO_2 emissions from fossil fuel combustion.

In 2021, CO2 emissions from fossil fuel combustion increased by 7 percent relative to the previous year. This increase in fossil fuel consumption emissions was due primarily to economic activity rebounding after the height of the COVID-19 pandemic. Of the five major sectors—residential and commercial, agricultural, industry, transportation, and electricity generation—transportation accounted for the highest amount of GHG emissions in 2021 (approximately 28 percent), with electricity generation second at 25 percent and emissions from industry third at 23 percent (U.S. Environmental Protection Agency, 2023).

5.3.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a Project could have a significant effect if it were to:

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

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

CEQA Guidelines Section 15064.4 provides discretion to the lead agency whether to: (1) use a model of methodology to quantify GHG emissions resulting from a project, and which model or methodology to use; or (2) rely on a qualitative analysis or performance-based standards. In addition, CEQA does not provide guidance to determine whether the project's estimated GHG emissions are significant, but recommends that lead agencies consider several factors that may be used in the determination of significance of project related GHG emissions, including:

- The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting.
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

[1] United Nations Framework Convention on Climate Change (UNFCCC). 2021. GHG Data from UNFCCC. Website: unfccc.int/process-and-meetings/transparency-and-reporting/greenhouse-gas-data/ghg-data-unfccc/ghg-data-from-unfccc (accessed January 2024).

CEQA Guidelines Section 15130(f) describes that the effects of GHG emissions are by their very nature cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis. Additionally, CEQA Guidelines Section 15064(h)3 states that a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides requirements to avoid or lesson the cumulative problem.

To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, SCAQMD convened a GHG CEQA Significance Threshold Working Group (Working Group). Based on the last Working Group meeting held in September 2010 (Meeting No. 15), SCAQMD proposed to adopt a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency:

- Tier 1. Exemptions: If a project is exempt from CEQA, project-level and cumulative GHG emissions are less than significant.

- Tier 2. Consistency with a locally adopted GHG Reduction Plan: If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project's geographic area (i.e., city or county), project-level and cumulative GHG emissions are less than significant.

- Tier 3. Numerical Screening Threshold: If GHG emissions are less than the numerical screening-level threshold, project-level and cumulative GHG emissions are less than significant.

  For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, SCAQMD requires an assessment of GHG emissions. The 10,000 MT of CO2e per year (MT CO2e/yr) threshold for industrial uses would be recommended for use by all lead agencies. Under Option 1, separate screening thresholds are proposed for residential projects (3,500 MT CO2e/yr), commercial projects (1,400 MT CO2e/yr), and mixed-use projects (3,000 MT CO2e/yr). Under Option 2, a single numerical screening-level threshold of 3,000 MT CO2e/yr would be used for all non-industrial projects.

- Tier 4. Performance Standards: If emissions exceed the numerical screening threshold, a more detailed review of the project's GHG emissions is warranted. SCAQMD has proposed an efficiency target for projects that exceed the bright-line threshold. The current recommended approach is per capita efficiency targets. SCAQMD is not recommending use of a percent emissions reduction target. Instead, SCAQMD proposes a 2020 efficiency target of 4.8 MT CO2e/yr per service population (for project-level analyses and 6.6 MT CO2e/yr per service population for plan-level projects (e.g., program-level projects such as general plans). The GHG efficiency metric divides annualized GHG emissions by the service population, which is the sum of residents and employees, per the following equation:

  Rate of Emission: GHG Emissions (MT CO2e/yr) ÷ Service Population

  The efficiency evaluation consists of comparing the project's efficiency metric to efficiency targets. Efficiency targets represent the maximum quantity of emissions each resident and employee in the State of California could emit in various years based on emissions levels necessary to achieve the statewide GHG emissions reduction goals. A project that results in a lower rate of emissions would be more efficient than a project with a higher rate of emissions, based on the same service population. The metric considers GHG reduction measures integrated into a project's design and operation (or through mitigation). The per capita efficiency targets are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for the CARB's 2008 Scoping Plan.

Relative to the 2035 target date, this target date was selected to be consistent with the GHG reduction target date of SB 375. Overall, GHG reductions by the SB 375 target date of 2035 would be approximately 40 percent. This 40 percent reduction was applied to the 2020 targets, resulting in an efficiency threshold for plans of 4.1 MT CO2e/yr and an efficiency threshold at the project level of 3.0 MT CO2e/yr.

For the purpose of this analysis, the Project will be compared to the SCAQMD screening-level Tier 3 Numerical Screening Threshold of 3,000 MT CO2e/yr for all land use type projects. Because it is not yet known whether full buildout at The Market Place, including the 900 additional housing units allowed under the proposed Housing Overlay (HO) and the remaining commercial buildout capacity, would occur, this analysis does not compare the Project's emissions to the service population threshold. In addition, the proposed Project is also evaluated for compliance with the 2022 Scoping Plan and the 2024-2050 RTP/SCS.

5.3.5 METHODOLOGY

The California Emissions Estimator Model (CalEEMod) v2022.1.1.20 has been used to determine construction and operational GHG emissions for buildout of the Project, based on the maximum development assumptions outlined in Section 3.0*, Project Description*. The purpose of this model is to calculate construction-source and operational-source GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from measures incorporated into the Project to reduce or minimize GHG emissions. For construction phase Project emissions, GHGs are quantified and, per SCAQMD methodology, the total GHG emissions for construction activities are divided by 30-years, and then added to the annual operational phase of GHG emissions.

In addition, CEQA requires the lead agency consider the extent to which the Project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Therefore, this section addresses whether the Project complies with various programs and measures designed to reduce GHG emissions. There is no Statewide program or regional program or plan that has been adopted with which all new development must comply; thus, this analysis has identified the regulations most relevant to the City of Tustin and the Project.

Recognizing that the field of global climate change analysis is rapidly evolving, the approaches advocated most recently indicate that for determining a project's contribution to GHG emissions, lead agencies should calculate, or estimate, emissions from vehicular traffic, energy consumption, water conveyance and treatment, waste generation, construction activities, and any other significant source of emissions within the Project area.

5.3.6 ENVIRONMENTAL IMPACTS

IMPACT GHG-1: THE PROJECT WOULD GENERATE GREENHOUSE GAS EMISSIONS, EITHER DIRECTLY OR INDIRECTLY, THAT MAY HAVE A SIGNIFICANT IMPACT ON THE ENVIRONMENT.

An Air Quality, Energy, and Greenhouse Gas Impact Report was prepared for the Project (LSA, 2024). The analysis and conclusions are incorporated into the discussion below. The full report can be found in Appendix B.

Significant and Unavoidable.

As identified in the Project Description, the City's 2021–2029 Housing Element identifies several adequate sites that are able to accommodate the development of up to 900 additional housing units for the City to meet its estimated housing growth needs identified in the SCAG's RHNA allocation. Of the Housing Element inventory sites, The Market Place (the Project site) was identified as necessary for rezoning under Housing Element Program 1.1f to allow for high density residential/mixed use development. The Project would

accommodate up to 900 housing units to help the City meet its RHNA allocation. Additionally, the Project site has additional existing nonresidential capacity of 13,032 SF. Therefore, the analysis below considers potential future buildout of 900 residential units (high density multifamily) and 13,032 SF of nonresidential development (land use has been assumed restaurant for purposes of the analysis but would not be limited to such).

Construction

Construction activities associated with the potential future construction of 900 housing units and remaining commercial buildout capacity would cause short-term GHG emissions. Construction activities for the Project would produce combustion emissions from various sources. During construction, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO2, CH4, and N2O. Furthermore, CH4 is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

As indicated above, the SCAQMD does not have an adopted threshold of significance for construction-related GHG emissions. However, lead agencies are required to quantify and disclose GHG emissions that would occur during construction. The SCAQMD then requires the construction GHG emissions to be amortized over the life of the project, defined by the SCAQMD as 30 years, added to the operational emissions, and compared to the applicable interim GHG significance threshold tier.

As discussed under Section 5.1, *Air Quality,* and shown in Table 5.1-6, information regarding a specific development project is not yet known; however, for the purposes of this analysis, future development of the additional 900 units and remaining commercial buildout capacity associated with the Project could occur anytime between October 2024 and October 2029. Therefore, to be conservative, this analysis assumes a Project construction schedule based on a start date of October 2024 and a construction period of two years (construction ending April 2026). Using CalEEMod, it is estimated that development envisioned under the Project would generate approximately 2,433.0 MT CO2e during construction of the Project. When annualized over the 30-year life of the project, annual construction emissions would be 80.1 MT CO2e.

Operation

Operational activities associated with the 900 additional housing units and remaining commercial buildout capacity consistent with the buildout envisioned as part of the Project would result in long-term GHG emissions associated with mobile sources (e.g., vehicle trips), area sources (e.g., maintenance activities and landscaping), indirect emissions from sources associated with energy consumption, waste sources (land filling and waste disposal), and water sources (water supply and conveyance, treatment, and distribution). Mobile-source GHG emissions would include Project-generated vehicle trips to and from the Project. Area-source emissions would be associated with activities such as landscaping and maintenance on the Project site. Energy source emissions would be generated at off-site utility providers because of the increased electricity demand generated by the Project. Waste source emissions generated by the Project include energy generated by land filling and other methods of disposal related to transporting and managing project-generated waste. In addition, water source emissions associated with the Project are generated by water supply and conveyance, water treatment, water distribution, and wastewater treatment.

Following guidance from the SCAQMD, GHG emissions were estimated using CalEEMod. Table 5.3-2 shows the calculated GHG emissions for development consistent with the Project.

As discussed above, according to SCAQMD, a project would have less than significant GHG emissions if it would result in operational-related GHG emissions of less than 3,000 MT CO2e/yr. Based on the analysis results, full buildout of the development envisioned under the Project would result in a net increase of 8,166.9 MT CO2e/yr, which would exceed the SCAQMD threshold of 3,000 MT CO2e/yr.

However, before development can occur, once a specific development project is proposed, it would be required to be analyzed for conformance with the General Plan, zoning requirements, and other applicable local and State requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits. As demonstrated below, the likely scale and extent of build out associated with future projects would likely exceed the SCAQMD thresholds. As such, implementation of Mitigation Measure GHG-1 would require a project-specific assessment of potential GHG impacts and implementation of feasible mitigation measures to reduce GHG emissions.

While Mitigation Measure GHG-1 would serve to reduce GHG emissions associated with buildout of the Project, GHG emission impacts would remain significant and unavoidable because compliance with future efficiency targets cannot be assured.

Table 5.3-1: Greenhouse Gas Emissions (MT/yr)

Emissions Source	Operational Emissions (MT/yr)			
	CO2	CH4	N2O	CO2e
Existing Uses				
Existing Uses Mobile Sources	30,816.0	1.7	1.3	31,311.0
Existing Uses Area Sources	15.2	<0.1	<0.1	15.2
Existing Uses Energy Sources	2,909.0	0.2	<0.1	2,919.0
Existing Uses Water Sources	135.0	2.2	0.1	207.0
Existing Uses Waste Sources	135.0	13.5	0.0	474.0
Full Buildout of the Project Site				
Project Buildout Mobile Sources	36,885.0	2.0	1.6	37,475.0
Project Buildout Area Sources	214.0	<0.1	<0.1	214.0
Project Buildout Energy Sources	4,258.0	0.3	<0.1	4,273.0
Project Buildout Water Sources	208.0	3.5	0.1	320.0
Project Buildout Waste Sources	209.0	20.9	0.0	730.0
Project Buildout Emissions	41,744.0	26.7	1.7	43,012.0
Amortized Construction Emissions				81.1
Total Project Buildout Annual Emissions				43,093.1
Net New Emissions (Project Buildout – Existing Uses)				8,166.9
SCAQMD Threshold				3,000
Exceed?				Yes

Source: Compiled by LSA (April 2024).
CH4 = methane
CO2 = carbon dioxide
CO2e = carbon dioxide equivalent MT/yr = metric tons per year
N2O = nitrous oxide
SCAQMD = South Coast Air Quality Management District

IMPACT GHG-2: THE PROJECT WOULD CONFLICT WITH AN APPLICABLE PLAN, POLICY OR REGULATION ADOPTED FOR THE PURPOSE OF REDUCING THE EMISSIONS OF GREENHOUSE GASES.

Significant and Unavoidable.

An evaluation of the Project's consistency with the 2022 Scoping Plan and the 2024-2050 RTP/SCS is provided below.

2022 Scoping Plan

The following discussion evaluates the Project according to the goals of the 2022 Scoping Plan, EO B-30-15, AB 1279, SB 32, and AB 197.

EO B-30-15 added the immediate target of reducing GHG emissions to 40 percent below 1990 levels by 2030. CARB released a second update to the Scoping Plan, the 2017 Scoping Plan, to reflect the 2030 target set by EO B-30-15 and codified by SB 32. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in EO B-30-15. SB 32 builds on AB 32 and keeps us on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels. The companion bill to SB 32, AB 197, provides additional direction to the CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 intended to provide easier public access to air emissions data that are collected by CARB was posted in December 2016. AB 1279 establishes State policy to achieve net zero GHG emissions no later than 2045 and for Statewide anthropogenic GHG emissions to be reduced to at least 85 percent below 1990 levels by 2045.

In addition, the 2022 Scoping Plan assesses progress toward the statutory 2030 target, while laying out a path to achieving carbon neutrality no later than 2045. The 2022 Scoping Plan focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

The 2022 Scoping Plan focuses on building clean energy production and distribution infrastructure for a carbon-neutral future, including transitioning existing energy production and transmission infrastructure to produce zero-carbon electricity and hydrogen, and utilizing biogas resulting from wildfire management or landfill and dairy operations, among other substitutes. The 2022 Scoping Plan states that in almost all sectors, electrification will play an important role. The 2022 Scoping Plan evaluates clean energy and technology options and the transition away from fossil fuels, including adding four times the solar and wind capacity by 2045 and about 1,700 times the amount of current hydrogen supply. As discussed in the 2022 Scoping Plan, EO N-79-20 requires that all new passenger vehicles sold in California will be zero-emission by 2035, and all other fleets will have transitioned to zero-emission as fully possible by 2045, which will reduce the percentage of fossil fuel combustion vehicles.

Energy efficient measures are intended to maximize energy efficiency building and appliance standards, pursue additional efficiency efforts including new technologies and new policy and implementation mechanisms, and pursue comparable investment in energy efficiency from all retail providers of electricity in California. In addition, these measures are designed to expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings. As identified above, buildout of the Project would be required to comply with the latest Title 24 and CALGreen Code standards regarding energy conservation and green building standards. Therefore, the Project would comply with applicable energy measures.

Water conservation and efficiency measures are intended to continue efficiency programs and use cleaner energy sources to move and treat water. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions. As noted above, buildout associated with the Project would be required to comply with the latest Title 24 and CALGreen Code standards, which include a variety of different measures, including reduction of wastewater and water use. In addition, the project would be required to comply with the California Model Water Efficient Landscape Ordinance. Therefore, the Project would not conflict with any of the water conservation and efficiency measures.

The goal of transportation and motor vehicle measures is to develop regional GHG emissions reduction targets for passenger vehicles. Specific regional emission targets for transportation emissions would not directly apply to the Project. The second phase of Pavley standards will reduce GHG emissions from new cars by 34 percent from 2016 levels by 2025, resulting in a 3 percent decrease in average vehicle emissions for all vehicles by 2020. Vehicles traveling to the project site would comply with the Pavley II (LEV III) Advanced Clean Cars Program. Therefore, the Project would not conflict with the identified transportation and motor vehicle measures.

2024-2050 Regional Transportation Plan/Sustainable Communities Strategy

SCAG's RTP/SCS identifies that land use strategies that focus on new housing and job growth in areas served by high quality transit and other opportunity areas would be consistent with a land use development pattern that supports and complements the proposed transportation network. The core vision in the 2024-2050 RTP/SCS is to better manage the existing transportation system through design management strategies, integrate land use decisions and technological advancements, create complete streets that are safe to all roadway users, preserve the transportation system, and expand transit and foster development in transit-oriented communities. The 2024-2050 RTP/SCS contains transportation projects to help more efficiently distribute population, housing, and employment growth, as well as forecast development that is generally consistent with regional-level general plan data. The forecasted development pattern, when integrated with the financially constrained transportation investments identified in the 2024-2050 RTP/SCS, would reach the GHG emissions reduction target set by CARB, including the regional target of reducing GHG emissions from autos and light-duty trucks by 19 percent by 2035 (compared to 2005 levels). The 2024-2050 RTP/SCS does not require that local General Plans, Specific Plans, or zoning be consistent with the 2024-2050 RTP/SCS but provides incentives for consistency for governments and developers.

The objectives of the 2024–2050 RTP/SCS are to create a region with: transit as a backbone of the transportation system; more Complete Streets where people and safety are prioritized; policies that encourage emerging technologies and mobility innovations that support rather than hamper regional goals; more housing, jobs, and mobility options closer together in Priority Development Areas to preserve natural lands and open spaces; more housing to address the existing housing need as defined by the RHNA; safe and fluid movement of goods, with a commitment to the broad deployment of zero- and near-zero emission technologies.

With respect to determining the Project's consistency with AQMP growth assumptions, the projections in the AQMP for achieving air quality goals are based on assumptions in SCAG's RTP/SCS regarding population, housing, and growth trends. According to SCAG's 2024–2050 RTP/SCS, in 2019, the City's population was 80,400 residents and the City had 27,000 households and 51,700 jobs. Households are forecast to increase by approximately 6,800 households by 2035 and 7,000 households by 2050 and employment are forecast to increase by approximately 14,600 jobs by 2035 and 19,600 jobs by 2050 (Southern California Association of Governments, 2024).

As identified in the Project Description, the City's 2021–2029 Housing Element identifies several adequate sites that are able to accommodate the development of up to 900 additional housing units for the City to meet its estimated housing growth needs identified in the SCAG's RHNA allocation. Of the Housing Element inventory sites, The Market Place (the Project site) was identified as necessary for rezoning under Housing Element Program 1.1f to allow for high density residential/mixed use development. The Project would accommodate up to 900 housing units to help the City meet its RHNA allocation.

The development of 900 housing units would result in approximately 2,592 additional residents based on the estimated 2.88 persons per household average in Tustin (State of California Department of Finance, 2023). Future development implemented in accordance with the proposed SPA would accommodate planned regional housing growth included in the SCAG RHNA and would be required to adhere to the City's General

Plan. Therefore, since the purpose of the Project is to accommodate planned regional housing growth included in the SCAG RHNA, the Project would not exceed the growth assumptions in the SCAG's RTP/SCS or the AQMP. Based on the nature of the Project, it is anticipated that implementation of the Project would not interfere with SCAG's ability to implement the regional strategies outlined in the RTP/SCS.

Implementing SCAG's RTP/SCS will greatly reduce the regional GHG emissions from transportation, helping to achieve statewide emissions reduction targets. The Project would not interfere with SCAG's ability to achieve the region's GHG reduction target of 19 percent below 2005 per capita emissions levels by 2035. As identified above, the proposed Project would help the City meet its RHNA allocation, which is consistent with SCAG's objectives to provide more housing in Priority Development Areas to preserve natural lands and open spaces and to address the existing housing need as defined by the RHNA. As such, the proposed Project would be consistent with SCAG's 2024–2050 RTP/SCS.

Although the proposed Project would be consistent with the identified measures and goals from the 2022 Scoping Plan and 2024-2050 RTP/SCS, as well as the approved 2024-2050 RTP/SCS, the proposed Project would result in a significant and unavoidable impact for GHG emissions based on SCAQMD thresholds. As such, the proposed Project would not comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in the 2022 Scoping Plan, EO B-30-15, and AB 197 and would not be consistent with applicable State plans and programs designed to reduce GHG emissions. Therefore, the proposed Project would conflict with applicable plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs.

5.3.7 CUMULATIVE IMPACTS

This section presents information regarding potential cumulative impacts associated with the proposed project. As defined in the State CEQA Guidelines, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area. Below is a list of cumulative projects; however, because of the lack of available emissions data for the cumulative projects, cumulative emissions were not evaluated quantitatively. Table 5-1 lists the cumulative projects and provides a brief description and the distances from the Project site and Figure 5-1 includes a map of the various cumulative projects considered. The list includes 5 projects within the City of Santa Ana, 14 projects within the City of Tustin, and 2 projects within the City of Irvine.

GHG impacts are by their nature cumulative impacts. Localized impacts of climate change are the result of the cumulative impact of global emissions. The combined benefits of reductions achieved by all levels of government help to slow or reverse the growth in GHG emissions. In the absence of comprehensive international agreements on appropriate levels of reductions achieved by each country, another measure of cumulative contribution is required. This serves to define the State's share of the reductions regardless of the activities or lack of activities of other areas of the U.S. or the world. Therefore, a cumulative threshold based on consistency with State targets and actions to reduce GHGs is an appropriate standard of comparison for significance determinations.

As previously stated, GHG emissions associated with the potential future buildout under the Project would not exceed the SCAQMD threshold of 3,000 MT CO2e/yr. Since GHG is a global issue, it is unlikely that the proposed Project would generate enough GHG emissions to influence GHG emissions on its own; however, because project-related CO_2e emissions would exceed the SCAQMD's threshold, the proposed Project would have a significant contribution to cumulatively considerable GHG emission impacts.

5.3.8 EXISTING REGULATIONS AND PLANS, PROGRAMS, OR POLICIES

Existing Regulations

State

- Clean Car Standards – Pavley Assembly Bill 1493
- California Executive Order S-3-05
- Assembly Bill 32 (Global Warming Solutions Act of 2006)
- Senate Bill 375
- California Executive Order B-30-15
- Senate Bill 32
- California Green Building Standards Code (Code of Regulations, Title 24 Part 6)

Plans, Programs, or Policies

PPP E-1: CALGreen Compliance. Listed previously in Section 5.2, *Energy*.

5.3.9 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impact GHG-1 and Impact GHG-2 would be potentially significant.

5.3.10 MITIGATION MEASURES

Mitigation Measure GHG-1: Prior to discretionary approval by the City of Tustin (City) for residential development projects subject to California Environmental Quality Act (CEQA) review, project applicants shall prepare and submit a technical assessment evaluating potential project-related greenhouse gas (GHG) impacts to the City for review and approval. The evaluation shall be prepared in conformance with South Coast Air Quality Management District (SCAQMD) methodology. If project-related GHG emissions exceed applicable SCAQMD thresholds of significance and/or Statewide GHG reduction targets, the City shall require that applicants for new development projects incorporate mitigation measures to reduce GHG emissions. Mitigation measures could include, but are not limited, to energy efficiency measures, water conservation and efficiency measures, solid waste measures, and transportation and motor vehicles measures. The identified measures shall be included as part of the conditions of approval.

5.3.11 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impact GHG-1 and Impact GHG-2 would be significant and unavoidable.

5.3.12 REFERENCES

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5.4 Land Use and Planning

5.4.1 INTRODUCTION

In accordance with CEQA Guidelines Section 15125(d), this section provides a summary of the plans, policies, and regulations of the City of Tustin, and regional, State, and federal agencies that have policy and regulatory control over the proposed Project. Policy conflicts do not, in and of themselves, indicate a significant environmental effect within the meaning of CEQA. To the extent that physical environmental impacts may result from such conflicts, those impacts are analyzed in this EIR in the specific topical sections to which the impact pertains (e.g., noise, air quality, greenhouse gas emissions, or transportation). More specifically, this section examines the potential for the proposed Market Place Rezone Project to physically divide an established community and/or conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project adopted for the purpose of avoiding or mitigating an environmental effect, including relevant goals and policies of the recently updated City of Tustin General Plan (2018), the City's Zoning Code, and the SCAG Final 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), "Connect SoCal 2020".

- *City of Tustin General Plan* (including 2021-2029 Housing Element), adopted November 2018 and updated October 2022.
- *East Tustin Specific Plan,* adopted March 1986 and updated November 1997.
- *Tustin City Code.*
- *Connect SoCal 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS),* adopted April 2024.

5.4.2 REGULATORY SETTING

5.4.2.1 State Regulations

California Planning and Zoning Law

The legal framework under which California cities and counties exercise local planning and land use functions is set forth in California Planning and Zoning Law, Government Code Sections 65000-66499.58. Under State planning law, each city and county must adopt a comprehensive, long-term general plan. State law gives cities and counties wide latitude in how a jurisdiction may create a general plan, but there are fundamental requirements that must be met. As stated in Section 65302 of the California Government Code, "The general plan shall consist of a statement of development policies and shall include a diagram or diagrams and text setting forth objectives, principle, standard, and plan proposals." While a general plan will contain the community vision for future growth, California law also requires each plan to address the mandated elements listed in Section 65302. The mandatory elements for all jurisdictions are land use, circulation, housing, conservation, open space, noise, and safety. Each of the elements must contain text and descriptions setting forth objectives, principles, standards, policies, and plan proposals.

5.4.2.2 Local and Regional Regulations

SCAG Final 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy

The Southern California Association of Governments (SCAG) is designated by federal law as a Metropolitan Planning Organization (MPO) and under state law as a Regional Transportation Planning

Agency and a Council of Governments. The SCAG region encompasses six counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura) and 191 cities in an area covering more than 38,000 square miles. SCAG develops transportation and housing strategies for Southern California as a whole.

On September 3, 2020, SCAG's Regional Council adopted Connect SoCal (Connect SoCal) - The 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (2020 RTP/SCS), which includes long range regional transportation plans, regional transportation improvement programs, regional housing needs allocations, and other plans for the region. Most of the plan's goals are related to regional transportation infrastructure and the efficiency of transportation in the region.

2024 SCAG Connect SoCal Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (Connect SoCal 2024)

The 2024 SCAG Connect SoCal RTP/SCS was officially adopted in April 2024 as the new RTP/SCS for the SCAG jurisdiction. Several updates are reflected within Connect SoCal 2024 plan, including growth projections and forecasting for the region. Connect SoCal 2024 reflects a continuation of the shift toward more efficient resource management. This refers to transportation infrastructure, land resources, and environmental resources. This plan projects that 66 percent of new households and 54 percent of new jobs between 2019–2050 will be located in Priority Development Areas, either near transit or in walkable communities.

City of Tustin General Plan

The General Plan (GP) is the City's principal long-range policy and planning document guiding the development, conservation, and enhancement of Tustin. The GP was adopted by the City in 2018 and contains seven elements that provide a comprehensive collection of goals and policies related to the physical development of the City. The City is also required by State law to periodically update its Housing Element, a mandatory component of the City's General Plan. The 2021-2029 Housing Element Update (HEU) was adopted by the City in 2021 and certified by the State of California Housing and Community Development Department (HCD) in 2022. The GP goals and policies that are relevant to the proposed Project are listed below by GP Element.

Land Use Element

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.**

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.

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.

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.

Policy 1.7: As part of the City's attraction to business and industry, provide adequate sites to house future employees.

Policy 1.10: Ensure that the distribution and intensity of land uses are consistent with the Land Use Plan and classification system.

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 useable for active or passive recreation as well as for visual relief.

Policy 1.13: Preserve the existing low-density character of North Tustin single family zoned neighborhoods.

Goal 2: **Ensure that future land use decisions are the result of sound and comprehensive planning.**

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.

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.**

Policy 3.7: Encourage the preservation and enhancement of public vistas, particularly those seen from public places.

Goal 4: **Assure a safe, healthy and aesthetically pleasing community for residents and businesses.**

Policy 4.1: Mitigate traffic congestion and unacceptable levels of noise, odors, dust and light and glare which affect residential areas and sensitive receptors.

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.

Policy 4.3: Where mixed uses are permitted, ensure compatible integration of adjacent uses to minimize conflicts.

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.**

Policy 6.2: Encourage and promote high quality design and physical appearance in all development projects.

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.

Policy 6.9: Upgrade the visual quality of edge conditions between industrial and residential uses through street tree planting and on-site landscaping.

Policy 6.12: Review and revise, as necessary, the City's development standards to improve the quality of new development in the City and to protect the public health and safety.

Goal 8 **Ensure that necessary public facilities and services should be available to accommodate development proposed on the Land Use Policy Map.**

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

Policy 8.7: To ensure an orderly extension of essential services and facilities, and preservation of a free-flowing circulation system, continue to require provision of essential facilities and services at the developer's expense where these systems do not exist or are not already part of the City's financed capital improvement program.

Policy 8.8: Maintain and improve, where necessary, the City's infrastructure and facilities.

Goal 9: **Continue to provide for a planned community in East Tustin compatible with the land use characteristics of the local area and sensitive to the natural environment.**

Policy 9.6: Retain natural landscape to the maximum extent possible, and incorporate planting in new development areas compatible with the character and quality of the natural surrounding environment.

Housing Element

Goal 1: **Provision of 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 commensurate with the City's identified housing needs in the RHNA allocation.**

Policy 1.1: Provide site opportunities inventory of vacant and underutilized land for development of housing that responds to diverse community needs in terms of housing type, cost and location, emphasizing locations near services and transit.

Policy 1.4: Initiate development permit and zoning code streamlining strategies to encourage and expedite residential development (i.e. accessory dwelling units, affordable housing units, and investments in existing buildings) to reduce and eliminate regulatory barriers.

Policy 1.5: Encourage infill development or site redevelopment within feasible development sites for homeownership and rental units through the implementation of smart growth principles, allowing for 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 employment opportunities, community facilities and services, and amenities.

Goal 2: **Promote fair housing opportunities for all people regardless of their special characteristics as protected under state and federal fair housing laws.**

Policy 2.3: Promote the dispersion and integration of housing for low- and very-low income families throughout the community.

Policy 2.6: Promote fair housing opportunities by supporting the continuation of policies that require relocation assistance, and/or to provide incentives and assistance for purchase of the units by low- and moderate-income households.

Goal 5: **Ensure that new housing is sensitive to the existing natural and built environment.**

Policy 5.1: Prioritize sustainable housing developments in proximity to services and employment centers thereby enabling the use of public transit, walking or bicycling and promoting an active lifestyle.

Policy 5.2: Promote green building practices for more sustainable energy conservation measures in the construction of new housing or rehabilitated units.

Program 1.2a: Program 1.2a provides that the City will amend its Zoning Code to remove subjective design guidance in TCC Section 9272 (Design Review) and adopt new Objective Design Standards (ODS) to ensure that the City can provide clear guidance regarding project design, in order to streamline the development of high-quality residential development. The ODS would include provisions consistent with the requirements of Senate Bill (SB) 35. Program 1.2a is anticipated to be complete in October 2024.

Program 1.2c: Program 1.2c directs the City to develop parking standards to facilitate residential housing production as part of mixed-use developments, adaptive reuse projects, and new residential developments. The program provides that parking displaced as a result of redevelopment may be replaced with vertical parking structures, as needed, to provide required parking. Additionally, the parking standards would incentivize creative parking strategies such as parking credits for transit rich development, and allowance of parking structures and parking lifts, by right and subject to the ODS.

Circulation Element

Goal 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.**

Policy 1.2: Develop and implement circulation system standards for roadway and intersection classifications, right-of-way width, pavement width, design speed, warrant requirements, capacity, maximum grades and associated features such as medians and bicycle lanes or trails that are adjacent or off-road.

Policy 1.3: Coordinate roadway improvements with applicable regional, state and federal transportation plans and proposals.

Policy 1.4: Develop and implement thresholds and performance standards for acceptable levels of service.

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.

Policy 1.11: Encourage new development which facilitates transit services, provides for non-vehicular circulation and minimizes vehicle miles traveled.

Policy 1.13: Minimize effects of transportation noise wherever possible so as to comply with the Noise Element.

Policy 1.15: Ensure construction of existing roadways to planned widths, as new developments are constructed.

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.

Goal 5: **Support development of a public transportation system that provides mobility to all City inhabitants and encourages use of public transportation as an alternative to automobile travel.**

Policy 5.2: Require new development to fund transit facilities, such as bus shelters and turn-outs, where deemed necessary to meet public needs arising in conjunction with development.

Policy 5.5: Promote new development that is designed in a manner which facilitates provision or expansion of transit service and provides non-automobile circulation within the development.

Goal 6: **Increase the use of non-motorized modes of transportation.**

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.

Policy 6.2: Maintain existing pedestrian facilities and require new development to provide pedestrian walkways between developments, schools and public facilities.

Policy 6.8: Support retrofit installation of sidewalks in industrial districts and Planned Community Business Parks as development occurs.

Policy 6.14: Require new development to dedicate land and fund improvement of bicycle, pedestrian and equestrian facilities, where deemed necessary to meet public needs arising in conjunction with development.

Goal 7: **Provide for well-designed and convenient parking facilities.**

Policy 7.1: Consolidate parking, where appropriate, to eliminate the number of ingress and egress points onto arterials.

Policy 7.2: Provide sufficient off-street parking for all land uses.

Conservation, Open Space, and Recreation Element

Goal 1: **Reduce air pollution through proper land use, transportation and energy use planning.**

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.

Policy 1.3: Locate multiple family developments close to commercial areas to encourage pedestrian rather than vehicular travel.

Policy 1.4: Develop neighborhood parks near concentrations of residents to encourage pedestrian travel to the recreation facilities.

Policy 1.6: Cooperate and participate in regional air quality management plans, programs, and enforcement measures.

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.**

Policy 2.1: Reduce vehicle trips through incentives, regulations and/or Transportation Demand Management (TDM) programs.

Policy 2.2: Reduce total vehicle miles traveled (VMT) through incentives, regulations and/or Transportation Demand Management.

Policy 2.12: Implement land use policy contained in the Land Use Element toward the end of achieving jobs/housing balance goals.

Goal 3: **Reduce particulate emissions to the greatest extent feasible.**

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.

Goal 4: **Reduce emissions through reduced energy consumption.**

Policy 4.1: Promote energy conservation in all sectors of the City including residential, commercial, and industrial.

Goal 5: **Protect water quality and conserve water supply.**

Policy 5.2: Protect groundwater resources from depletion and sources of pollution.

Policy 5.3: Conserve imported water by requiring water conservation techniques, water conserving appliances, and drought-resistant landscaping.

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.

Goal 7: **Conserve and protect natural plant and animal communities.**

Policy 7.1: Inventory unique or significant tree stands, with particular attention given to the cedar stand, eucalyptus groves, and eucalyptus windrows in East Tustin. Develop standards to retain or incorporate the eucalyptus windrows and groves into development plans where feasible. The redwood/sequoia stand has been retained within a park site and integrated into the park design.

Policy 7.2: Conserve important plant communities and wildlife habitats, such as riparian areas, wildlife movement corridors, wetlands, and significant tree stands through the practice of creative site planning, revegetation, and open space easements/dedications.

Policy 7.4: Require new development to revegetate graded areas.

Goal 8: **Conserve and protect significant topographical features, important watershed areas, resources, and soils.**

Policy 8.1: Develop standards to preserve the unique variety of land forms indigenous in hillside areas and ensure that the development process is structured to ensure that grading and siting practice reflects the natural topography.

Policy 8.2: Control erosion during and following construction through proper grading techniques, vegetation replanting, and the installation of proper drainage control improvements.

Policy 8.3: Encourage the practice of proper soil management techniques to reduce erosion, sedimentation, and other soil-related problems.

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.

Policy 8.6: Site planning and architectural design shall respond to the natural landform whenever possible to minimize grading and viewshed intrusion.

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.

Policy 8.10: Mitigate the impacts of development on sensitive lands such as steep slopes, wetlands, cultural resources, and sensitive habitats through the environmental review process.

Policy 8.16: Site buildings and align roadways to maximize public visual exposure to natural features.

Goal 10: **Reduce solid waste produced within City.**

Policy 10.2: Ensure that the City diverts from landfills a maximum of 50% of the solid waste generated in the City as required by the California Integrated Waste Management Board.

Goal 11: **Conserve energy resources through use of available energy technology and conservation practices.**

Policy 11.2: Maintain local legislation to establish, update and implement energy performance building code requirements established under State Title 24 Energy Regulations.

Goal 12: **Maintain and enhance the City's unique culturally and historically significant building sites or features.**

Policy 12.2: Retain and protect significant areas of archaeological, paleontological, or historical value for education and scientific purposes.

Goal 13: **Preserve Tustin's archaeological and paleontological resources.**

Policy 13.1: Require a site inspection by certified archaeologists or paleontologists for new development in designated sensitive areas.

Policy 13.2: Require mitigation measures where development will affect archaeological or paleontological resources.

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.**

Policy 14.8: Encourage and, where appropriate, require the inclusion of recreation facilities and open space within future residential, industrial and commercial developments.

Policy 14.12: Ensure that the City's laws and related implementation tools relating to park dedication and development (e.g., ordinances, regulations, in-lieu fee schedules, etc.) reflect current land and construction costs, and are, in fact, providing adequate park land and facilities concurrent with population growth.

Goal 17: **Operate and maintain existing and future parks and recreation facilities so they are safe, clean, and attractive to the public; and preserve, protect, and enhance both**

existing and potential natural recreation areas to ensure that long-term public investments and values are not unreasonably preempted, compromised, or prevented by neglect or short-term considerations.

Policy 17.2: Require park designs (including landscape treatments, buildings, irrigation, etc.) that are durable, reasonably standardized, and economical to maintain.

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.**

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), Redevelopment 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.

Public Safety Element

Goal 1: **Reduce the risk to the community's inhabitants from flood hazards.**

Policy 1.1: Identify flood hazard areas and provide appropriate land use regulations for areas subject to flooding.

Policy 1.5: Require detention basins as a flood control measure where applicable to reduce the risk from flood hazards.

Goal 3: **Reduce the risk to the community from geologic and seismic hazards.**

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.

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.

Policy 3.7: Include and periodically review and update emergency procedures for earthquakes in the City's Emergency Preparedness Plan.

Goal 4: **Reduce the risk to the community's inhabitants from exposure to hazardous materials and wastes.**

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.

Policy 4.5: Establish regulations requiring land uses involved in the production, storage, transportation, handling, or disposal of hazardous materials to be located a safe distance from other land uses that may be adversely affected by such activities.

Policy 4.15: Coordinate with the County of Orange in the implementation of the National Pollution Discharge Elimination System Permits (NPDES) regulations.

Goal 5: **Reduce the risk to the community's inhabitants from fires or explosions.**

Policy 5.4: Enforce building code requirements that assure adequate fire protection.

Policy 5.6: Cooperate with Orange County Fire Authority to ensure the provision of adequate and cost-effective fire protection services.

Goal 6: **Stabilize demand for law enforcement services.**

Policy 6.1: Provide appropriate levels of police protection within the community.

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.

Goal 8: **Improve the City's ability to respond to natural and manmade emergencies.**

Policy 8.1: Maintain an up-to-date Emergency Operations Plan identifying all available resources and funds for use in the event of a disaster and establishing implementing actions or procedures under the Plan for rescue efforts, medical efforts, emergency shelters, provision of supplies, and all other response efforts recommended by the State Office of Emergency Services and the Federal Emergency Management Agency (FEMA). Include procedures for dealing with specific events such as earthquake, major rail and roadway accidents, flooding, and hazardous materials.

Noise Element

Goal 1: **Use noise control measures to reduce the impact from transportation noise sources.**

Policy 1.1: Pursue construction of new barriers, or the augmentation of existing barriers, to reduce noise impacts along the Route 5 and Route 55 freeways along segments directly next to residential areas.

Policy 1.11: Consider noise impacts to residential neighborhoods when designating truck routes and major circulation corridors.

Goal 2: **Incorporate noise considerations into land use planning decisions.**

Policy 2.1: Adopt planning guidelines that establish acceptable noise standards for various land uses throughout the Tustin Planning Area.

Policy 2.3: Use noise/land use compatibility standards as a guide for future planning and development.

Policy 2.4: Review proposed projects in terms of compatibility with nearby noise-sensitive land uses with the intent of reducing noise.

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.

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.

Policy 2.7: Require new commercial/industrial operations located in proximity to existing or proposed residential areas to incorporate noise mitigation into project design.

Goal 3: **Develop measures to control non-transportation noise impacts.**

Policy 3.1: Implement a review process of Tustin's noise ordinance, and City policies and regulations affecting noise.

Policy 3.2: Minimize the impacts of construction noise on adjacent land uses through limiting the permitted hours of activity.

Policy 3.3: Require City departments to observe state and federal occupational safety and health noise standards.

Growth Management Element

Goal 2: **Ensure adequate transportation facilities are provided for existing and future inhabitants of the City.**

Policy 2.1: Require that all new development pay its share of the street improvement costs associated with the development, including regional traffic mitigation.

Policy 2.5: All new development shall be required to establish a development phasing program which phases approval of development commensurate with required improvements to roadway capacity. The Phasing Plan shall include an overall buildout development plan which can demonstrate the ability of the infrastructure to support the planned development.

Policy 2.6: Development phasing for new projects shall be a component of the development review and entitlement process and shall be approved prior to issuance of building or grading permits.

Tustin City Code

Tustin City Code Chapter 2, *Zoning*, regulates the location and uses of specific uses within the city, including residences, businesses, trades, industries, use of buildings, structures, and land, the location, height, bulk, and size of buildings and structures. The zoning standards are implemented to:

- Encourage the most appropriate use of land.
- Conserve and stabilize property value.
- Provide adequate open spaces for light and air and to prevent and fight fires.
- Prevent the undue concentration of population.
- Lessen congestion on streets and highways.
- Promote the health, safety, and the general welfare of the people, all as part of the General Plan of the City.

East Tustin Specific Plan

The Market Place is located within the East Tustin Specific Plan (ETSP). The overall land use concept for the ETSP is intended to provide a planned community that expands and enhances the existing amenities of the City. To accomplish this, the Plan allows a wide variety of residential product types, employment centers, commercial complexes, school facilities, parks, recreation and open space amenities, and a comprehensive vehicular circulation system. The following standards are applicable to the Project.

Section 2.8 – Parks: The specific park requirement for each residential project is based on the number of units constructed in each project and the persons per unit for each density category in each project (density assumptions provided in Section 2.8 of the ETSP). The ETSP defers to the City's Park Ordinance that specifies for each 1,000 persons, three acres of parkland shall be dedicated, and/or an equivalent value of park improvements shall be constructed, and/or in lieu fees shall be paid (hereafter referred to as the

"park requirements"). Where park dedication acreage is more than required on any project and/or sector, the excess acreage may be used as credit for other residential development in East Tustin.

Per the ETSP, there are three types of parks to be located within East Tustin to meet park requirements: community park, public neighborhood park, and private neighborhood park. These types constitute a three-tiered recreation system, each serving a particular category of recreation need in the community. Fifty percent of the park requirements shall be allocated to community parks and 50 percent shall be allocated to neighborhood parks. Neighborhood parks shall be allocated between public and private parks, provided that private parks do not exceed 25 percent of the total park requirement. For statistical purposes, in this Specific Plan, it is assumed that private neighborhood parks provide 25 percent of the total park requirement (the maximum allowed).

Section 2.10 – Schools: The Specific Plan symbolically identifies a maximum number of school sites to serve the largest estimated population growth. The ultimate requirement for the precise number of schools is based on the number of students that are to be generated from the residential areas within the ETSP area. Per the ETSP, as development plans are prepared for each sector, the land owner and school district will make specific provisions for school facilities. These provisions should be accomplished prior to final development.

Section 2.11 – Other Public Facilities: Several new fire stations were anticipated and considered at the time of the ETSP approval. One new station was identified as potentially needed, in addition to the planned fire stations, to accommodate the additional proposed development within the ETSP. The fire station identified was proposed near the intersection of Portola Parkway and Myford Road but was eventually constructed at the intersection of Jamboree Road at Tustin Ranch Road.

Section 2.12 – Urban Design Guidelines: This section of the ETSP includes a design theme and concepts regarding landscaping and architecture.

The following policies are applicable to the Project:

- Prior to Tentative Tract approval, a conceptual landscape plan will be approved by the Director of Community Development for major streets within and adjoining the subdivision. The plan will identify the specific plant materials to be used along with spacing dimensions of parkway and setback area, type of wall treatment, heights of berms, etc.
- East Tustin should be a part of the City and not appear to be separate from the existing City.
- The overall suburban nature of Tustin should be retained.
- The City should be distinctive and not lost in the urban development of adjacent Cities.
- Tustin should appear as a vibrant, contemporary City.

Section 2.13 – Sector Plans, Policies, and Programs: The ETSP area has been divided into twelve geographical areas referred to as "Sectors." A variety of physical, jurisdictional, and planning considerations exist which vary among the different sectors. The Project site is located within Sector 12, an L-shaped area that includes 121 acres of flat land bounded by Bryan Avenue on the north, Jamboree Road on the east, and the 1-5 Freeway on the south. The total identified allowable units for Sector 12 is zero (0) and the total allowable units for the entire ETSP is 7,236 (Table 2.4 of the ETSP).

The following policies apply to Sector 12:

A. In addition to the specific submittal requirements for the Subdivision Map of this Sector, a conceptua1 landscape plan for arterial roadways within this sector shall also be submitted with the Subdivision Map for approval by the Director of Community Development.

B. Concurrent with the Subdivision Map submittal for this Sector a Conceptual Site Plan shall also be submitted.

Chapter 3 – Development Standards: Chapter 3 of the ETSP includes development standards to satisfy the requirements of the Planned Community district regulations of the Tustin City Code. The ETSP includes both general development standards applicable to the entire ETSP and land use specific development standards specific to sector and land use. Development standards include, but are not limited to, allowed density, parking requirements, setback distances, walls and fencing, and permitted and conditional uses.

Standard Q, *Sector Plan Consistency Finding,* states that "As part of the initial subdivision map and development plan process for a given sector, the Planning Commission shall make a finding as a part of the subdivision map that the subject project is in conformance with applicable policies in Section 2.0 for that sector, and the means to implement these policies has been identified."

Section 3.14*, Amendments to the Plan*, specifies that any amendment to the ETSP Sections I and 2 which changes any property from one land use area to another, imposes any regulation upon property not therefore imposed, or removes or modifies any such regulation may be initiated and adopted on a sector-by-sector basis. Only the sector or sectors proposed for amendment shall be reviewed in the amendment and subject to the Public Hearing Process. The notices of public hearing for amendment to any sector plan shall be published in a newspaper of local circulation and mailed to all property owners within the specific sector and to all property owners within three-hundred feet from the exterior boundaries of the sector. Amendments to the East Tustin Specific Pion Section 3 shall be initiated and processed in the same manner set forth by the City Code for amending the City Zoning Ordinance.

5.4.3 ENVIRONMENTAL SETTING

As described in Section 3.0, *Project Description*, the Project site is located within a developed area surrounded by residential and commercial uses.

The Market Place is currently developed with 747,165 square feet (SF) of commercial business, including restaurants, retail, and service commercial uses, and has approximately 13,032 SF of additional square footage entitled for the commercial uses, though no plans have been submitted to date. The site also includes surface parking and ornamental landscaping along the perimeter and throughout the parking areas.

5.4.3.1 Existing General Plan Land Use and Zoning Designations

The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of PC COM, and is identified Mixed Use (MU) within the ETSP (SP-8). The ETSP states the site is intended for development of planned retail commercial, office, and industrial/research and development land uses of an intensity compatible with neighboring residential and the Auto Center land uses. The Mixed Use zoning is intended to provide an opportunity for development to respond to future changes in economic and market forces. The Project site's existing General Plan land use and zoning designations are shown in Figure 3-5, *Existing General Plan Land Use*, and Figure 3-6, *Existing Zoning*, in Section 3.0, *Project Description*.

5.4.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a Project could have a significant effect if it were to:

LU-1 Physically divide an established community.

LU-2 Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

The Initial Study (Appendix A) established that the proposed Project would not result in impacts related to Threshold LU-1; therefore, no further assessment of this threshold is required in this Draft EIR.

5.4.5 METHODOLOGY

The analysis of land use consistency impacts considers whether the proposed Project would be inconsistent with (or conflict with) regional and local plans, policies, and regulations that are applicable to the proposed rezone and Project site, including the SCAG RTP/SCS, City of Tustin GP, and zoning code. Consistent with the scope and purpose of this EIR, this discussion primarily focuses on those goals and policies that relate to avoiding or mitigating environmental impacts, and an assessment of whether any inconsistency with these standards creates a significant physical impact on the environment. Thus, a project's inconsistency with a policy is only considered significant if such inconsistency would cause significant physical environmental impacts (as defined by CEQA Guidelines Section 15382).

CEQA Guidelines Section 15125(d) requires that an EIR discuss inconsistencies with applicable plans that the decision-makers should address. A project need not be consistent with each and every policy and objective in a planning document. Rather, a project is considered consistent with the provisions of the identified regional and local plans if it meets the general intent of the plans and would not preclude the attainment of the primary goals of the land use plan or policy.

5.4.6 ENVIRONMENTAL IMPACTS

IMPACT LU-2: THE PROJECT WOULD NOT CAUSE A SIGNIFICANT ENVIRONMENTAL IMPACT DUE TO A CONFLICT WITH ANY LAND USE PLAN, POLICY, OR REGULATION ADOPTED FOR THE PURPOSE OF AVOIDING OR MITIGATING AN ENVIRONMENTAL EFFECT.

Less than Significant.

SCAG Final 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), (ConnectSoCal 2020)

SCAG strategies focus largely on implementing transit-oriented development and increasing the use of regional transit, encouraging development patterns and densities that reduce infrastructure costs, and providing a variety of housing types including affordable housing. The proposed General Plan Amendment (GPA) and rezone of the Project site would implement SCAG strategies related to high-density, infill development, and improvement of the job/housing balance that is centered around public transit opportunities. The proposed GPA and rezone of the Project site provides for infill development in an already developed urban area that would make use of the existing circulation and utility infrastructure. The proposed GPA and rezone of the Project site would introduce high-density residential uses and commercial uses that would create a mixed-use environment in which residents would benefit from the proposed onsite uses and nearby shopping, restaurant, and employment opportunities to reduce VMT.

Table 5.4-1 below describes consistency of the Project with the policies of the SCAG RTP/SCS. As described, the proposed Project would be consistent with and therefore not conflict with the RTP/SCS.

Table 5.4-1: Project Consistency with SCAG Connect SoCal Regional Transportation Plan/Sustainable Communities Strategy Policies

RTP/SCS Goal, Policy, or Objective	Project Consistency
Focus Growth Near Destinations & Mobility Options	
Emphasize land use patterns that facilitate multimodal access to work, educational and other destinations.	**Consistent.** The proposed Project includes a General Plan Amendment (GPA) and Specific Plan Amendment (SPA) to allow for future residential development within an existing commercial center near multiple freeways and the OCTA transit system. The proposed mixed-use land uses would reduce VMT by providing housing, retail, restaurants, and services within the Project site (see Section 5.9, *Transportation*).
Focus on a regional jobs/housing balance to reduce commute times and distances and expand job opportunities near transit and along center-focused main streets.	**Consistent.** The City is considered jobs-rich and lacks available housing. The Project would provide additional housing that would support the City in achieving more balanced jobs/housing conditions. Additionally, the Project would reduce VMT by providing housing amongst retail, restaurants, and services within the Project site (see Section 5.9, *Transportation*).
Plan for growth near transit investments and support implementation of first/last mile strategies.	**Consistent.** The proposed Project includes a GPA and SPA to allow for future residential development within an existing commercial center near multiple freeways and the OCTA transit system. The proposed mixed-use land uses would reduce VMT by providing housing, retail, restaurants, and services within the Project site (see Section 5.9, *Transportation*).
Promote the redevelopment of underperforming retail developments and other outmoded nonresidential uses.	**Consistent.** The proposed Project would develop an existing shopping center with large areas of surface parking and intensify the existing site by allowing for the future development of residential uses. The Project also considers future development of new nonresidential uses (previously entitled) that would be developed consistent with market demands and conditions.
Prioritize infill and redevelopment of underutilized land to accommodate new growth, increase amenities and connectivity in existing neighborhoods.	**Consistent.** The proposed Project is an infill use that would allow for future development of an existing commercial center to accommodate anticipated residential growth, and would increase amenities, such as parks, and provide connectivity to surrounding neighborhoods.
Encourage design and transportation options that reduce the reliance on and number of solo car trips (this could include mixed-uses or locating and orienting close to existing destinations).	**Consistent.** The proposed Project includes a GPA and SPA to allow for future residential development within an existing commercial center near multiple freeways and the OCTA transit system. The proposed mixed-use land uses would reduce VMT by providing housing, retail, restaurants, and services within the Project site (see Section 5.9, *Transportation*).
Identify ways to "right size" parking requirements and promote alternative parking strategies (e.g., shared parking or smart parking).	**Consistent.** The proposed ETSP includes parking requirements and provides flexibility in implementing the various parking requirements for residential and nonresidential uses. Future parking would likely include a combination of surface and structure parking, which would be further regulated through compliance with ODS created for the Project site.
Promote Diverse Housing Choices	
Preserve and rehabilitate affordable housing and prevent displacement.	**Consistent.** The Project site does not currently include any housing. No housing would be displaced with the proposed Project. The proposed Project allows for the future development of housing in proximity to existing retail and commercial services. The Project is prompted by the City's HEU, which is meant to facilitate future development of a variety of housing types, including affordable housing.
Identify funding opportunities for new	**Not applicable.** The Project proposes a land use change and does not

RTP/SCS Goal, Policy, or Objective	Project Consistency
workforce and affordable housing development.	propose any actual development or funding of future development. The Project would not prevent SCAG from meeting this goal.
Create incentives and reduce regulatory barriers for building context-sensitive accessory dwelling units to increase housing supply.	**Consistent.** The Project includes proposed rezone of several parcels for residential development and ODS, which are meant to streamline the design review of future residential and mixed-use projects proposed within the Project site to increase residential capacity within the City.
Provide support to local jurisdictions to streamline and lessen barriers to housing development that supports reduction of greenhouse gas emissions.	**Consistent.** Issues related to streamlining the City's development review process and lessening barriers to the production of housing are addressed in the City's HEU. However, the Project is in fulfillment of the requirements, policies, and programs included within the HEU. The proposed Project includes a GPA and SPA to allow for future residential development within an existing commercial center near multiple freeways and the OCTA transit system. The proposed mixed-use land uses would reduce VMT by providing housing, retail, restaurants, and services within the Project site (see Section 5.9, *Transportation*), and therefore, would minimize overall GHG consistent with smart growth principles.
Leverage Technology Innovations	
Promote low emission technologies such as neighborhood electric vehicles, shared rides hailing, car sharing, bike sharing and scooters by providing supportive and safe infrastructure such as dedicated lanes, charging and parking/drop-off space.	**Not applicable.** The Project proposes a land use change and does not propose any actual development or funding of future development. However, all future projects would be applicable to the California Building Code, which includes requirement for EV charging and other low emission technologies. The Project would not prevent SCAG from meeting this goal.
Improve access to services through technology—such as telework and telemedicine as well as other incentives such as a "mobility wallet," an app-based system for storing transit and other multi-modal payments.	**Not applicable.** Issues related to technological improvements are addressed on a citywide and regional basis. The Project would not prevent SCAG from meeting this goal.
Identify ways to incorporate "micro-power grids" in communities, for example solar energy, hydrogen fuel cell power storage and power generation.	**Not applicable.** Issues related to "micro-power grids" would be addressed on a citywide and regional basis. All future development proposed as part of the Project would comply with CALGreen/Title 24 requirements. The Project would not prevent SCAG from meeting this goal.
Support Implementation of Sustainability Policies	
Pursue funding opportunities to support local sustainable development implementation projects that reduce greenhouse gas emissions.	**Not applicable.** The Project proposes a land use change and does not propose any actual development or funding of future development. The Project would not prevent SCAG from meeting this goal.
Support statewide legislation that reduces barriers to new construction and that incentivizes development near transit corridors and stations.	**Consistent.** The proposed Project includes a GPA and SPA to allow for future residential development within an existing commercial center near multiple freeways and the OCTA transit system. The proposed mixed-use land uses would reduce VMT by providing housing, retail, restaurants, and services within the Project site (see Section 5.9, Transportation).
Support local jurisdictions in the establishment of Enhanced Infrastructure Financing Districts (EIFDs), Community Revitalization and Investment Authorities (CRIAs), or other tax increment or value	**Not applicable.** The Project proposes a land use change and does not propose any actual development or funding of future development. The Project would not prevent SCAG from meeting this goal.

RTP/SCS Goal, Policy, or Objective	Project Consistency
capture tools to finance sustainable infrastructure and development projects, including parks and open space.	
Work with local jurisdictions/communities to identify opportunities and assess barriers to implement sustainability strategies.	**Not applicable.** Issues related to regional sustainability strategy are strategized and coordinated on a citywide and regional basis. The Project would not prevent SCAG from meeting this goal.
Enhance partnerships with other planning organizations to promote resources and best practices in the SCAG region.	**Consistent.** The Project is being proposed pursuant to the certified HEU, which was prepared to accommodate the City's Regional Housing Needs Allocation, as delegated by SCAG. The City will continue to partner with SCAG and other planning organizations in fulfillment with City and regional goals.
Continue to support long range planning efforts by local jurisdictions.	**Consistent.** The Project is being proposed pursuant to the certified HEU, which was prepared to accommodate the City's Regional Housing Needs Allocation, as delegated by SCAG. The City will continue to partner with SCAG and other planning organizations in fulfillment with City and regional goals.
Provide educational opportunities to local decisions makers and staff on new tools, best practices, and policies related to implementing the Sustainable Communities Strategy.	**Not applicable.** The Project proposes a land use change in fulfillment of the HEU and does not include oversight or education by SCAG. The Project would not prevent SCAG from meeting this goal.
Promote a Green Region	
Support development of local climate adaptation and hazard mitigation plans, as well as project implementation that improves community resiliency to climate change and natural hazards.	**Consistent.** The Project is proposed pursuant to the City's HEU. The HEU Goal 5 states "Ensure that new housing is sensitive to the existing natural and built environment." Several policies are included to support this goal, including requirements for sustainable development and energy conservation. All future projects proposed within the Project site would be required to comply with the City's goals, policies, and programs. Additionally, all future development proposed as part of the Project would comply with CALGreen/Title 24 requirements.
Support local policies for renewable energy production, reduction of urban heat islands and carbon sequestration.	**Consistent.** The Project is proposed pursuant to the City's HEU. The HEU Goal 5 states "Ensure that new housing is sensitive to the existing natural and built environment." Several policies are included to support this goal, including requirements for sustainable development and energy conservation. All future projects proposed within the Project site would be required to comply with the City's goals, policies, and programs. Additionally, all future development proposed as part of the Project would comply with CALGreen/Title 24 requirements.
Integrate local food production into the regional landscape.	**Not applicable.** This measure is a regional policy and is not applicable to an urban infill development, such as that proposed by the Project.
Promote more resource efficient development focused on conservation, recycling, and reclamation.	**Consistent.** The Project is proposed pursuant to the City's HEU. The HEU Goal 5 states "Ensure that new housing is sensitive to the existing natural and built environment." Several policies are included to support this goal, including requirements for sustainable development and energy conservation. All future projects proposed within the Project site would be required to comply with the City's goals, policies, and programs. Additionally, all future development proposed as part of the Project would comply with CALGreen/Title 24 requirements, which includes conservation and waste reduction measures.
Preserve, enhance, and restore regional wildlife connectivity.	**Not applicable.** The Project site and surrounding areas are completely developed and do not contain biological habitats for which wildlife

RTP/SCS Goal, Policy, or Objective	Project Consistency
	connectivity would be an issue.
Reduce consumption of resource areas, including agricultural land.	**Not applicable.** This measure is a regional policy and not related to an urban transit-oriented environment. The Project site does not contain any resource areas, including agricultural land.
Identify ways to improve access to public park space.	**Consistent.** The Project proposes a land use change and does not propose any actual development or funding of future development. However, as described in Section 5. 8, *Recreation*, future development under the Project would be required to provide for adequate recreational spaces consistent with the City's park space requirements.

Source: Southern California Association of Governments (SCAG) 2020 Connect SoCal Regional Transportation Plan/ Sustainable Communities Strategy

As defined under Code Regs. tit. 14 § 15126.2 "the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published". The Notice of Preparation, included as Appendix A to this EIR, was circulated for public review on February 16, 2024, and set the environmental baseline for the proposed Project. As described previously, SCAG is required by federal and state law to prepare and update the RTP/SCS every four years. Connect SoCal, the 2024-2050 RTP/SCS, was approved on April 4, 2024. Although the 2024 RTP/SCS was approved after the environmental baseline was set for the Project, Table 5.4-2 below lists applicable strategic policies included in the updated RTP/SCS which the proposed Project would be consistent with. As described above and in Table 5.4-1, the proposed GPA required for the Project would implement SCAG strategies related to high-density, infill development, and improvement of the job/housing balance that is centered around public transit opportunities consistent with Connect SoCal Policies.

Table 5.4-2: Project Consistency with 2024 SCAG Connect SoCal Regional Transportation Plan/Sustainable Communities Strategy Policies

2024 Connect SoCal Strategy Policy	Proposed Project Consistency with Policy
Complete Streets	
Support implementation of Complete Streets demonstrations (including those addressing curb space management) to accommodate and optimize new technologies and micromobility devices, first/last mile connections to transit and last-mile deliveries	**Consistent.** The Project does not currently propose any development or roadway improvements. Roadway improvements would be determined at the time a development project is proposed, and would coordinate with applicable regional, state, and federal transportation parties as necessary. Future projects under the proposed Project would be required to comply with the circulation system standards and traffic control standards specified by the City's latest *Standard Plans and Design Standards* as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits (PPP T-1 and T-2).
Support community-led Complete Streets plans and projects, including those that take into account how to mitigate or adapt to climate change impacts (e.g., extreme heat)	**Not Applicable.** This is not a project-specific goal and is therefore not applicable.
Transit and Multimodal Integration	
Increase multimodal connectivity (e.g., first/last mile transit and airport connections), which includes planning for and developing mobility hubs throughout the SCAG region	**Consistent.** The proposed Project includes a GPA to allow for future residential development within an existing commercial center near multiple freeways and the OCTA transit system. The Project site is located near commercial, retail, and office uses. Additionally, as described in Section 5.9, *Transportation*, the proposed Project is located near established public transit and would promote an active lifestyle.

2024 Connect SoCal Strategy Policy	Proposed Project Consistency with Policy
Through land use planning, support residential development along high-frequency transit corridors and around transit/rail facilities and centers	**Consistent.** The proposed Project includes a GPA to allow for future residential development within an existing commercial center near multiple freeways and the OCTA transit system. The Project site is located near commercial, retail, and office uses. Additionally, as described in Section 5.9, *Transportation*, the proposed Project is located near established public transit and would promote an active lifestyle.
Expand the region's networks of bicycle and pedestrian facilities. This includes creating more low stress facilities, such as separated bikeways and bike paths, slow streets, and open streets	**Consistent.** The Project does not currently propose any development or roadway improvements. Roadway improvements would be determined at the time a development project is proposed, and would coordinate with applicable regional, state, and federal transportation parties as necessary. Future projects under the proposed Project would be required to comply with the circulation system standards and traffic control standards specified by the City's latest *Standard Plans and Design Standards* as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits (PPP T-1 and T-2).
Safety	
Work with local, state and federal partners to advance safer roadways, including reduced speeds to achieve zero deaths and reduce GHGs	**Not Applicable.** This is not a project-specific goal and is therefore not applicable.
Priority Development Areas	
Support the development of housing in areas with existing and planned infrastructure and availability of multimodal options, and where a critical mass of activity can promote location efficiency	**Consistent.** The Regional Housing Needs Assessment (RHNA) is mandated by State Housing Law as part of the periodic process of updating local housing elements of the General Plan. On November 7, 2019, SCAG's Regional Council voted to approve the Draft RHNA Methodology. The approved draft methodology allocated RHNA "fair share" to various jurisdictions based on several variables, including access to job and transit (Southern California Association of Governments, 2020). At the regional level, SCAG planned for future housing growth with a concentration in areas that have existing and planned infrastructure and availability of multimodal options through their "fair share" allocations. The Project is proposed to make the GP consistent with the certified 2021-2029 Housing Element, which was prepared to accommodate the City's 6th Cycle RHNA allocation. Therefore, the Project supports SCAG's regional efforts to develop housing in existing and planned infrastructure and availability of multimodal options through implementation of their State Housing Law responsibilities
Housing the Region	
Provide technical assistance for jurisdictions to complete and implement their housing elements and support local governments and Tribal Entities to advance housing production	**Consistent.** The Project is being proposed pursuant to the certified HEU, which was prepared to accommodate the City's Regional Housing Needs Allocation, as delegated by SCAG. The City will continue to partner with SCAG and other planning organizations in fulfillment with City and regional goals.
Identify and pursue partnerships at the local, regional, state and federal levels to align utility, transit and infrastructure investments with housing development and equitable outcomes across the region	**Consistent.** As described in Section 5.7, Public Services, adequate public facilities, and services are available to support the proposed Project. At the time development projects are proposed, appropriate impact fees and necessary coordination with agencies and utility providers would occur to ensure essential services and utilities are supplied to future residents and businesses Additionally, a TIA was prepared as part of this Project and will be assessed by the City to determine necessary future improvements. The TIA would be available

2024 Connect SoCal Strategy Policy	Proposed Project Consistency with Policy
	upon request from the City of Tustin. Future development would be responsible for implementing identified improvements.
Sustainable Development	
Research the availability of resources that can support the development of water and energy-efficient building practices, including green infrastructure	**Consistent.** The Project is proposed pursuant to the City's HEU. The HEU Goal 5 states "Ensure that new housing is sensitive to the existing natural and built environment." Several policies are included to support this goal, including requirements for sustainable development and energy conservation. All future projects proposed within the Project site would be required to comply with the City's goals, policies, and programs. Additionally, all future development proposed as part of the Project would comply with CALGreen/Title 24 requirements.
Air Quality	
Coordinate with local, regional, state and federal partners to meet federal and state ambient air-quality standards and improve public health	**Consistent.** As described in Section 5.1, *Air Quality*, particulate emissions would mostly be derived from mobile source emissions. Future development would produce minimal mobile source emissions and would also be required to comply with all relevant State, regional, and local regulations and policies for reducing particulate emissions.
Clean Transportation	
Support the deployment of clean transit and technologies to reduce greenhouse gas emissions as part of the CARB innovative clean technology (ICT) rule	**Consistent.** The CARB innovative clean technology (ICT) rule requires all public transit agencies to gradually reduce fleet vehicle tailpipe emissions and encourages them to provide innovative first and last-mile connectivity and improved mobility for transit riders. the Project vicinity is served by OCTA. As described in Section 5.9, Transportation, the proposed Project is located near established public transit and would promote an active lifestyle. The Project site includes a bus stop for Route 79 at the corner of Bryan Avenue and Myford Road. Additionally, the Metrolink Inland Empire-Orange County Line has a stop 1.5 miles south of the Project of the Project site, at the Tustin Metrolink Station. Future projects under the proposed Project would be required, if deemed necessary, to fund transit facilities as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits.
Natural and Agricultural Lands Preservation	
Work with implementation agencies to support, establish or supplement voluntary regional advance mitigation programs (RAMP) for regionally significant transportation projects to mitigate environmental impacts, reduce per-capita VMT and provide mitigation opportunities through the Intergovernmental Review Process	**Consistent.** The proposed Project includes a GPA to allow for future residential development within an existing commercial center near multiple freeways and the OCTA transit system. The proposed mixed-use land uses would reduce VMT by providing housing, retail, restaurants, and services within the Project site. As discussed in Section 5.8, *Transportation,* the Project would result in a less than significant impact on VMT (see Section 5.9, *Transportation*).
Continue efforts to support partners in identifying priority conservation areas—including habitat, wildlife corridors, and natural and agricultural lands—for permanent protection	**Consistent.** The Project site is completely developed and void of natural topographical features, natural resources and soils. Design requirements established through ODS for the site would be created to ensure that future projects are compatible with the surrounding environment and development by including appropriate landscaping.

2024 Connect SoCal Strategy Policy	Proposed Project Consistency with Policy
Support the integration of nature-based solutions into implementing agency plans to address urban heat, organic waste reduction, protection of wetlands, habitat and wildlife corridor restoration, greenway connectivity and similar efforts	**Consistent.** The Project site and surrounding areas are completely developed and do not contain biological habitats for which wildlife connectivity would be an issue. Additionally, each future residential project implemented as part of the housing overlay and Housing Element would require a project-level plan check.
Climate Resilience	
Develop partnerships and programs to support local and regional climate adaptation, mitigation and resilience initiatives	**Not Applicable.** This is not a project-specific goal and is therefore not applicable.
Collaborate with partners to foster adoption of systems and technologies that can reduce water demand and/or increase water supply, such as alternative groundwater recharge technologies, stormwater capture systems, urban cooling infrastructure and greywater usage systems	**Consistent.** Future projects would be required to implement landscaping and water conserving appliances pursuant to Section 9701 of Article 9, Chapter 7 of the Tustin City Code. Compliance would be reviewed by the city during the permitting process. Additionally, development and construction of the Project site would require preparation and adherence to SWPPP and WQMP. Therefore, development of the site would not deplete or pollute groundwater resources. Additionally, all future development proposed as part of the Project would comply with CALGreen/Title 24 requirements.
Workforce Development	
Provide technical assistance to help local jurisdictions realize their economic and workforce-development goals	**Not Applicable.** This is not a project-specific goal and is therefore not applicable.
Encourage the growth of, and equitable access to, living-wage jobs throughout the region	**Consistent.** The Project anticipates the future nonresidential capacity buildout of 13,032 SF within a portion of the Project site that allows non-residential development. As described in Section 5.6, Population and Housing, using employment generation rates from the 2001 SCAG Employment Density Report, buildout of the 13,032 SF of nonresidential space would result in approximately 40 employees (1 employee per 325 SF).

Source: Southern California Association of Governments (SCAG) 2024 Connect SoCal Regional Transportation Plan/ Sustainable Communities Strategy

General Plan Update

General Plan Land Use Designation. The Project site currently has a GP Land Use designation of Planned Community Commercial/Business (PCCB). The GP Land Use Element states that the PCCB land use designation provides opportunities for a mixture of all those activities permitted within the Community Commercial, Professional Office, and Industrial land use designations. The PCCB designation may also permit other uses (such as residential uses) which support this land use designation. The average intensity of development for PCCB is a floor area ratio of 0.4:1 and the maximum intensity of development is a floor area ratio of 1.5:1. The overall population density range for residential use within the PCCB designation is limited to 2 to 54 persons per acre.

During the Housing Element process, the City identified The Market Place as a suitable commercial site for rezoning to allow mixed-use development, which introduced the opportunity to allow higher density housing in either horizontal or vertical mixed-use development on the site. The City's certified 2021-2029 HEU identified The Market Place as having capacity for 900 housing units on up to 18 acres of the shopping center's existing parking lots. The proposed Project would implement the City's land use designation for the Project site by proposing an amendment to the East Tustin Specific Plan to create a High Density Residential land use category, and applying it to 18 acres of the Market Place's parking lots. The GPA will establish

that a density of residential uses higher than 2 to 54 persons per acre would be allowed in the PCCB designation, subject to density limits established by a Housing Overlay (HO) district or as allowed by a specific plan. Upon approval of the Specific Plan Amendment, the Project site could accommodate 900 units over approximately 18 acres of developable land within the existing 76.9-acre site. Therefore, with approval of the GPA, the Project would bring the Land Use Element of the City General Plan into consistency with the HEU.

Land Use Consistency. As shown on Figure 3-5, *Existing General Plan Land Use Designation,* and in Table 3-1, *Surrounding Existing Land Use and Zoning Designations*, in Section 3.0, *Project Description*, the area northwest of the Project site is also designated as PCCB. The area to the northeast is designated as Planned Community Residential (PCR). The area to the south is located in the City of Irvine, with the southeast area designated as Regional Commercial (RC) and southwest designated as Community Commercial (COC) and Research/Industrial (REI). The areas surrounding the Project site are developed with residential and commercial uses. Development of the site for residential development would be compatible with the adjacent uses. The proposed Project would provide housing proximate to local employment centers, commercial retail services and restaurants for onsite residents and employees working nearby. Development is not proposed as part of the Project; however, all future residential development proposed within the Project site would be subject to the requirement and provisions of the applicable ODS. Design requirements established through ODS for the site would be created to ensure compatibility with the existing development as well as surrounding land uses. All future development would be required to comply with the City's ODS for the site.

Overall, the proposed Project would not result in a land use inconsistency. The proposed Project would implement residential development within an existing commercial shopping center, including residential, and would provide locational efficiency as it allows people to work, live, and obtain services within a small area, which has the potential to reduce VMT and GHG in comparison to residential development that is farther from employment and services. As described throughout this EIR, with implementation of existing regulations, the proposed Project would not result in significant environmental impacts such as light, noise, or air quality to the adjacent existing and planned land uses. Therefore, impacts related to land use inconsistency would be less than significant.

GP Goals, Policies, and Objectives: The provision of residential development within the Project site was not previously analyzed under existing land use plans. A detailed analysis of the proposed Project's consistency with the applicable goals, policies, and objectives of the City's GP that serve to avoid or mitigate environmental impacts is provided in Table 5.4-3 below. As described, the proposed Project would be consistent with the relevant goals, policies, and objectives of the City's GP that avoid or mitigate environmental impacts, and impacts related to conflict with a GP policy related to an environmental effect would be less than significant.

Table 5.4-3: Consistency with Relevant General Plan Update Goals, Policies, and Objectives

General Plan Update Goal, Policy, or Objective	Project Consistency
Land Use Element	
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.	**Consistent.** The proposed Project would introduce residential land uses to an existing commercial site. During the Housing Element process, the City identified The Market Place as a suitable commercial site for rezoning to allow residential development, which introduced the opportunity to allow higher density housing development on the site. Additionally, the Project site is envisioned to function similar to a mixed-use site, in that portions of the Project site (Market Place Shopping Center) would remain as nonresidential land

General Plan Update Goal, Policy, or Objective	Project Consistency
	use, providing a well-balance mix of adjacent residential and commercial land uses. Thus, the proposed Project would be consistent with Goal 1.
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.** Development of the proposed Project would allow higher density housing to be constructed on the Project site pursuant to the certified HEU. The rezone of the Project site was proposed in order to accommodate the City's allocated RHNA. The Project would be consistent with surrounding land uses, which include a mix of commercial and residential development. Thus, the proposed Project would be consistent with Policy 1.1.
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 proposed Project anticipates the future nonresidential capacity buildout of an additional 13,032 SF (previously entitled but unconstructed) within a portion of the Project site that would continue to allow non-residential development. Based on market demand and conditions, future development of neighborhood-serving commercial uses would be constructed once a project is proposed. Thus, the proposed Project would be consistent with Policy 1.2.
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.** The proposed Project anticipates the future nonresidential capacity buildout of an additional 13,032 SF (previously entitled but unconstructed) within a portion of the Project site that would continue to allow non-residential development. Based on market demand and conditions, future development of neighborhood-serving commercial uses would be constructed once a project is proposed. Thus, the proposed Project would be consistent with Policy 1.6.
Policy 1.7: As part of the City's attraction to business and industry, provide adequate sites to house future employees.	**Consistent.** The proposed Project results in a mix of uses within The Market Place, including commercial and residential uses, and would provide locational efficiency as it allows people to work, live, and obtain services within a small area in comparison to residential development that is farther from employment and services. Thus, the proposed Project would be consistent with Policy 1.7.
Policy 1.10: Ensure that the distribution and intensity of land uses are consistent with the Land Use Plan and classification system.	**Consistent.** The proposed Project would include a GPA and SPA for the Project site to allow for future development of up to 900 housing units over 18 acres, consistent with the City's certified 2021-2029 HEU. Future residential development would be constructed within the boundaries of the existing Project site and would be subject to ODS. Thus, the proposed Project would be consistent with Policy 1.10.
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 useable for active or passive recreation as well as for visual relief.	**Consistent.** As described in Section 5.08, *Recreation*, future projects would provide adequate local park space in order to maintain the City of Tustin Park area ratio. Thus, the proposed Project would be consistent with Policy 1.11.
Goal 2: Ensure that future land use decisions are the result of sound and comprehensive planning	**Consistent.** The proposed Project would allow for future residential development within an existing commercial land use that would be compatible with the adjacent residential, commercial, and office land uses. Design

General Plan Update Goal, Policy, or Objective	Project Consistency
	review of all future proposed projects would be required to ensure compatibility with existing development and consistency with the Project site ODS, prior to project approval. Thus, the proposed Project is consistent with Goal 2.
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.	**Consistent.** Table LU-2 analyzed the proposed Project's consistency with all GP element goals and policies and found no conflict. Thus, the proposed Project is consistent with Policy 2.1.
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	**Consistent.** The proposed Project would allow for future residential development within an existing commercial land use that would be compatible with the adjacent residential, commercial, and office land uses. Design review of all future proposed projects would be required to ensure compatibility with existing development and consistency with the Project site ODS, prior to project approval. As described in Section *5.7*, *Public Services*, the proposed Project would not result in public facility and service deficiencies. Additionally, as described in the IS/NOP (Appendix A), the proposed Project would be consistent with the City's unique visual character. As described in Section *5.9*, *Transportation*, the proposed Project would not conflict with the circulation network. Thus, the proposed Project is consistent with Goal 3.
Policy 3.7: Encourage the preservation and enhancement of public vistas, particularly those seen from public places.	**Consistent.** As described in the IS/NOP (Appendix A), public roadways surrounding the Project site, including I-5, Jamboree Road, Bryan Avenue, and Myford Road, do not provide views of Peters Canyon Ridgeline due to low elevation and visual obstruction by surrounding buildings and trees. The provision for residential development in an area formerly designated for nonresidential land uses would not further diminish views of a scenic vista. Thus, the proposed Project is consistent with Policy 3.7.
Goal 4: Assure a safe, healthy and aesthetically pleasing community for residents and businesses.	**Consistent.** The ODS would ensure high visual character and quality of future residential development proposed within the Project site. Additionally, each future residential project implemented as part of the housing overlay and Housing Element would require a project-level plan check. Thus, the proposed Project would be consistent with Goal 4.
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.** An Air Quality Report (Appendix B) and Noise Report (Appendix C) were completed for the Project. Construction and operational impacts related to air quality would be less than significant with implementation of standard best practices required through permits and agency regulations, as discussed in Section *5.1*, *Air Quality*, of this EIR. Project impacts to light and glare would also be less than significant as determined by the Initial Study (Appendix A). Construction noise impacts would be reduced to less than significant as discussed in Section *5.5*. Therefore, the Project would be consistent with Policy 4.1.

General Plan Update Goal, Policy, or Objective	Project Consistency
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.** Per the MU designation of the ETSP, structures within The Market Place currently have a maximum height limit of 35 feet within 300 feet of the center line of Bryan Avenue and a maximum height of 50 feet in all remaining areas. . Design requirements established through ODS for the site would be created to ensure compatibility with the surrounding land uses. The ODS would maintain the 35-foot height limit for residential development within 300 feet of Bryan Avenue; however the height limit would be increased to up to 75 feet in areas away from the adjacent roadway. By requiring increased development heights to be setback from the roadway, the Project would avoid scale differences with adjacent land uses. The ODS would also ensure high visual character and quality of future residential development proposed within the Project site. All future development would be required to comply with the City's ODS for the site. Thus, the proposed Project would be consistent with Policy 4.2.
Policy 4.3: Where mixed uses are permitted, ensure compatible integration of adjacent uses to minimize conflicts.	**Consistent.** Design requirements established through ODS for the site would be created to ensure compatibility with the existing site development and surrounding land uses. Thus, the proposed Project would be consistent with Policy 4.3.
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.	**Consistent.** Design requirements established through ODS for the site would be created to ensure compatibility with the existing site development and surrounding land uses, such as compatible building height, cohesive architectural style, and appropriate landscaping. Thus, the proposed Project would be consistent with Goal 6.
Policy 6.2: Encourage and promote high quality design and physical appearance in all development projects.	**Consistent.** Design requirements established through ODS for the site would be created to ensure compatibility with the existing site development and surrounding land uses, such as compatible building height, cohesive architectural style, and appropriate landscaping. The ODS would ensure high visual character and quality of future residential development proposed within the Project site. All future residential development would be required to comply with the City's ODS for the site. Thus, the proposed Project would be consistent with Policy 6.2.
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.	**Consistent.** Design requirements established through ODS for the site would be created to ensure compatibility with the existing site development and surrounding land uses, such as compatible building height, cohesive architectural style, and appropriate landscaping. The ODS would ensure high visual character and quality of future residential development proposed within the Project site. All future residential development would be required to comply with the City's ODS for the site. Thus, the proposed Project would be consistent with Policy 6.4.

General Plan Update Goal, Policy, or Objective	Project Consistency
Policy 6.9: Upgrade the visual quality of edge conditions between industrial and residential uses through street tree planting and on-site landscaping.	**Not Applicable.** The Project site is located in a commercial area adjacent to other commercial and residential land uses. Therefore, this policy is not applicable to the Project.
Policy 6.12: Review and revise, as necessary, the City's development standards to improve the quality of new development in the City and to protect the public health and safety.	**Consistent.** The proposed Project would include a GPA to allow for increased residential density and an SPA to allow for future high density residential development on a portion of the Project site, consistent with the City's certified 2021-2029 Housing Element. Additionally, design requirements established through ODS for the site would be created to ensure compatibility with the existing site development and surrounding land uses, such as compatible building height, cohesive architectural style, and appropriate landscaping. The ODS would ensure high visual character and quality of future residential development proposed within the Project site. All future residential development would be required to comply with the City's ODS for the site. Thus, the proposed Project would be consistent with Policy 6.4.
Goal 8: Ensure that necessary public facilities and services should be available to accommodate development proposed on the Land Use Policy Map.	**Consistent.** As described in Section *5.7*, *Public Services*, adequate public facilities and services are available to support the proposed Project. Thus, the proposed Project would be consistent with Goal 8. Additionally, as ensured during the City's plan check, future projects would be required to pay DIF's as necessary.
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	**Consistent.** As described in Section *5.7*, *Public Services*, adequate public facilities and services are available to support the proposed Project. Thus, the proposed Project would be consistent with Policy 8.1. Additionally, as ensured during the City's plan check, future projects would be required to pay DIF's, such as school district fees, as needed.
Policy 8.7: To ensure an orderly extension of essential services and facilities, and preservation of a free-flowing circulation system, continue to require provision of essential facilities and services at the developer's expense where these systems do not exist or are not already part of the City's financed capital improvement program.	**Consistent.** As described in Section *5.7*, *Public Services*, adequate public facilities, and services are available to support the proposed Project. At the time development projects are proposed, appropriate impact fees and necessary coordination with agencies and utility providers would occur to ensure essential services and utilities are supplied to future residents and businesses. Additionally, a TIA was prepared as part of this Project and will be assessed by the City to determine necessary future roadway improvements. Future development would be responsible for implementing identified improvements. Thus, the proposed Project would be consistent with Policy 8.7.

General Plan Update Goal, Policy, or Objective	Project Consistency
Policy 8.8: Maintain and improve, where necessary, the City's infrastructure and facilities.	**Consistent.** As described in Section 5.7, *Public Services*, adequate public facilities, and services are available to support the proposed Project. At the time development projects are proposed, appropriate impact fees and necessary coordination with agencies and utility providers would occur to ensure essential services and utilities are supplied to future residents and businesses. Additionally, a TIA was prepared as part of this Project and will be assessed by the City to determine necessary future roadway improvements. Future development would be responsible for implementing identified improvements. Thus, the proposed Project would be consistent with Policy 8.7.
Goal 9: Continue to provide for a planned community in East Tustin compatible with the land use characteristics of the local area and sensitive to the natural environment.	**Consistent.** The Project would include a SPA to the ETSP. The changes proposed by the Project include an allowance of up to 900 dwelling units over 18 acres within The Market Place site.
Policy 9.6: Retain natural landscape to the maximum extent possible, and incorporate planting in new development areas compatible with the character and quality of the natural surrounding environment	**Consistent.** Design requirements established through ODS for the site would be created to ensure that future projects are compatible with the surrounding environment and development by including appropriate landscaping. Thus, the proposed Project would be consistent with Policy 9.6.
Housing Element	
Goal 1: Provision of 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 commensurate with the City's identified housing needs in the RHNA allocation.	**Consistent.** During the Housing Element process, the City identified The Market Place as a suitable commercial site for rezoning to allow higher density housing. The Project would include a GPA and an SPA of the Project site to allow for future development of up to 900 housing units, consistent with the City's certified 2021-2029 Housing Element. The allowed densities under this Project would provide for a variety of housing types and diverse socio-economic needs. Thus, the proposed Project would be consistent with Goal 1.
Policy 1.1: Provide site opportunities inventory of vacant and underutilized land for development of housing that responds to diverse community needs in terms of housing type, cost and location, emphasizing locations near services and transit.	**Consistent.** During the Housing Element process, the City identified The Market Place as a suitable commercial site for rezoning to allow higher density housing. The Project would include a GPA and an SPA of the Project site to allow for future development of up to 900 housing units, consistent with the City's certified 2021-2029 Housing Element. The allowed densities under this Project would provide for a variety of housing types and diverse socio-economic needs. Thus, the proposed Project would be consistent with Goal 1.
Policy 1.4: Initiate development permit and zoning code streamlining strategies to encourage and expedite residential development (i.e. accessory dwelling units, affordable housing units, and investments in existing buildings) to reduce and eliminate regulatory barriers.	**Consistent.** Per Housing Element Program 1.2a, the City will develop objective design standards (ODS) to ensure high quality residential development, while simultaneously meeting the City's goal of streamlining residential development to meet its RHNA goals. As part of the Project, ODS for the Project site would be developed. Thus, the proposed Project would be consistent with Policy 1.4.

General Plan Update Goal, Policy, or Objective	Project Consistency
Policy 1.5: Encourage infill development or site redevelopment within feasible development sites for homeownership and rental units through the implementation of smart growth principles, allowing for 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 employment opportunities, community facilities and services, and amenities.	**Consistent.** During the Housing Element process, the City identified The Market Place as a suitable commercial site for rezoning to allow mixed-use development, which introduced the opportunity to allow higher density housing. The Project would include a GPA and an SPA of the Project site to allow for future development of up to 900 housing units, consistent with the City's certified 2021-2029 Housing Element. The allowed densities under this Project would provide for a variety of housing types and diverse socio-economic needs. Thus, the proposed Project would be consistent with Policy 1.5.
Goal 2: Promote fair housing opportunities for all people regardless of their special characteristics as protected under state and federal fair housing laws.	**Consistent.** The Project proposes housing opportunities near existing services, workplaces and existing transit.
Policy 2.3: Promote the dispersion and integration of housing for low- and very-low income families throughout the community.	**Consistent.** During the Housing Element process, the City identified The Market Place as a suitable commercial site for rezoning to allow higher density housing. The Project would include a GPA and an SPA of the Project site to allow for future development of up to 900 housing units, consistent with the City's certified 2021-2029 Housing Element. The allowed densities under this Project would provide for a variety of housing types and diverse socio-economic needs. Thus, the proposed Project would be consistent with Policy 2.3.
Policy 2.6: Promote fair housing opportunities by supporting the continuation of policies that require relocation assistance, and/or to provide incentives and assistance for purchase of the units by low- and moderate-income households.	**Not Applicable.** This is not a Project-specific policy and is therefore not applicable.
Goal 5: Ensure that new housing is sensitive to the existing natural and built environment.	**Consistent.** The ODS would ensure high visual character and quality of future residential development proposed within the Project site. Additionally, each future residential project implemented as a result of the SPA and Housing Element would require, at minimum, a project-level plan check. Thus, the proposed Project would be consistent with Goal 5.
Policy 5.1: Prioritize sustainable housing developments in proximity to services and employment centers thereby enabling the use of public transit, walking or bicycling and promoting an active lifestyle.	**Consistent.** The Project site is located near commercial, retail, and office uses. Additionally, as described in Section 5.9, *Transportation*, the proposed Project is located near established public transit and would promote an active lifestyle. Thus, the proposed Project would be consistent with Policy 5.1.
Policy 5.2: Promote green building practices for more sustainable energy conservation measures in the construction of new housing or rehabilitated units.	**Consistent.** As described in Section 5.2, *Energy*, future development under the proposed Project would be required to adhere to State and local regulations regarding green building and sustainable practices such as Title 24. Thus, the proposed Project would be consistent with Policy 5.2.
Program 1.2a Program 1.2a provides that the City will amend its Zoning Code to remove subjective design guidance in TCC Section 9272 (Design Review) and adopt new Objective Design Standards (ODS) to ensure	**Consistent.** The Project would be in fulfillment of Program 1.2a, which would include rezone of the Project site (The Market Place) in accordance with state law and the creation of ODS to ensure clear guidance

General Plan Update Goal, Policy, or Objective	Project Consistency
that the City can provide clear guidance regarding project design, in order to streamline the development of high-quality residential development. The ODS would include provisions consistent with the requirements of Senate Bill (SB) 35. Program 1.2a is anticipated to be complete in October 2024.	for future allowed residential uses.
Program 1.2c Program 1.2c directs the City to develop parking standards to facilitate residential housing production as part of mixed-use developments, adaptive reuse projects, and new residential developments. The program provides that parking displaced as a result of redevelopment may be replaced with vertical parking structures, as needed, to provide required parking. Additionally, the parking standards would incentivize creative parking strategies such as parking credits for transit rich development, and allowance of parking structures and parking lifts, by right and subject to the ODS.	**Consistent.** The Project would be in fulfillment of Program 1.2a, which would include rezone of the Project site (The Market Place) in accordance with state law, and the development of ODS to ensure clear guidance for future allowed residential uses. The ODS would include parking standards consistent with the commitment of Program 1.2c, which would allow for flexible parking strategies and accommodate future parking needs.
Circulation Element	
Goal 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.** During the Housing Element process, the City identified The Market Place as a suitable commercial site for rezoning to allow allow higher density housing. The Project would include a GPA and an SPA of the Project site to allow for future development of up to 900 housing units, consistent with the City's certified 2021-2029 Housing Element. The allowed densities under this Project would provide for a variety of housing types and diverse socio-economic needs. Thus, the proposed Project would be consistent with Goal 1.
Policy 1.2: Develop and implement circulation system standards for roadway and intersection classifications, right-of-way width, pavement width, design speed, warrant requirements, capacity, maximum grades and associated features such as medians and bicycle lanes or trails that are adjacent or off-road.	**Consistent.** Future development projects under the proposed Project would be required to comply with the circulation system standards, as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits.
Policy 1.3: Coordinate roadway improvements with applicable regional, state and federal transportation plans and proposals.	**Consistent.** The Project does not currently propose any development or roadway improvements. Roadway improvements would be determined at the time a development project is proposed, and would coordinate with applicable regional, state, and federal transportation parties as necessary.
Policy 1.4: Develop and implement thresholds and performance standards for acceptable levels of service.	**Consistent.** As described in Section *5.7*, *Public Services*, adequate public facilities, and services are available to support the proposed Project. At the time development projects are proposed, appropriate impact fees and necessary coordination with agencies and utility providers would occur to ensure essential services and utilities are supplied to future residents and businesses Additionally, a TIA was prepared as part of this Project and will be assessed by the City to determine necessary future improvements. Future development would be responsible for implementing identified improvements.

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	Thus, the proposed Project would be consistent with Policy 1.4.
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.** A TIA was prepared as part of this Project and will be assessed by the City to determine necessary future improvements. Future development would be responsible for implementing identified improvements. Future major development under the proposed Project would require preparation of a project-specific TIA to identify project-specific impacts. Thus, the proposed Project would be consistent with Policy 8.7.
Policy 1.11: Encourage new development which facilitates transit services, provides for non-vehicular circulation and minimizes vehicle miles traveled.	**Consistent.** The proposed Project is an infill use that would allow for future development of an existing commercial center to accommodate anticipated residential growth, and would increase amenities, such as parks, provide connectivity to surrounding neighborhoods, and minimize VMT.
Policy 1.13: Minimize effects of transportation noise wherever possible so as to comply with the Noise Element.	**Consistent.** As discussed in Section *5.5*, *Noise*, the Project would result in a less-than-significant impact regarding traffic noise. Future development under the proposed Project would be required to ensure consistency with the Project's noise analysis, and if inconsistent, would be required to prepare a separate project-specific noise analysis. Consistency with the approved Project would be determined during City plan check.
Policy 1.15: Ensure construction of existing roadways to planned widths, as new developments are constructed.	**Consistent.** Future development under the proposed Project would be required to comply with City roadway requirements which would be confirmed through City plan check.
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.** Future development projects would be required to pay and/or implement their fair share of public improvements, as ensured by the City during plan check and prior to acquiring building permits. Thus, the proposed Project would be consistent with Policy 1.16.
Goal 5: Support development of a public transportation system that provides mobility to all City inhabitants and encourages use of public transportation as an alternative to automobile travel.	**Not applicable.** This Project does not include the development of public transit.
Policy 5.2: Require new development to fund transit facilities, such as bus shelters and turn-outs, where deemed necessary to meet public needs arising in conjunction with development.	**Consistent.** Future projects would be required, if deemed necessary, to fund transit facilities as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits. Thus, the proposed Project would be consistent with Policy 5.2.
Policy 5.5: Promote new development that is designed in a manner which facilitates provision or expansion of transit service and provides non-automobile circulation within the development.	**Consistent.** The proposed Project would allow for a future mix of uses by placing residential uses in an existing commercial center, and would provide locational efficiency as it allows people to work, live, and obtain services within a small area, which has the potential to reduce VMT in comparison to residential development that is farther from employment and services. Additionally, the Project is located near two Orange County Transportation Authority (OCTA) transit stops that would be available to potential future

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	residents in the event residential land uses are developed. Further, the Metrolink Orange County Line and Inland Empire-Orange County commuter lines travel through Tustin, with stops at the Tustin Metrolink Station, located approximately 1.5 miles south of the Project site. Thus, the proposed Project would be consistent with Policy 5.5.
Goal 6: Increase the use of non-motorized modes of transportation.	**Not Applicable.** This is not a project-specific goal and is therefore not applicable.
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.** Future development projects under the proposed Project would be required to comply with all City transportation standards, as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits. A specific development project is not proposed at this time.
Policy 6.2: Maintain existing pedestrian facilities and require new development to provide pedestrian walkways between developments, schools and public facilities.	**Consistent.** A specific development project is not proposed at this time. The Project would allow for future infill development. Future residential development would utilize existing sidewalks and potential future improvements would be made at the time projects are proposed.
Policy 6.8: Support retrofit installation of sidewalks in industrial districts and Planned Community Business Parks as development occurs.	**Not Applicable.** The Project site is within an existing commercially developed area.
Policy 6.14: Require new development to dedicate land and fund improvement of bicycle, pedestrian and equestrian facilities, where deemed necessary to meet public needs arising in conjunction with development.	**Not Applicable.** This is not a project-specific goal, but a City initiative, and is therefore not applicable.
Goal 7: Provide for well-designed and convenient parking facilities.	**Consistent.** Future development projects under the proposed Project would be required to comply with all City transportation standards, as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits. A specific development project is not proposed at this time.
Policy 7.1: Consolidate parking, where appropriate, to eliminate the number of ingress and egress points onto arterials.	**Consistent.** Future development projects under the proposed Project would be required to comply with all City transportation standards, as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits. A specific development project is not proposed at this time.
Policy 7.2: Provide sufficient off-street parking for all land uses	**Consistent.** Future development projects under the proposed Project would be required to comply with all City transportation standards, as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits. A specific development project is not proposed at this time.
Conservation, Open Space, and Recreation Element	

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Goal 1: Reduce air pollution through proper land use, transportation and energy use planning.	**Consistent.** The proposed Project is an infill use that would allow for future development of an existing commercial center to accommodate anticipated residential growth, and would provide connectivity to surrounding neighborhoods, and minimize VMT. Reduced VMT would also result in reduced mobile-source emissions and energy demand.
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.	**Not Applicable.** This is not a project-specific goal, but a City initiative, and is therefore not applicable.
Policy 1.3: Locate multiple family developments close to commercial areas to encourage pedestrian rather than vehicular travel.	**Consistent.** The proposed Project is an infill use that would allow for future development of an existing commercial center to accommodate anticipated residential growth, and would provide connectivity to surrounding neighborhoods, and increase walkability and minimize VMT.
Policy 1.4: Develop neighborhood parks near concentrations of residents to encourage pedestrian travel to the recreation facilities.	**Consistent.** As described in Section 5.8 Recreation, future implementation of development projects would be required to determine their fair share of park facilities and either provide adequate park facilities or pay in lieu fees in accordance with Tustin City Code Section 9331 (PPP R-1).
Policy 1.6: Cooperate and participate in regional air quality management plans, programs, and enforcement measures.	**Not Applicable.** This is not a project-specific goal, but a City initiative, and is therefore not applicable.
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.	**Not Applicable.** This is not a project-specific goal, but a City initiative, and is therefore not applicable.
Policy 2.1: Reduce vehicle trips through incentives, regulations and/or Transportation Demand Management (TDM) programs.	**Consistent.** The proposed Project is an infill use that would allow for future development of an existing commercial center to accommodate anticipated residential growth, and would provide connectivity to surrounding neighborhoods and complimentary uses, and increase walkability and minimize VMT.
Policy 2.2: Reduce total vehicle miles traveled (VMT) through incentives, regulations and/or Transportation Demand Management.	**Consistent.** The proposed Project is an infill use that would allow for future development of an existing commercial center to accommodate anticipated residential growth, and would provide connectivity to surrounding neighborhoods and complimentary uses, and increase walkability and minimize VMT.
Policy 2.12: Implement land use policy contained in the Land Use Element toward the end of achieving jobs/housing balance goals.	**Not Applicable.** This is not a project-specific goal and is therefore not applicable.
Goal 3: Reduce particulate emissions to the greatest extent feasible.	**Consistent.** As described in Section 5.1, *Air Quality*, particulate emissions would mostly be derived from mobile source emissions. The Project would allow for future development of residential within an existing commercial area; thereby incentivizing reduced vehicle trips and additional mobile source emissions as a result of mixed land use. Future development would produce minimal mobile source emissions and would also be required to comply with all relevant State, regional,

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	and local regulations and policies for reducing particulate emissions. Thus, the proposed Project would be consistent with Goal 3.
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.	**Not Applicable.** This is not a project-specific goal, but a City initiative, and is therefore not applicable.
Goal 4: Reduce emissions through reduced energy consumption.	**Consistent.** As described in Section 5.2, *Energy*, future development under the proposed Project would be required to adhere to State and local regulations regarding green building and sustainable practices such as Title 24, as ensured and verified by the City during the plan check and permitting process. Thus, the proposed Project would be consistent with Goal 4.
Policy 4.1: Promote energy conservation in all sectors of the City including residential, commercial, and industrial.	**Consistent.** As described in Section 5.2, *Energy*, future development under the proposed Project would be required to adhere to State and local regulations regarding green building and sustainable practices such as Title 24, as ensured and verified by the City during the plan check and permitting process. Thus, the proposed Project would be consistent with Policy 4.1.
Goal 5: Protect water quality and conserve water supply.	**Consistent.** As described in the IS/NOP Section 5.10, *Hydrology and Water Quality* (see Appendix A), construction of future development facilitated by the Project would be required to obtain coverage under the NPDES General Permit for Discharges of Storm Water Associated with Construction Activity. This would require implementation of a SWPPP that is required to identify all potential sources of pollution that are reasonably expected to affect the quality of storm water discharges from the construction site. Additionally, operation of the proposed Project would be required to comply with the requirements of the Orange County Drainage Area Management Plan (DAMP) and the intent of the non-point source NPDES Permit for Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the incorporated Cities of Orange County within the Santa Ana Region. The DAMP requires that new development and significant redevelopment projects develop and implement a water quality management plan (WQMP) that includes BMPs and low impact development (LID) design features that would provide onsite treatment of stormwater to prevent pollutants from onsite uses from leaving the site. WQMPs prepared for future development would be reviewed and approved by the City to ensure it complies with the MS4 Permit regulations. In addition, the City's permitting process would ensure that all BMPs in the WQMP would be implemented with the project. Thus, implementation of a SWPPP and WQMP would protect water quality and water supply. Additionally, future projects would be required to implement landscaping and water conserving appliances pursuant to Section 9701 of Article 9, Chapter 7 of the Tustin City Code. Compliance would be reviewed by the City during the

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	permitting process. Thus, the proposed Project would be consistent with Goal 5.
Policy 5.2: Protect groundwater resources from depletion and sources of pollution.	**Consistent.** As described in Section 5.11, *Utilities,* the Project site is fully developed and nearly 100 percent impervious aside from some landscaped areas. Therefore, implementation of the proposed Project would not change the amount of impervious surface of interfere with the rate of groundwater recharge compared to existing conditions. Further, as described above, development and construction of the Project site would require preparation and adherence to SWPPP and WQMP. Therefore, development of the site would not deplete or pollute groundwater resources. Thus, the proposed Project would be consistent with Policy 5.2.
Policy 5.3: Conserve imported water by requiring water conservation techniques, water conserving appliances, and drought-resistant landscaping.	**Consistent.** Future projects would be required to implement landscaping and water conserving appliances pursuant to Section 9701 of Article 9, Chapter 7 of the Tustin City Code. Compliance would be reviewed by the City during the permitting process. Thus, the proposed Project would be consistent with Policy 5.3.
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.	**Not Applicable.** This is not a project-specific goal, but a City initiative, and is therefore not applicable.
Policy 7.1: Inventory unique or significant tree stands, with particular attention given to the cedar stand, eucalyptus groves, and eucalyptus windrows in East Tustin. Develop standards to retain or incorporate the eucalyptus windrows and groves into development plans where feasible. The redwood/sequoia stand has been retained within a park site and integrated into the park design.	**Not Applicable.** The Project site is completely developed. Future development would not result in the removal of tree stands.
Policy 7.2: Conserve important plant communities and wildlife habitats, such as riparian areas, wildlife movement corridors, wetlands, and significant tree stands through the practice of creative site planning, revegetation, and open space easements/dedications.	**Not Applicable.** The Project site is completely developed. Future development would not result in the disturbance of important plant communities.
Policy 7.4: Require new development to revegetate graded areas.	**Consistent.** All future projects are required to comply with the City of Tustin Grading Manual (1990), which includes requirements for the revegetation of graded areas. Implementation of grading manual standards would be verified by the City during the plan check and permitting process. Thus, the proposed Project would be consistent with Policy 7.4.
Goal 8: Conserve and protect significant topographical features, important watershed areas, resources, and soils.	**Not applicable.** The Project site is completely developed and void of natural topographical features, natural resources and soils.
Policy 8.1: Develop standards to preserve the unique variety of land forms indigenous in hillside areas, and ensure that the development process is structured to ensure that grading and siting practice reflects the natural topography.	**Consistent.** The Project site is not located within a hillside area, is already developed with commercial land uses and parking areas and would be subject to design requirements established through ODS. Furthermore, all future projects are required to comply with the City of Tustin Grading Manual (1990).

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	Implementation of grading manual standards would be verified by the City during the plan check and permitting process. Thus, the proposed Project would be consistent with Policy 8.1.
Policy 8.2: Control erosion during and following construction through proper grading techniques, vegetation replanting, and the installation of proper drainage control improvements.	**Consistent.** As described above, development and construction of the Project site would require preparation and adherence to SWPPP and WQMP. Through implementation of BMP's, future development of the site would require proper grading techniques, vegetation replanting, and the installation of proper drainage control improvements during and following construction. Furthermore, all future projects are required to comply with the City of Tustin Grading Manual (1990). Implementation of grading manual standards would be verified by the City during the plan check and permitting process. Thus, the proposed Project would be consistent with Policy 8.2.
Policy 8.3: Encourage the practice of proper soil management techniques to reduce erosion, sedimentation, and other soil-related problems.	**Consistent.** Future development facilitated by the provision of residential land uses within the Project site would be required to comply with the RWQCB NPDES Construction General Permit requirements. Requirements include installation of Best Management Practices (BMPs), which establishes minimum stormwater management requirements and controls. To reduce the potential for soil erosion and the loss of topsoil, a SWPPP is required by the RWQCB regulations to be developed by a (Qualified SWPPP Developer) QSD. The SWPPP is required to address site-specific conditions related to specific grading and construction activities. The SWPPP would identify potential sources of erosion and sedimentation to prevent loss of topsoil during construction, and to identify erosion control BMPs to reduce or eliminate the erosion and loss of topsoil, such as use of silt fencing, fiber rolls, or gravel bags; stabilized construction entrances/exits; hydroseeding, and similar measures. In addition to RWQCB requirements, proposed development would need to comply with the City of Tustin Grading Manual procedures. Thus, the proposed Project would be consistent with Policy 8.3.
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.** All future development permitted would be required to comply with the requirement of the California Building Code (CBC) (California Code of Regulations, Title 24, Part 2) (PPP GEO-1), which is a minimum requirement intended to protect life safety and prevent collapse of structures. Implementation of CBC standards would be verified by the City during the plan check and permitting process Furthermore, all future projects are required to comply with the City of Tustin Grading Manual (1990). Implementation of grading manual standards would be verified by the City during the plan check and permitting process. Thus, the proposed Project would be consistent with Policy 8.5.
Policy 8.6: Site planning and architectural design shall respond to the natural landform whenever possible to	**Consistent.** The Project site is located in an urban environment and would implement design requirements

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minimize grading and viewshed intrusion.	established through ODS for the site, and future development within the site, which would be created to ensure compatibility with the existing site development and surrounding land uses, such as compatible building height, cohesive architectural style, and appropriate landscaping. Furthermore, all future projects are required to comply with the City of Tustin Grading Manual (1990). Implementation of grading manual standards would be verified by the City during the plan check and permitting process. Thus, the proposed Project would be consistent with Policy 8.6.
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.** The Project site is outside of a 500-foot radius from an active fault and is not subject to a special development permit. The Project site contains existing development, and the provision for additional development would not exacerbate existing risk of earthquake. Further, all future development permitted would be required to comply with the requirement of the California Building Code (CBC) (California Code of Regulations, Title 24, Part 2). Implementation of CBC standards would be verified by the City during the plan check and permitting process for future development within the Project site. Additionally, future projects would be required to implement measures identified within the project-specific geotechnical investigation (MM GEO-1). Thus, the proposed Project would be consistent with Policy 8.8.
Policy 8.10: Mitigate the impacts of development on sensitive lands such as steep slopes, wetlands, cultural resources, and sensitive habitats through the environmental review process.	**Consistent.** The Project site is currently completely paved; thus, implementation of the Project would not result in an adverse effect, either directly or through habitat modifications, on any sensitive species (see Section 5.4 of the Initial Study in Appendix A). Additionally, the site does not contain wetlands, sensitive habitats, or steep slopes. If commencement of vegetation clearing for any future residential development project occurs between February 1 and September 15, Mitigation Measure BIO-1 has been included to require nesting bird surveys. Additionally, according to the IS/NOP Section 5.5, *Cultural Resources*, there is a low potential that future construction could result in inadvertent discovery of a buried archeological resource. However, Mitigation Measure CUL-1 has been incorporated to mitigate any potential impact to an archeological resource. Furthermore, future development would be required to comply with California Health and Safety Code Section 7050.5, CEQA Section 15064.5, and Public Resources Code Section 5097.98, and the City of Tustin Grading Manual. Thus, the proposed Project would be consistent with Policy 8.10.
Policy 8.16: Site buildings and align roadways to maximize public visual exposure to natural features.	**Consistent.** As described in the IS/NOP attached as Appendix A, public roadways surrounding the Project site, including I-5, Jamboree Road, Bryan Avenue, and Myford Road, do not provide views of Peters Canyon Ridgeline due to low elevation and visual obstruction by surrounding buildings and trees. The Project site and

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	surrounding roadways do not provide views of any other natural features. Thus, the proposed Project would be consistent with Policy 8.16.
Goal 10: Reduce solid waste produced within City.	**Consistent.** Project construction would generate solid waste for landfill disposal in the form of demolition debris from the existing building and infrastructure that would be removed from the site. Demolition waste would be properly characterized as required by law and recycled or disposed of at an appropriate type of landfill for such materials. Section 5.408.1 of the 2019 California Green Building Standards Code requires demolition and construction activities to recycle or reuse a minimum of 65 percent of the nonhazardous construction and demolition waste. Additionally, operation of the Project would generate waste as well. However, at least 75 percent of the solid waste is required by AB 341 to be recycled. All future development would be required to comply with waste reduction regulations. Therefore, the Project would be consistent with Goal 10.
Policy 10.2: Ensure that the City diverts from landfills a maximum of 50% of the solid waste generated in the City as required by the California Integrated Waste Management Board.	**Consistent.** Project construction would generate solid waste for landfill disposal in the form of demolition debris from the existing building and infrastructure that would be removed from the site. Demolition waste would be properly characterized as required by law and recycled or disposed of at an appropriate type of landfill for such materials. Section 5.408.1 of the 2019 California Green Building Standards Code requires demolition and construction activities to recycle or reuse a minimum of 65 percent of the nonhazardous construction and demolition waste. Additionally, operation of the Project would generate waste as well. However, at least 75 percent of the solid waste is required by AB 341 to be recycled. All future development would be required to comply with waste reduction regulations. Therefore, the Project would be consistent with Policy 10.2.
Goal 11: Conserve energy resources through use of available energy technology and conservation practices.	**Consistent.** As described in Section 5.2, *Energy*, future development under the proposed Project would be required to adhere to State and local regulations regarding green building and sustainable practices such as Title 24, as ensured and verified by the City during the plan check and permitting process. Thus, the proposed Project would be consistent with Goal 11.
Policy 11.2: Maintain local legislation to establish, update and implement energy performance building code requirements established under State Title 24 Energy Regulations.	**Consistent.** As described in Section 5.2, *Energy*, future development under the proposed Project would be required to adhere to State and local regulations regarding green building and sustainable practices such as Title 24, as ensured and verified by the City during the plan check and permitting process. Thus, the proposed Project would be consistent with Policy 11.2.
Goal 12: Maintain and enhance the City's unique culturally and historically significant building sites or features.	**Consistent.** The Project site is completely developed. The Project site is a paved parking lot and does not include any historically significant buildings. Additionally, there is a low potential that future

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	construction could result in inadvertent discovery of a buried archeological resource. Mitigation Measure CUL-1 has been incorporated to mitigate any potential impact to an archeological resource. Thus, the proposed Project would be consistent with Goal 12.
Policy 12.2: Retain and protect significant areas of archaeological, paleontological, or historical value for education and scientific purposes.	**Consistent.** A Cultural Records Search was conducted for the Project site by BFSA Environmental Services in 2023 (see Appendix A). According to results of the cultural record search prepared for the Project, the Project site does not contain any historic resources. Additionally, there is a low potential that future construction could result in inadvertent discovery of a buried archeological resource. Mitigation Measure CUL-1 has been incorporated to mitigate any potential impact to an archeological resource. Furthermore, the Project site is not located in an area identified by the General Plan as "High Paleontological Sensitivity" and the City has very detailed standards and requirements for grading that are designed to protect sensitive topographic, soil, palaeontologic, and archaeologic resources. The Tustin Grading Manual prescribes appropriate measures to protect the earth by controlling erosion, sedimentation, and storm drainage (PPP HYD-2). Proper grading, soil management, and open space standards will work to preserve any potential paleontological resources in the very unlikely event that a resource is encountered. Thus, the proposed Project would be consistent with Policy 12.2
Goal 13: Preserve Tustin's archaeological and paleontological resources.	**Consistent.** As described above, the Project site has low potential for archaeological and paleontological resources. Additionally, Mitigation Measure CUL-1 has been incorporated to mitigate any potential impact to an archeological resource. The Tustin Grading Manual prescribes appropriate measures to protect the earth by controlling erosion, sedimentation, and storm drainage (PPP HYD-2). Proper grading, soil management, and open space standards will work to preserve any potential paleontological resources in the very unlikely event that a resource is encountered during future construction activities. Thus, the proposed Project would be consistent with Goal 13.
Policy 13.1: Require a site inspection by certified archaeologists or paleontologists for new development in designated sensitive areas.	**Consistent.** Future projects within the Project site would require preparation of Geotechnical Investigations. Future projects would be required to implement measures identified within the project-specific geotechnical investigation (MM GEO-1). Additionally, a Cultural Records Search (Appendix A of the Initial Study) was prepared to determine the potential for historic and architectural resources to occur within the Project site. Thus, the proposed Project would be consistent with Policy 13.1.
Policy 13.2: Require mitigation measures where development will affect archaeological or paleontological resources.	**Consistent.** As described above, the Project site has low potential for archeological resources; however, future development would be required to comply with Mitigation Measure CUL-1 and all relevant regulatory requirements. Additionally, the Project site is not located

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	in an area identified by the General Plan as "High Paleontological Sensitivity." The City has very detailed standards and requirements for grading that are designed to protect sensitive topographic, soil, palaeontologic, and archaeologic resources. The Tustin Grading Manual prescribes appropriate measures to protect the earth by controlling erosion, sedimentation, and storm drainage. All future projects are required to comply with the City of Tustin Grading Manual. Additionally, future projects would be required to implement measures identified within the project-specific geotechnical investigation (MM GEO-1). Thus, the proposed Project would be consistent with Policy 13.2.
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.	**Consistent.** The Project proposes a land use change and does not propose a specific development project or funding of future development. However, as described in Section 5. 8, Recreation, future development under the Project would provide for adequate private recreational spaces consistent with the City's park space requirements, and park dedications for subdivision projects, pursuant to City Code (or parkland dedication in-lieu fee).
Policy 14.8: Encourage and, where appropriate, require the inclusion of recreation facilities and open space within future residential, industrial and commercial developments.	**Consistent.** The Project proposes a land use change and does not propose a specific development project or funding of future development. However, as described in Section 5. 8, *Recreation*, future development under the Project would provide for adequate private recreational spaces, and park dedications for subdivision projects, pursuant to City Code (or parkland dedication in-lieu fee, where applicable).
Policy 14.12: Ensure that the City's laws and related implementation tools relating to park dedication and development (e.g., ordinances, regulations, in-lieu fee schedules, etc.) reflect current land and construction costs, and are, in fact, providing adequate park land and facilities concurrent with population growth.	**Not Applicable.** This is not a project-specific policy and is therefore not applicable.
Goal 17: Operate and maintain existing and future parks and recreation facilities so they are safe, clean, and attractive to the public; and preserve, protect, and enhance both existing and potential natural recreation areas to ensure that long-term public investments and values are not unreasonably preempted, compromised, or prevented by neglect or short-term considerations.	**Not Applicable.** This is not a project-specific goal and is therefore not applicable.
Policy 17.2: Require park designs (including landscape treatments, buildings, irrigation, etc.) that are durable, reasonably standardized, and economical to maintain.	**Consistent.** The Project proposes a land use change and does not propose a specific development project or funding of future development. However, as described in Section 5. 8, *Recreation*, future development under the Project would provide for adequate private recreational spaces, and park dedications for subdivision projects, pursuant to City Code (or parkland dedication in-lieu fee, where applicable).
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	**Consistent.** The Project proposes a land use change and does not propose a specific development project or funding of future development. However, as described

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of Tustin's financial resources and legal authorities and the appropriate responsibilities of other agencies, the private sector, and individual and group users.	in Section 5. 8, *Recreation*, future development under the Project would provide for adequate private recreational spaces, and park dedications for subdivision projects, pursuant to City Code (or parkland dedication in-lieu fee, where applicable).
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), Redevelopment 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.** The Project proposes a land use change and does not propose a specific development project or funding of future development. However, as described in Section 5. 8, *Recreation*, future development under the Project would provide for adequate private recreational spaces, and park dedications for subdivision projects, pursuant to City Code (or parkland dedication in-lieu fee, where applicable).
Public Safety Element	
Goal 1: Reduce the risk to the community's inhabitants from flood hazards.	**Consistent.** The Project site is included in the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Map Number 06059C0161J (Federal Emergency Management Agency, 2009). The southern portion of the Project site is within an area designated as Zone AH, a Special Flood Hazard Area subject to inundation by the one percent annual chance flood with a flood depth of one to three feet. Therefore, the Project would facilitate the development of housing within a flood zone. Tustin City Code, Chapter 8, *Floodplain Management*, includes requirements for residential and nonresidential development within a flood hazard zone (PPP HYD-4). Requirements include measures to avoid potential hazards from flooding, such as ensuring the bottom floor of the structure is raised above the flood elevation and anchoring structures to prevent shifting. Future development would be required to comply with all local and State requirements for the construction of residential and nonresidential development within a flood hazard zone. Implementation of the City's floodplain management design requirements would ensure future development does not impede or redirect existing flood flows. The Project site is currently completely developed and completely paved, with the exception of some ornamental landscaped areas. Future development would not result in additional impervious surfaces that could increase the volume and velocity of stormwater runoff that would exacerbate flood conditions. Therefore, the Project would result in a less-than-significant impact.
Policy 1.1: Identify flood hazard areas and provide appropriate land use regulations for areas subject to flooding.	**Consistent.** The Project site is included in the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Map Number 06059C0161J (Federal Emergency Management Agency, 2009). The southern portion of the Project site is within an area designated as Zone AH, a Special Flood Hazard Area subject to inundation by the one percent annual chance flood with a flood depth of one

General Plan Update Goal, Policy, or Objective	Project Consistency
	to three feet. Therefore, the Project would facilitate the development of housing within a flood zone. Tustin City Code, Chapter 8, *Floodplain Management*, includes requirements for residential and nonresidential development within a flood hazard zone (PPP HYD-4). Requirements include measures to avoid potential hazards from flooding, such as ensuring the bottom floor of the structure is raised above the flood elevation and anchoring structures to prevent shifting. Future development would be required to comply with all local and State requirements for the construction of residential and nonresidential development within a flood hazard zone. Implementation of the City's floodplain management design requirements would ensure future development does not impede or redirect existing flood flows. The Project site is currently completely developed and completely paved, with the exception of some ornamental landscaped areas. Future development would not result in additional impervious surfaces that could increase the volume and velocity of stormwater runoff that would exacerbate flood conditions. Therefore, the Project would result in a less-than-significant impact.
Policy 1.5: Require detention basins as a flood control measure where applicable to reduce the risk from flood hazards.	**Consistent.** Specific infrastructure improvements required to support residential development within the The Market Place are not known at this time and will not be known until a development project is proposed. However, future development would comply with the DAMP regulations which are included in Tustin City Code Section 4902 and are the implementation method for NPDES Stormwater Permit compliance. Compliance would ensure that all future development within The Market Place incorporates appropriate Site Design, Source Control, and Treatment Control BMPs.
Goal 3: Reduce the risk to the community from geologic and seismic hazards.	**Consistent.** Future projects within the Project site would require preparation of Geotechnical Investigations. Future projects would be required to implement measures identified within the project-specific geotechnical investigation (MM GEO-1). Further, all future development permitted would be required to comply with the requirement of the California Building Code (CBC) (California Code of Regulations, Title 24, Part 2). Implementation of CBC standards would be verified by the City during the plan check and permitting process for future development within the Project site.
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.** Future projects within the Project site would require preparation of Geotechnical Investigations. Future projects would be required to implement measures identified within the project-specific geotechnical investigation (MM GEO-1). Further, all future development permitted would be required to comply with the requirement of the California Building

General Plan Update Goal, Policy, or Objective	Project Consistency
	Code (CBC) (California Code of Regulations, Title 24, Part 2). Implementation of CBC standards would be verified by the City during the plan check and permitting process for future development within the Project site.
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.** Future projects within the Project site would require preparation of Geotechnical Investigations. Future projects would be required to implement measures identified within the project-specific geotechnical investigation (MM GEO-1). Further, all future development permitted would be required to comply with the requirement of the California Building Code (CBC) (California Code of Regulations, Title 24, Part 2). Implementation of CBC standards would be verified by the City during the plan check and permitting process for future development within the Project site.
Policy 3.7: Include and periodically review and update emergency procedures for earthquakes in the City's Emergency Preparedness Plan.	**Consistent.** The Project site is not designated as an emergency evacuation route. The Project would not impair the implementation of evacuation protocol in the event of an emergency within the City or Project site. Additionally, each future residential project implemented as part of the housing overlay and Housing Element would require a project-level plan check with the City and would be reviewed by the City's fire department (Orange County Fire Authority) to ensure proper emergency access to and from the site.
Goal 4: Reduce the risk to the community's inhabitants from exposure to hazardous materials and wastes.	**Consistent.** The Project site is not located on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Additionally, all future development through implementation of the specific plan and the City's certified 2021-2029 Housing Element would be required to develop and implement a SWPPP as required through the NPDES. Implementation of a SWPPP would minimize potential adverse effects to workers, the public, and the environment from the foreseeable upset and accident conditions involving the release of hazardous materials. Construction contract specifications would include strict on-site handling rules and BMPs for hazardous materials.
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.** Future construction and operational activities could involve the transport, use, and disposal of hazardous materials; however, the types of materials are not acutely hazardous, and all storage, handling, use, and disposal of these materials are regulated by federal and State requirements that are implemented by the City during building permitting for construction activities.
Policy 4.5: Establish regulations requiring land uses involved in the production, storage, transportation, handling, or disposal of hazardous materials to be located a safe distance from other land uses that may be adversely affected by such activities.	**Not Applicable.** This is not a project-specific goal and is therefore not applicable.

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Policy 4.15: Coordinate with the County of Orange in the implementation of the National Pollution Discharge Elimination System Permits (NPDES) regulations.	**Consistent.** Construction of future projects would be required to obtain coverage under the NPDES General Permit for Discharges of Storm Water Associated with Construction Activity. This would require implementation of a SWPPP that is required to identify all potential sources of pollution that are reasonably expected to affect the quality of storm water discharges from the construction site. Additionally, operation of the proposed Project would be required to comply with the requirements of the DAMP and the intent of the non-point source NPDES Permit for Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the incorporated Cities of Orange County within the Santa Ana Region. The DAMP requires that new development and significant redevelopment projects develop and implement a WQMP that includes BMPs and LID design features that would provide onsite treatment of stormwater to prevent pollutants from onsite uses from leaving the site. WQMPs prepared for future development would be reviewed and approved by the City to ensure it complies with the MS4 Permit regulations. In addition, the City's permitting process would ensure that all BMPs in the WQMP would be implemented with the project.
Goal 5: Reduce the risk to the community's inhabitants from fires or explosions.	**Consistent.** The Project site is currently developed as a commercial site and is surrounded by other commercial developments. According to the CalFire Fire Hazard Severity Zone Map, the City of Tustin contains very high fire severity zones in the northeast portion of the City. The Project site is not located within or near State responsibility areas or lands classified as very high fire hazard severity zones. Additionally, all future development permitted would be required to comply with the requirement of the California Building Code (CBC) (California Code of Regulations, Title 24, Part 2) (PPP GEO-1), which is a minimum requirement intended to protect life safety and prevent collapse of structures. Additionally, all future development would be required to comply with the requirements of the California Fire Code (Title 24, Part 9).
Policy 5.4: Enforce building code requirements that assure adequate fire protection.	**Consistent.** All future development permitted would be required to comply with the requirement of the California Building Code (CBC) (California Code of Regulations, Title 24, Part 2) (PPP GEO-1), which is a minimum requirement intended to protect life safety and prevent collapse of structures. Additionally, all future development would be required to comply with the requirements of the California Fire Code (Title 24, Part 9).

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Policy 5.6: Cooperate with Orange County Fire Authority to ensure the provision of adequate and cost-effective fire protection services.	**Consistent.** As discussed in Section *5.7*, all future projects would pay appropriate DIF fees for the maintenance of adequate public services. Ongoing coordination would be conducted between the City and Orange County Fire Authority regarding growth planning.
Goal 6: Stabilize demand for law enforcement services.	**Consistent.** As discussed in Section *5.7*, all future projects would pay appropriate DIF fees for the maintenance of adequate public services. Ongoing coordination would be conducted between the law enforcement services regarding growth planning.
Policy 6.1: Provide appropriate levels of police protection within the community.	**Consistent.** As discussed in Section *5.7*, all future projects would pay appropriate DIF fees for the maintenance of adequate public services. Ongoing coordination would be conducted between the law enforcement services regarding growth planning.
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 Project site is completely developed. Future development would be reviewed for consistency with the Project site ODS. The ODS would include development standards to enhance public safety, such as lighting requirements, security measures, etc.
Goal 8: Improve the City's ability to respond to natural and manmade emergencies.	**Not Applicable.** This is not a project-specific goal and is therefore not applicable.
Policy 8.1: Maintain an up-to-date Emergency Operations Plan identifying all available resources and funds for use in the event of a disaster and establishing implementing actions or procedures under the Plan for rescue efforts, medical efforts, emergency shelters, provision of supplies, and all other response efforts recommended by the State Office of Emergency Services and the Federal Emergency Management Agency (FEMA). Include procedures for dealing with specific events such as earthquake, major rail and roadway accidents, flooding, and hazardous materials	**Not Applicable.** This is not a project-specific policy and is therefore not applicable.
Noise Element	
Goal 1: Use noise control measures to reduce the impact from transportation noise sources.	**Consistent.** As discussed in Section *5.5*, *Noise*, the Project would result in a less than significant impact regarding traffic noise. Future development under the proposed Project would be required to ensure consistency with the City's noise standards and implement appropriate design measures to mitigate potential noise impacts. Consistency with the approved Project would be determined during City plan check.
Policy 1.1: Pursue construction of new barriers, or the augmentation of existing barriers, to reduce noise impacts along the Route *5* and Route *55* freeways along segments directly next to residential areas.	**Consistent.** The Project site is adjacent to Interstate *5* freeway. Future residential projects could experience noise pollutions from the adjacent freeway. All future projects would require a Final Acoustical Report to determine whether the proposed project meets the City's interior and exterior noise-level standards, as discussed in Section *5.5*, *Noise*.
Policy 1.11: Consider noise impacts to residential neighborhoods when designating truck routes and major circulation corridors.	**Not Applicable.** This is not a project-specific policy and is therefore not applicable.

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Goal 2: Incorporate noise considerations into land use planning decisions.	**Consistent.** The Project site is adjacent to Route 5. Future residential projects could experience noise pollutions from the adjacent freeway. All future projects would require a Final Acoustical Report to determine whether the proposed project meets the City's interior and exterior noise-level standards, as discussed in Section *5.5, Noise*.
Policy 2.1: Adopt planning guidelines that establish acceptable noise standards for various land uses throughout the Tustin Planning Area.	**Consistent.** Future development under the proposed Project would be required to adhere to acceptable noise standards for the established land uses, as ensured by the City during the plan check and permitting process. All future projects would require a Final Acoustical Report to determine whether the proposed project meets the City's interior and exterior noise-level standards, as discussed in Section *5.5, Noise*. Thus, the proposed Project would be consistent with Policy 2.1.
Policy 2.3: Use noise/land use compatibility standards as a guide for future planning and development.	**Consistent.** Future development under the proposed Project would be required to adhere to acceptable noise standards for the established land uses, as ensured by the City during the plan check and permitting process. All future projects would require a Final Acoustical Report to determine whether the proposed project meets the City's interior and exterior noise-level standards, as discussed in Section *5.5, Noise*. Thus, the proposed Project would be consistent with Policy 2.3.
Policy 2.4: Review proposed projects in terms of compatibility with nearby noise-sensitive land uses with the intent of reducing noise.	**Consistent.** Future development under the proposed Project would be required to adhere to acceptable noise standards for the established land uses, as ensured by the City during the plan check and permitting process. All future projects would require a Final Acoustical Report to determine whether the proposed project meets the City's interior and exterior noise-level standards, as discussed in Section *5.5, Noise*. Thus, the proposed Project would be consistent with Policy 2.4.
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 development under the proposed Project would be required to adhere to acceptable noise standards for the established land uses, as ensured by the City during the plan check and permitting process. All future projects would require a Final Acoustical Report to determine whether the proposed project meets the City's interior and exterior noise-level standards, as discussed in Section *5.5, Noise*. Thus, the proposed Project would be consistent with Policy 2.5.
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.** The proposed Project allows for the future development residential land uses, and incorporates previously approved commercial square footage. Future development under the proposed Project would be reviewed by the City for compatibility with nearby noise-sensitive land uses, as ensured during plan check and permitting. All future projects would require a Final Acoustical Report to determine whether the proposed

General Plan Update Goal, Policy, or Objective	Project Consistency
	project meets the City's interior and exterior noise-level standards, as discussed in Section *5.5*, *Noise*. Thus, the proposed Project would be consistent with Policy 2.6.
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.** The proposed Project allows for the development of residential land uses, and incorporates previously approved commercial square footage. Future commercial development under the proposed Project would be reviewed by the City, as ensured during plan check and permitting, and would incorporate noise mitigation into project design as needed. Thus, the proposed Project would be consistent with Policy 2.7.
Goal 3: Develop measures to control non-transportation noise impacts.	**Consistent.** The Project allows for the potential future development of residential uses within the center of existing commercial land uses. Residential land uses are not considered noise-intensive uses, and would not contribute to new significant noise increase, as discussed in Section *5.5*, *Noise*. Therefore, the Project would be consistent with Goal 3.
Policy 3.1: Implement a review process of Tustin's noise ordinance, and City policies and regulations affecting noise.	**Not Applicable.** This is not a project-specific goal and is therefore not applicable.
Policy 3.2: Minimize the impacts of construction noise on adjacent land uses through limiting the permitted hours of activity.	**Consistent.** Future development under the proposed Project would be reviewed by the City for consistency with the permitted hours of activity, as ensured during plan check and permitting. Thus, the proposed Project would be consistent with Policy 3.2.
Policy 3.3: Require City departments to observe state and federal occupational safety and health noise standards	**Not Applicable.** This is not a project-specific policy and is therefore not applicable.
Growth Management Element	
Goal 2: Ensure adequate transportation facilities are provided for existing and future inhabitants of the City.	**Consistent.** A TIA was prepared as part of this Project and will be assessed by the City to determine necessary future improvements. Future development would be responsible for implementing identified improvements. Future major development under the proposed Project would require preparation of a project-specific TIA to identify project-specific impacts. Thus, the proposed Project would be consistent with Goal 2.
Policy 2.1: Require that all new development pay its share of the street improvement costs associated with the development, including regional traffic mitigation.	**Consistent.** Future projects would be required to pay their fair share of street improvement costs, as identified in the Project TIA (available upon request by the City), including regional traffic mitigation, as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits. Thus, the proposed Project would be consistent with Policy 2.1.
Policy 2.5: All new developments shall be required to establish a development phasing program which phases approval of development commensurate with required improvements to roadway capacity. The Phasing Plan shall include an overall buildout development plan which can demonstrate the ability of the infrastructure to support the planned development.	**Consistent.** Future projects would be required to establish a phasing program as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits. Thus, the proposed Project would be consistent with Policy 2.5.

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Policy 2.6: Development phasing for new projects shall be a component of the development review and entitlement process and shall be approved prior to issuance of building or grading permits	**Consistent.** All future projects would be required to comply with the City of Tustin Grading Manual (1990). Implementation of grading manual standards would be verified by the City during the plan check and permitting process. Thus, the proposed Project would be consistent with Policy 2.6.

Source: City of Tustin General Plan (2018 updated 2022)

East Tustin Specific Plan

The Market Place is located within the ETSP. The overall land use concept for the ETSP is intended to provide a planned community that expands and enhances the existing amenities of the City. The ETSP includes goals, policies, and development standards that are applicable to future development within the Project site.

Table 5.4-4 below describes consistency of the Project with the policies of the ETSP. As described, the proposed Project would be consistent with and therefore not conflict with the ETSP.

Table 5.4-2: East Tustin Specific Plan Policies

ETSP Goal, Policy, or Objective	Project Consistency
Section 2.8 – Parks: The ETSP defers to the City's Park Ordinance that specifies for each 1,000 persons, three acres of parkland shall be dedicated, and/or an equivalent value of park improvements shall be constructed, and/or in lieu fees shall be paid	**Consistent.** As described in Section 5.8, *Recreation*, future projects would comply with Tustin City Code Section 9331 and provide adequate local park space in order to maintain the City of Tustin Park area ratio, or provide adopted park dedication in lieu fees, when applicable.
Section 2.10 – Schools: The Specific Plan symbolically identifies a maximum number of school sites to serve the largest estimated population growth. The ultimate requirement for the precise number of schools is based on the number of students that are to be generated from the residential areas within the ETSP area. Per the ETSP, as development plans are prepared for each sector the land owner and school district will make specific provision for school facilities. These provisions should be accomplished prior to final development.	**Consistent.** As described in Section 5.7, *Public Services*, adequate public facilities and services are available to support the proposed Project. Thus, the proposed Project would be consistent with Section 2.10. Additionally, as ensured during the City's plan check, future projects would be required to pay DIF's as necessary.
Section 2.11 – Other Public Facilities: Several new fire stations were anticipated and considered at the time of the ETSP approval. One new station was identified as potentially needed in addition to the planned fire stations to accommodate the additional proposed development within the ETSP. The fire station identified was proposed near the intersection of Portola Parkway and Myford Road.	**Consistent.** As described in Section 5.7, *Public Services*, adequate public facilities and services are available to support the proposed Project. Thus, the proposed Project would be consistent with Section 2.11. Additionally, as ensured during the City's plan check, future projects would be required to pay DIF's as necessary.
Section 2.12 – Urban Design Guidelines: This section of the ETSP includes design theme and concepts regarding landscaping and architecture. The following policies are applicable to the Project: • Prior to Tentative Tract approval, a conceptual landscape plan will be approved by the Director of Community Development for major streets within and adjoining the subdivision. The plan will identify the specific plant materials to be used along with spacing dimensions of parkway and setback area,	**Consistent.** The Project would include development of ODS that would complement existing commercial development and incorporate applicable ETSP design standards from the Urban Design Guidelines. All applicable plans shall be approved by the Director of Community Development as required per Section 2.12 requirements of the ETSP.

ETSP Goal, Policy, or Objective	Project Consistency
type of wall treatment, heights of berms, etc. • East Tustin should be a part of the City and not appear to be separate from the existing City. • The overall suburban nature of Tustin should be retained. • The City should be distinctive and not lost in the urban development of adjacent Cities. • Tustin should appear as a vibrant, contemporary City.	
Section 2.13 – Sector Plans, Policies and Programs: Sector 12 Policy A. In addition to the specific submittal requirements for the Subdivision Map of this Sector, a conceptual landscape plan for arterial roadways within this sector shall also be submitted with the Subdivision Map for approval by the Director of Community Development.	**Consistent.** The Project would include development of ODS that would complement existing commercial development and incorporate applicable ETSP design standards from the Urban Design Guidelines. All applicable plans shall be approved by the Director of Community Development as required per Section 2.12 requirements of the ETSP.
Section 2.13 – Sector Plans, Policies and Programs: Sector 12 Policy B. Concurrent with the Subdivision Map submittal for this Sector a Conceptual Site Plan shall also be submitted.	**Consistent.** The Project would include development of ODS that would complement existing commercial development and incorporate applicable ETSP design standards from the Urban Design Guidelines. All applicable plans shall be approved by the Director of Community Development as required per Section 2.12 requirements of the ETSP.
Sector 12 Req. - The City is currently studying the feasibility of establishing an assessment district in a portion of East Tustin that would fund certain major improvements (circulation and flood control) that must be in place before final approval of initial development under the Specific Plan. It is intended that the financing and construction of infrastructure improvements required by the Specific Plan will precede development approvals.	**Consistent.** All major improvements identified through independent studies have already been implemented by existing development for this sector, as the ETSP area is fully developed as previously envisioned. As described in Section 5.7, *Public Services*, adequate public facilities, and services are available to support the proposed Project. At the time development projects are proposed, appropriate impact fees and necessary coordination with agencies and utility providers would occur to ensure essential services and utilities are supplied to future residents and businesses Additionally, a TIA was prepared as part of this Project and will be assessed by the City to determine necessary future improvements. Future development would be responsible for implementing identified improvements. Thus, the proposed Project would be consistent with this policy.

Source: City of Tustin East Tustin Specific Plan (1986, updated 1997)

Chapter 3 – Development Standards: Chapter 3 of the ETSP includes development standards to satisfy the requirements of the Planned Community Zone regulations of the Tustin City Code. The ETSP includes both general development standards applicable to the entire ETSP and land use specific development standards specific to sector and land use. The development standards include but are not limited to allowed density, parking requirements, setback distances, walls and fencing, and permitted and conditional uses. The ODS developed for the Project to guide future potential residential development constructed on the site would replace the existing ETSP standards with more specific, clear guidelines intended specifically for future multifamily residential development that may be implemented on the site. The standards would ensure that any future residential development is complementary of the surrounding development and would be within the bounds of existing standards included under the ETSP for the Project site.

Standard Q, *Sector Plan Consistency Finding,* states that "As part of the initial subdivision map and development plan process for a given sector, the Planning Commission shall make a finding as a part of the subdivision map that the subject project is in conformance with applicable policies in Section 2.0 for that sector, and the means to implement these policies has been identified." All future projects would be required to be consistent with all applicable development standards, as administered through the ETSP, ODS, and Tustin City Code prior to approval.

Section 3.14*, Amendments to the Plan*, specifies that any amendment to the ETSP Sections I and 2 which changes any property from one land use area to another, imposes any regulation upon property not therefore imposed, or removes or modifies any such regulation may be initiated and adopted on a sector-by-sector basis. Only the sector or sectors proposed for amendment shall be reviewed in the amendment and subject to the Public Hearing Process. The notices of public hearing for amendment to any sector plan shall be published in a newspaper of local circulation and mailed to all property owners within the specific sector and to all property owners within three-hundred feet from the exterior boundaries of the sector. Amendments to the East Tustin Specific Plan, Section 3, shall be initiated and processed in the same manner set forth by the City Code for amending the City Zoning Ordinance. The preparation of an EIR for the Project is subject to Sector 12 of the ETSP and only includes potential changes and resulting impacts for this portion of the ETSP. Public noticing has been conducted for the Notice of Preparation (NOP) within 300 feet of the Project site and all future noticing will be conducted similarly. The Project is consistent with the requirements of ETSP Chapter 3 – Development Standards.

5.4.7 CUMULATIVE IMPACTS

The cumulative study area for land use and planning includes the neighboring Cities of Irvine and Santa Ana. As shown in Table 5-1, *Cumulative Projects List*, and Figure 5-1, *Cumulative Projects*, in Section 5.0, *Environmental Impact Analysis*, of this Draft EIR, the vicinity of the Project site includes numerous projects within the City of Santa Ana and City of Irvine. A large portion of these projects consist of multi-family residential, commercial, and office developments, which are similar, consistent, and complementary to the proposed Project.

As described previously, the proposed Project would implement the objectives of the previously approved 2021-2029 City Housing Element. Also, as detailed in Tables 5.4-2 through 5.4-4, above, the proposed Project is consistent with all of the relevant SCAG Connect SoCal RTP/SCS Policies, the City's GP goals and policies, and the East Tustin Specific Plan goals and policies adopted for the purpose of avoiding or mitigating an environmental effect. Furthermore, the proposed Project, which includes a GPA and SPA, would be consistent with the existing General Plan and Specific Plan land use designations and focused area development objectives upon implementation of the GPA and SPA. Because the proposed Project would implement the GP (including the Housing Element) and would not result in conflicts with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the proposed Project, which has the purpose of avoiding or mitigating an environmental effect, the proposed Project would not cumulatively contribute to such an impact that could occur from related projects. Overall, the Project would be cumulatively beneficial to meeting the statewide housing objectives as established through the regional and local RHNA. Project-level impacts would be mitigated to less-than-significant levels through the implementation of mitigation measures which would reduce any potentially reasonably foreseeable significant impacts from the implementation of future development projects. As a result, cumulative impacts related to land use and planning from the proposed Project would not be cumulatively considerable with implementation of mitigation.

5.4.8 EXISTING REGULATIONS AND PLANS, PROGRAMS, OR POLICIES

Existing Regulations

The following regulations are identified in the above analysis as existing regulations that would avoid or minimize potential Project impacts.

- AB 341 (recycling)
- California Green Building Standards Code, Section 5.408.1 (Green building standards)
- California Code of Regulations, Title 24 (California building requirements)
- Government Code Section 65962.5 (Hazardous waste disclosure)
- Tustin City Code, Section 9701 of Article 9, Chapter 7 (Water efficient landscapes)
- Tustin City Code, Section 4902 (DAMP)
- Tustin City Code, Article 4, Chapter 6 (City noise control)
- Tustin City Code, Chapter 8 (Floodplain Management)
- East Tustin Specific Plan, Section 2.12 requirements (Landscaping and design)

Plans, Programs, or Policies

The following plans, programs, and policies are identified in the above analysis as existing regulations that would avoid or minimize potential Project impacts.

PPP GEO-1 **CBC Title 24, Part 2.** Structures built in the City are required to be built in compliance with the CBC (California Code of Regulations, Title 24, Part 2) that provides provisions for earthquake safety based on factors including building occupancy type, the types of soils onsite, and the probable strength of ground motion. Compliance with the CBC would require the incorporation of 1) seismic safety features to minimize the potential for significant effects as a result of earthquakes; 2) proper building footings and foundations; and 3) construction of the building structure so that it would withstand the effects of strong ground shaking. Implementation of CBC standards would be verified by the City during the plan check and permitting process.

PPP HYD-1 **SWPPP.** Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB). The permit requirement applies to grading and construction sites of one acre or larger. The Project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site.

PPP HYD-2 **City of Tustin Grading Manual.** All future projects are required to comply with the City of Tustin Grading Manual (1990). Implementation of grading manual standards would be verified by the City during the plan check and permitting process.

PPP HYD-3 **WQMP**. Prior to the approval of the Grading Plan and issuance of Grading Permits a completed Water Quality Management Plan (WQMP) shall be prepared by the Project applicant and submitted to and approved by the City Public Works Department. The WQMP shall identify all Post-Construction, Site Design. Source Control, and Treatment Control Best Management Practices (BMPs) that will be incorporated into the development Project in order to minimize the adverse effects on receiving waters.

5.4.9 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements, Impact LU-2 would be potentially significant.

5.4.10 MITIGATION MEASURES

MM GEO-1 All future projects implemented within the Project site shall be required to conduct a project-specific geotechnical investigation to ensure that the site's soils is adequate for the construction and operation of the proposed project. Future projects would be required to implement measures identified within the project-specific geotechnical investigation. All mitigation measures identified through the geotechnical investigation shall be implemented to avoid potential geotechnical hazards through construction or operation of the Project. The City will ensure completion of the geotechnical investigation and identification of necessary measures prior to plan approval of future proposed projects.

MM CUL-1 **Inadvertent Discovery.** In the event that potential archaeological resources are discovered during excavation, grading, or construction activities, work shall cease within 50 feet of the find until a qualified archaeologist from the City or County List of Qualified Archaeologists has evaluated the find to determine whether the find constitutes a "unique archaeological resource," as defined in Section 21083.2(g) of the California Public Resources Code. Any resources identified shall be treated in accordance with California Public Resources Code Section 21083.2(g).

If the discovered resource(s) appears Native American in origin, a Native American Monitor shall be contacted to evaluate any potential tribal cultural resource(s) and shall have the opportunity to consult on appropriate treatment and curation of these resources. The discovery would also be reported to the City and the South Central Coastal Information Center (SCCIC).

Prior to the issuance of any permits for ground-disturbing activities that include the excavation of soils (including as grading, excavation, and trenching), the City of Tustin shall ensure that all Project grading and construction plans and specifications include requirement to halt construction activity and contact an archaeologist as specified above.

MM NOI-1 All future development shall prepare a project-specific Final Acoustical Report to confirm whether any proposed exterior noise sensitive areas would experience noise levels greater than 65 dBA CNEL or interior noise level of 45 dBA CNEL and identify any noise reduction features to the proposed development (e.g. upgraded windows with Sound Transmission Class (STC) ratings of 30–35). Additionally, the study shall confirm that proposed siting of noise-generating stationary sources will not result in an exceedance of noise levels on surrounding land uses.

5.4.11 LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of mitigation measures MM GEO-1, MM CUL-1, and MM NOI-1, the proposed Project would be consistent with land use plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, no significant unavoidable adverse impacts related to land use would occur.

5.4.12 REFERENCES

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5.5 Noise

5.5.1 INTRODUCTION

This EIR section evaluates the potential noise and vibration impacts that could result from implementation of the proposed Project. It discusses the existing noise environment within and around the Project site, as well as the regulatory framework for regulation of noise. This section analyzes the effect of the proposed Project on the existing ambient noise environment during demolition (of existing surface parking areas), construction, and operational activities; and evaluates the proposed Project's noise effects for consistency with relevant local agency noise policies and regulations. The analysis in this section also addresses impacts related to groundborne vibration. Information in this section is based on the:

- *City of Tustin General Plan* (including 2021-2029 Housing Element), adopted November 2018 and updated October 2022.
- *East Tustin Specific Plan,* adopted March 1986 and updated November 1997.
- *Tustin City Code*
- *Noise and Vibration Impact Analysis,* LSA, March 2024, Appendix C.

Noise and Vibration Terminology

Various noise descriptors are utilized in this EIR analysis, and are summarized as follows:

dB: Decibel, the standard unit of measurement for sound pressure level.

dBA: A-weighted decibel, an overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.

Leq: The equivalent sound level, which is used to describe noise over a specified period of time, typically 1 hour, in terms of a single numerical value. The Leq of a time-varying signal and that of a steady signal are the same if they deliver the same acoustic energy over a given time. The Leq may also be referred to as the average sound level.

Lmax: The instantaneous maximum noise level experienced during a given period of time.

Lmin: The instantaneous minimum noise level experienced during a given period of time.

Lx: The sound level that is equaled or exceeded "x" percent of a specified time period. The "x" thus represents the percentage of time a noise level is exceeded. For instance, L50 and L90 represents the noise levels that are exceeded 50 percent and 90 percent of the time, respectively.

Ldn: Also termed the "day-night" average noise level (DNL), Ldn is a measure of the average of A-weighted sound levels occurring during a 24-hour period, accounting for the greater sensitivity of most people to nighttime noise by weighting noise levels at night (penalizing" nighttime noises). Noise between 10:00 PM and 7:00 AM is weighted by adding 10 dBA to take into account the greater annoyance of nighttime noises.

CNEL: The Community Noise Equivalent Level, which, similar to the Ldn, is the average A-weighted noise level during a 24-hour day that is obtained after an addition of 5 dBA to measured noise levels between the hours of 7:00 PM to 10:00 PM and after an addition of 10 dBA to noise levels between the hours of 10:00 PM to 7:00 AM to account for noise sensitivity in the evening and nighttime, respectively.

Ambient Noise Level: The background noise level associated with a given environment at a specified time and is usually a composite of sound from many sources from many directions.

Effects of Noise

Noise is generally loud, unpleasant, unexpected, or undesired sound that is typically associated with human activity that is a nuisance or disruptive. The effects of noise on people can be placed into four general categories:

- Subjective effects (e.g., dissatisfaction, annoyance)
- Interference effects (e.g., communication, sleep, and learning interference)
- Physiological effects (e.g., startle response)
- Physical effects (e.g., hearing loss)

Although exposure to high noise levels has been demonstrated to cause physical and physiological effects, the principal human responses to typical environmental noise exposure are related to subjective effects and interference with activities. Interference effects refer to interruption of daily activities and include interference with human communication activities, such as normal conversations, watching television, telephone conversations, and interference with sleep. Sleep interference effects can include both awakening and arousal to a lesser state of sleep. Regarding the subjective effects, the responses of individuals to similar noise events are diverse and are influenced by many factors, including the type of noise, the perceived importance of the noise, the appropriateness of the noise to the setting, the duration of the noise, the time of day and the type of activity during which the noise occurs, and individual noise sensitivity.

In general, the more a new noise level exceeds the previously existing ambient noise level, the less acceptable the new noise level will be by those hearing it. With regard to increases in A-weighted noise levels, the following relationships generally occur:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived.
- Outside of the laboratory, a 3-dBA change in noise levels is considered a barely perceivable difference.
- A change in noise levels of 5 dBA is considered a readily perceivable difference.
- A change in noise levels of 10 dBA is subjectively heard as doubling of the perceived loudness.

Noise Attenuation

Stationary point sources of noise, including mobile sources such as idling vehicles, attenuate (lessen) at a rate of 6 dBA per doubling of distance from the source over hard surfaces to 7.5 dBA per doubling of distance from the source over hard surfaces, depending on the topography of the area and environmental conditions (e.g., atmospheric conditions, noise barriers [either vegetative or manufactured]). Thus, a noise measured at 90 dBA 50 feet from the source would attenuate to about 84 dBA at 100 feet, 78 dBA at 200 feet, 72 dBA at 400 feet, and so forth. Widely distributed noise, such as a large industrial facility spread over many acres or a street with moving vehicles, would typically attenuate at a lower rate, approximately 4 to 6 dBA per doubling of distance from the source.

Hard sites are those with a reflective surface between the source and the receiver, such as asphalt or concrete surfaces or smooth bodies of water. No excess ground attenuation is assumed for hard sites and the changes in noise levels with distance (drop-off rate) is simply the geometric spreading of the noise from the source. Soft sites have an absorptive ground surface such as soft dirt, grass, or scattered bushes and trees. In addition to geometric spreading, an excess ground attenuation value of 1.5 dBA (per doubling distance) is normally assumed for soft sites. Line sources (such as traffic noise from vehicles) attenuate at a rate between 3 dBA for hard sites and 4.5 dBA for soft sites for each doubling of distance from the reference measurement.

Fundamentals of Vibration

Vibration is energy transmitted in waves through the ground or man-made structures. These energy waves generally dissipate with distance from the vibration source. There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings but is not always suitable for evaluating human response (annoyance) because it takes some time for the human body to respond to vibration signals. Instead, the human body responds to average vibration amplitude often described as the root mean square (RMS). The RMS amplitude is defined as the average of the squared amplitude of the signal and is most frequently used to describe the effect of vibration on the human body. Decibel notation (VdB) is commonly used to measure RMS. VdB serves to reduce the range of numbers used to describe human response to vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receivers for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration-sensitive equipment.

The background vibration-velocity level in residential areas is generally 50 VdB. Ground-borne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration is rarely perceptible. 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.

5.5.2 REGULATORY SETTING

5.5.2.1 Federal Regulations

There are no federal regulations concerning noise impacts that are applicable to the Project.

5.5.2.2 State Regulations

Caltrans Vibration Guidance Manual

There are no vibration standards that are specifically applicable to the proposed Project, hence, California Department of Transportation's (Caltrans) Transportation and Construction Vibration Guidance Manual guidelines are used as a screening tool for assessing the potential for adverse vibration effects related to human perception, which are listed in Table 5.5-1. It should be noted that the human annoyance threshold of 0.04 is less (more conservative) than the Federal Transit Administration (FTA) building damage threshold for a reinforced concrete building.

Table 5.5-1: Vibration Screening Standards

Caltrans Guidelines	Peak Particle Velocity for Continuous Sources (PPV) (in/sec)
Human Annoyance	
Barely Perceptible	0.01
Distinctly Perceptible	0.04
Strongly Perceptible	0.10
Severe	0.40

Source: Caltrans Transportation and Construction Vibration Guidance Manual, September 2013, Tables 19 & 20.

Title 24, California Building Code

State regulations related to noise include requirements for the construction of new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings that are intended to limit the extent of noise transmitted into habitable spaces. These requirements are collectively known as the California Noise Insulation Standards and are found in California Code of Regulations, Title 24 (known as the Building Standards Administrative Code), Part 2 (known as the California Building Code), Appendix Chapters 12 and 12A. For limiting noise transmitted between adjacent dwelling units, the noise insulation standards specify the extent to which walls, doors, and floor ceiling assemblies must block or absorb sound. For limiting noise from exterior sources, the noise insulation standards set forth an interior standard of DNL 45 dBA in any habitable room and, where such units are proposed in areas subject to noise levels greater than DNL 60 dBA, require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard. If the interior noise level depends upon windows being closed, the design for the structure must also specify a ventilation or air conditioning system to provide a habitable interior environment.

The mandatory measures for non-residential buildings state that new construction shall provide an interior noise level that does not exceed an hourly equivalent level of 50 dBA Leq in occupied areas during any hour of operation. Title 24 standards are enforced by the City through the building permit application process.

5.5.2.3 Local and Regional Regulations

County of Orange General Aviation Noise Ordinance

To reduce noise from operation of John Wayne Airport (SNA) the General Aviation Noise Ordinance was adopted by the County to regulate the hours of operation and the maximum permitted noise levels associated with general aviation operations. The General Aviation Noise Ordinance specifies noise limits at each noise monitoring station that vary by time of day. The Ordinance also prohibits commercial aircraft departures between the hours of 10:00 PM and 7:00 AM and arrivals between the hours of 11:00 PM and 7:00 AM.

John Wayne Airport Environs Land Use Plan

The John Wayne Airport Environs Land Use Plan (AELUP) was adopted in 1975 and amended in 2008 and is the applicable compatibility plan for John Wayne Airport. The land use compatibility plan establishes policies to protect the public from the adverse effects of aircraft noise, to ensure that people and facilities are not concentrated in areas susceptible to aircraft accidents, and to ensure that no structures or activities adversely affect navigable airspace. Further, implementation of this plan forestalls urban encroachment on the airport and allows for its continued operation (Airport Land Use Commission for Orange County, 2008).

General Plan

The City's General Plan Land Use Element includes the following goals and policies that are relevant to the proposed Project:

Goal 2: **Ensure that future land use decisions are the result of sound and comprehensive planning.**

Policy 2.6: Maintain consistency with the Airport Environs Land Use Plan (AELUP) for John Wayne Airport in terms of maximum allowable building height, noise levels, safety areas, and other applicable standards.

The City's General Plan Noise Element includes the following goals and policies that are relevant to the proposed Project:

Goal 2: **Incorporate noise considerations into land use planning decisions.**

Policy 2.3: Use noise/land use compatibility standards as a guide for future planning and development.

Policy 2.4: Review proposed projects in terms of compatibility with nearby noise-sensitive land uses with the intent of reducing noise impacts.

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.

Policy 2.8: Replace a significant noise source with non-noise generating land uses when plans for future use of areas are developed.

Goal 3: **Develop measures to control non-transportation noise impacts.**

Policy 3.1: Use noise/land use compatibility standards as a guide for future planning and development.

Policy 3.2: Minimize the impacts of construction noise on adjacent land uses through limiting the permitted hours of activity.

Policy 3.2: Use noise/land use compatibility standards as a guide for future planning and development.

The City's Noise Element also includes standards related to excessive noise levels. The City's General Plan noise standards for land uses are provided in Table 5.5-2.

Table 5.5-2: City of Tustin General Plan Noise Element Standards

Land Use	Noise Standards[1]	
	Interior[2,3]	Exterior
Residential-Single family, multifamily, duplex, mobile home	CNEL 45 dB	CNEL 65 dB[4]
Residential-Transient lodging, hotels, motels, nursing homes, hospitals	CNEL 45 dB	CNEL 65 dB
Private offices, church sanctuaries, libraries, board rooms, conference rooms, theaters, auditoriums, concert halls, meeting halls, etc.	Leq(12) 45 dB(A)	-
Schools	Leq(12) 45 dB(A)	Leq(12) 67 dB(A)[5]
General offices, reception, clerical, etc.	Leq(12) 50 dB(A)	-
Bank lobby, retail store, restaurant, typing pool, etc.	Leq(12) 55 dB(A)	-
Manufacturing, kitchen, warehousing, etc.	Leq(12) 65 dB(A)	-
Parks, playgrounds	-	CNEL 65 dB[5]
Golf courses, outdoor spectator sports, amusement parks	-	CNEL 70 dB[5]

Source: City of Tustin General Plan Noise Element
Notes:
(1) CNEL - Community Noise Equivalent Level.
Leq(12) - The A-weighted equivalent sound level averaged over a 12-hour period (usually the hours of operation).
(2) Noise standard with windows closed. Mechanical ventilation shall be provided per UBC requirements to provide a habitable environment.
(3) Indoor environment excluding bathrooms, toilets, closets and corridors.
(4) Outdoor environment limited to rear yard of single-family homes, multifamily patios and balconies (with a depth of 6' or more) and common recreation areas.
(5) Outdoor environment limited to playground areas, picnic areas, and other areas of frequent human use.

East Tustin Specific Plan

Pursuant to the East Tustin Specific Plan (ETSP), plans for the noise attenuation of units located near arterial highways, freeways, or under the Browning flight corridor shall be submitted for review and approval at the time of builder's tentative tract consideration for residential development to ensure that interior and exterior noise levels do not exceed the City of Tustin noise ordinance.

Tustin City Code

Pursuant to the Tustin City Code Sections 4614 and 4615, noise levels at residential properties are restricted from exceeding certain noise levels for extended periods of time. Table 5.5-3 provides the City Code interior and exterior noise standards that are applied to residential properties.

Table 5.5-3: Tustin City Code Residential Noise Standards

Land Use	Interior		Exterior	
	Time	Permissible Noise Levels (dBA)	Time	Permissible Noise Levels (dBA)
Residential	7:00 AM to 10:00 PM	55 dBA	7:00 AM to 10:00 PM	55 dBA
	10:00 PM to 7:00 AM	45 dBA	10:00 PM to 7:00 AM	50 dBA
Mixed-Use	7:00 AM to10:00 PM (residential uses only)	55 dBA	any time	60 dBA
	10:00 PM to 7:00 AM (residential uses only)	45 dBA		

Source: Tustin City Code, Article 4, Chapter 6, Section 4614 and 4615.

With respect to construction-related noise, Section 4616 of the Tustin City Code specifies that noise sources associated with construction activities are prohibited before the hours of 7:00 AM and after 6:00 PM, Monday through Friday; before 9:00 AM and after 5:00 PM on Saturdays; anytime on Sundays; or anytime during City-observed federal holidays (City of Tustin, 2024).

5.5.3 ENVIRONMENTAL SETTING

Existing Noise Levels

To assess existing noise levels of the environment, long-term (24-hour) noise level measurements were conducted on January 23 and 24, 2024, at two locations as shown on Figure 5.5-1. The background ambient noise levels in the Project area are dominated by the transportation-related noise associated with surface streets and Interstate 5. Table 5.5-4 provides a summary of the measured hourly noise levels and calculated CNEL level from the long-term noise level measurements. As shown in Table 5.5-4, the calculated CNEL levels range from 67.2 dBA CNEL to 73.8 dBA CNEL.

Table 5.5-4: Summary of 24-Hour Ambient Noise Level Measurements

Location		Daytime Noise Levels[1] (dBA L_{eq})	Evening Noise Levels[2] (dBA L_{eq})	Nighttime Noise Levels[3] (dBA L_{eq})	Daily Noise Levels (dBA CNEL)
LT-1	2800 Monza, Tustin, CA 92782. Located in the front yard of a multifamily residence on tree, approximately 70 feet away from the Bryan Avenue centerline.	64.7– 68.4	61.9 – 65.4	50.4 – 62.3	67.2
LT-2	2982 El Camino Real, Tustin, CA 92782. Located northeast of a Best Buy entrance in the parking lot on a light pole, approximately 190 feet away from the Jamboree Road centerline.	65.8 – 68.8	69.4 – 70.1	62.4 – 69.2	73.8

Source: Noise and Vibration Impact Analysis, 2024 (Appendix C).
Note: Noise measurements were conducted from January 23 to January 24, 2024, starting at 11:00 AM
[1] Daytime Noise Levels = noise levels during the hours from 7:00 AM to 7:00 PM
[2] Evening Noise Levels = noise levels during the hours from 7:00 PM to 10:00 PM
[3] Nighttime Noise Levels = noise levels during the hours from 10:00 PM to 7:00 AM

Existing Vibration

Aside from periodic construction work that may occur in the vicinity of the Project area, the Project site and adjacent land uses are not currently exposed to sources of groundborne vibration.

Existing Airport Noise

John Wayne Airport (SNA) is located approximately 4.8 miles southwest of the Project site. The Project site is located outside of the airport's 60 CNEL noise contour. In addition, the General Aviation Noise Ordinance restricts airport operations between 11:00 PM and 7:00 AM, to limit the hours of noise generated by SNA.

Sensitive Receptors

Sensitive receptors are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include: residences, schools, hospitals, and recreation areas. Existing offsite sensitive noise receptors where someone can remain for 24 hours in the vicinity of the Project site consist of residences. The closest offsite residences are located 110 feet northeast of the site as listed in Table 5.5-5.

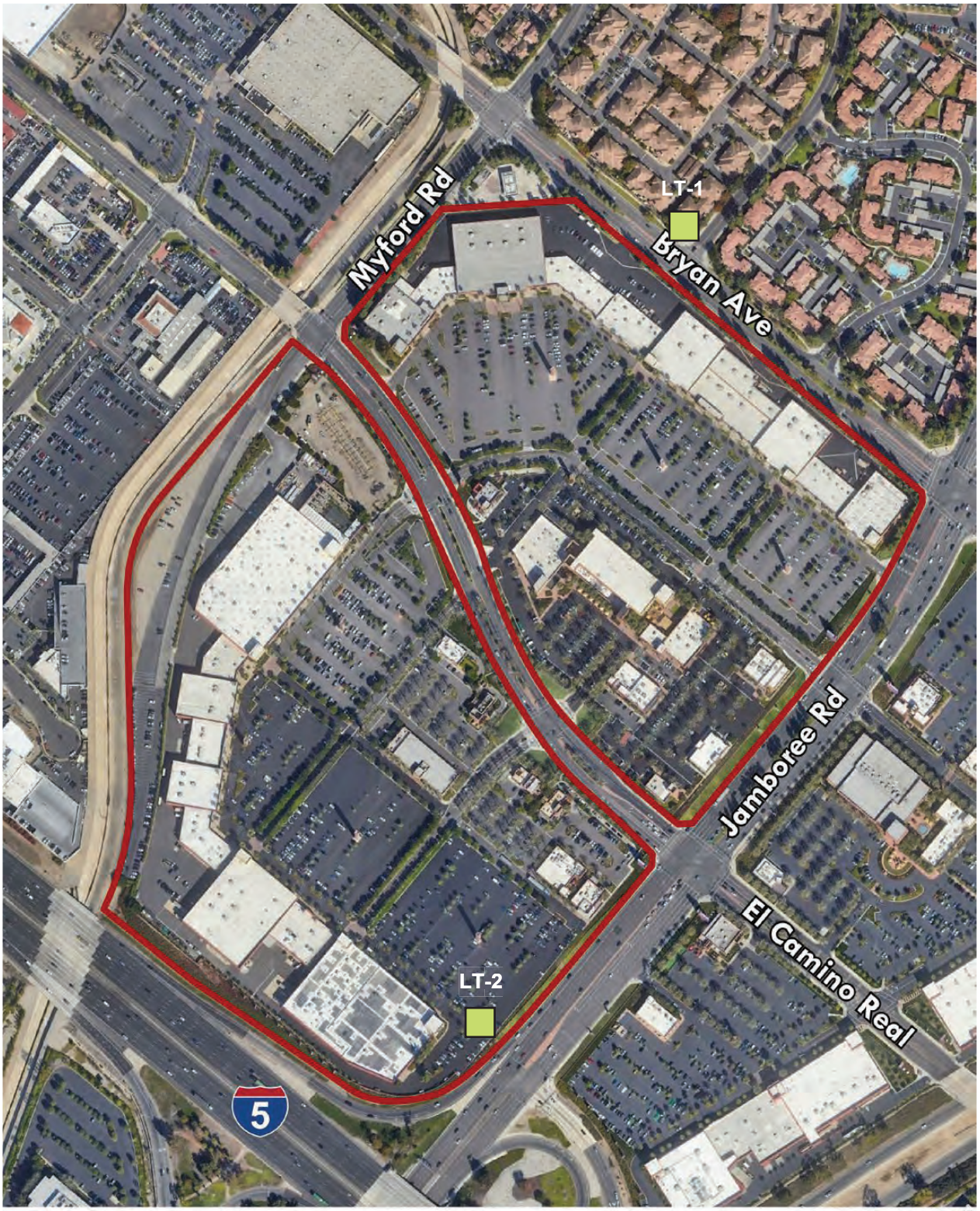
Table 5.5-5: Closest Sensitive Receptors to the Project Site

Receptor Description	Distance and Direction from the Project Site
Commercial	220 feet to the east
Commercial	130 feet to the west
Residential	110 feet to the northeast
Office	700 feet to the south

Source: Noise and Vibration Impact Analysis, 2024 (Appendix C).

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Noise Measurement Locations



Project Location

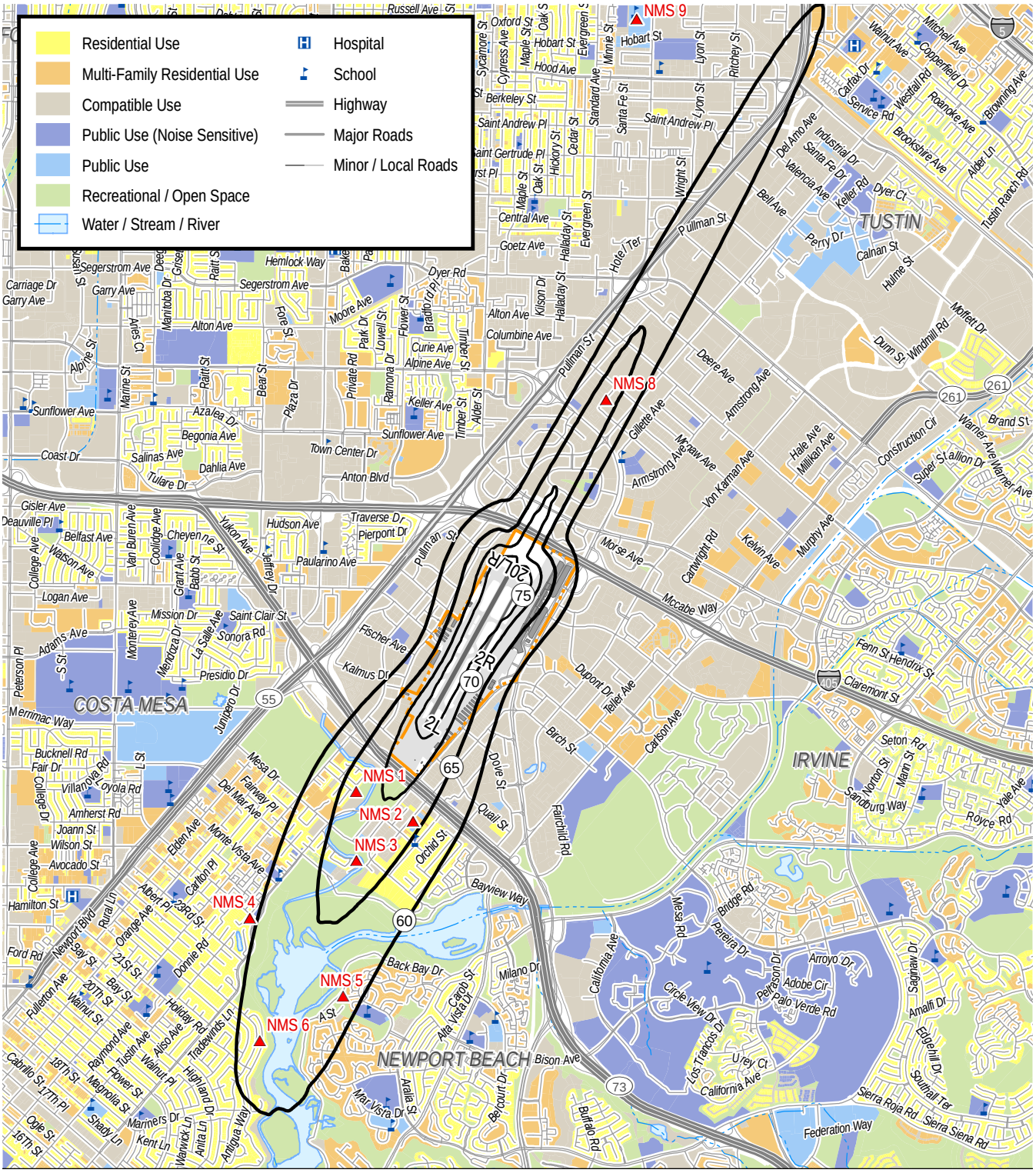
Longterm Noise Monitoring Locations

The Market Place Rezone Project
City of Tustin

Figure 5.5-1

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Airport Noise Contours



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5.5.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a Project could have a significant effect if it were to result in:

NOI-1 Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

NOI-2 Generation of excessive groundborne vibration or groundborne noise levels.

NOI-3 For a project located within the vicinity of a private airstrip or an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

Construction Noise and Vibration

A potentially significant construction noise and vibration impact could occur if Project-related construction activities:

- Occurs during the hours before 7:00 AM and after 6:00 PM, Monday through Friday; before 9:00 AM and after 5:00 PM on Saturdays; anytime on Sundays; or anytime during City-observed federal holidays (City of Tustin, 2024);
- Create noise levels which exceeds the Federal Transit Administration (FTA) threshold of daytime exterior construction noise level of 80 dBA Leq or 70 dBA Leq nighttime acceptable noise level threshold at nearby sensitive receiver locations; or
- Generate vibration levels which exceed the Caltrans *Transportation and Construction Vibration Guidance Manual* vibration threshold of 0.3 PPV in/sec at nearby buildings.

Off-Site Traffic Noise

A potentially significant noise and vibration impact could occur if offsite traffic noise levels at existing and future noise-sensitive land uses (e.g., residential, etc.):

- Are less than 60 dBA CNEL and the project creates a *readily perceptible* 5 dBA CNEL or greater project-related noise level increase; or
- Range from 60 to 64 dBA CNEL and the project creates a *barely perceptible* 3 dBA CNEL or greater project-related noise level increase; or
- Already exceeds 65 dBA CNEL, and the project creates a community noise level impact of greater than 1.5 dBA CNEL.

Operational Noise

The proposed Project may result in a potentially significant operational noise impact if Project-related operational (stationary source) noise levels exceed the exterior 55 dBA daytime (7:00 AM to 10:00 PM) or 50 dBA nighttime (10:00 PM to 7:00 AM) noise level standards for sensitive residential land uses.

5.5.5 METHODOLOGY

Construction Noise

To identify the temporary construction noise contribution to the existing ambient noise environment, the construction noise levels anticipated from usage of construction equipment necessary for future buildout of the proposed Project were combined with the existing ambient noise level measurements at the sensitive receiver locations. The construction noise levels are compared against the thresholds listed previously to assess the level of significance associated with temporary construction noise level impacts.

Operational Noise

The primary source of noise associated with the operation from buildout of the proposed Project would be from vehicular trips. The expected roadway noise level increases from vehicular traffic were calculated using the Federal Highway Administration (FHWA) traffic noise prediction model and the average daily traffic volumes prepared for the proposed Project. As detailed in Section 5.9, *Transportation,* existing uses on the Project site generate approximately 31,374 average daily trips (ADT). With the buildout of the proposed housing units and remaining commercial buildout capacity, the proposed Project would generate approximately 36,857 ADT, resulting in 5,483 net new ADT. The increase in noise levels generated by the vehicular trips have been quantitatively estimated and compared to applicable noise standards and thresholds of significance.

Secondary sources of noise would include new stationary sources (such as heating, ventilation, and air conditioning units) associated with the buildout of the new buildings on the Project site. The increase in noise levels generated by these activities has been qualitatively analyzed and additional requirements for future projects analysis are specified.

Vibration

Aside from noise levels, groundborne vibration would also be generated during construction at future buildout of the proposed Project by various construction-related activities and equipment; and could be generated by truck traffic traveling to and from the Project site. The potential ground-borne vibration levels resulting from construction activities occurring from the proposed Project were estimated by data published by the Federal Transit Administration (FTA). Thus, the groundborne vibration levels generated by these sources have also been quantitatively estimated and compared to the applicable thresholds of significance listed previously.

5.5.6 ENVIRONMENTAL IMPACTS

IMPACT NOI-1: THE PROJECT WOULD NOT RESULT IN GENERATION OF A SUBSTANTIAL TEMPORARY OR PERMANENT INCREASE IN AMBIENT NOISE LEVELS IN THE VICINITY OF THE PROJECT IN EXCESS OF STANDARDS ESTABLISHED IN THE LOCAL GENERAL PLAN OR NOISE ORDINANCE, OR APPLICABLE STANDARDS OF OTHER AGENCIES.

Construction

Less than Significant Impact with Mitigation. As described in Section 3.0, *Project Description* of this DEIR, the proposed Project would consist of a Specific Plan Amendment (SPA) of the Project site to accommodate up to 900 housing units on 18 acres in areas that are currently used for surface parking on the Project site. In addition, there is a remaining development potential of 13,032 SF of nonresidential land uses (i.e. retail, restaurant, office, etc.). This 13,032 SF of additional nonresidential development is the residual development capacity already entitled but not constructed. The proposed Project does not propose any specific

development. However, the following analysis considers the future development of the additional 900 units and remaining commercial buildout capacity associated with the proposed Project, which is expected to occur anytime between October 2024 and October 2029.

Construction activities for the residential units would include demolition of existing surface parking areas, site preparation, grading, building construction, paving, and architectural coatings. As such, noise generated by construction equipment would include a combination of trucks, power tools, concrete mixers, and portable generators that can reach high levels when combined. Construction is expected to occur in the following stages: demolition of existing surface parking areas, site preparation and grading, building construction, architectural coating, and paving. As shown in Table 5.5-6, construction-related composite noise levels at a distance of 50 feet would range from 74 dBA Leq to 88 dBA Leq with the highest noise levels occurring during the site preparation and grading phases.

Per the Tustin City Code Section 4616, construction activities are allowed only between the hours of 7:00 AM and 6:00 PM, Monday through Friday and between 9:00 AM to 5:00 PM on Saturdays with no activity allowed on Sundays and City-observed federal holidays (PPP NOI-1). Construction activities for future buildout would be required to occur within the City's designated hours. Thus, future buildout construction activities would be in compliance with the City's construction-related noise standards. In addition, construction noise would be temporary in nature as the operation of each piece of construction equipment would not be constant throughout the construction day, and equipment would be turned off when not in use.

Construction is completed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. It is expected that composite noise levels during construction at the nearest residential uses northeast of the Project, across Bryan Avenue, would reach 60 dBA Leq. These predicted noise levels would only occur when all construction equipment is operating simultaneously; and therefore, are conservative assumptions. While construction-related short-term noise levels have the potential to be higher than existing ambient noise levels in the Project area under existing conditions, the noise impacts would no longer occur once construction is completed. As shown on Table 5.5-7, construction noise from future buildout of the proposed Project at the nearby receptor locations would range from 57 to 61 dBA Leq, which would not exceed the 90 dBA Leq and 100 dBA Leq 1-hour construction noise level criteria as established by the FTA for residential and commercial land uses. Therefore, impacts related to construction noise would be less than significant.

Table 5.5-6: Construction Reference Noise Levels

Equipment Description	Acoustical Usage Factor (%)[1]	Maximum Noise Level (Lmax) at 50 Feet[2]
Auger Drill Rig	20	84
Backhoes	40	80
Compactor (ground)	20	80
Compressor	40	80
Cranes	16	85
Dozers	40	85
Dump Trucks	40	84
Excavators	40	85
Flat Bed Trucks	40	84
Forklift	20	85
Front-end Loaders	40	80
Graders	40	85

Equipment Description	Acoustical Usage Factor (%)[1]	Maximum Noise Level (Lmax) at 50 Feet[2]
Impact Pile Drivers	20	95
Jackhammers	20	85
Paver	50	77
Pickup Truck	40	55
Pneumatic Tools	50	85
Pumps	50	77
Rock Drills	20	85
Rollers	20	85
Scrapers	40	85
Tractors	40	84
Trencher	50	80
Welder	40	73

Source: FHWA Roadway Construction Noise Model User's Guide, Table 1 (FHWA 2006). Note: Noise levels reported in this table are rounded to the nearest whole number.
1 Usage factor is the percentage of time during a construction noise operation that a piece of construction equipment is operating at full power.
2 Maximum noise levels were developed based on Specification 721.560 from the Central Artery/Tunnel program to be consistent with the City of Boston's Noise Code for the "Big Dig" project.
FHWA = Federal Highway Administration Lmax = maximum instantaneous sound level

Table 5.5-7: Construction Noise Level at Nearest Receptors

Receptor (Location)	Composite Noise Level (dBA Leq) at 50 feet[1]	Distance (feet)[2]	Composite Noise Level (dBA Leq)
Commercial (East)	88	1,080	61
Commercial (West)		1,080	61
Residential (Northeast)		1,270	60
Office (South)		1,700	57

[1] The composite construction noise level represents the site preparation and grading phases which are expected to result in the greatest noise level as compared to other phases.
[2] Measured from center of the Project site
Source: Noise and Vibration Impact Analysis, 2024 (Appendix C)

Operation

Less than Significant Impact.

As described previously, a specific development project is not proposed as part of this Project, thus the following analysis considers the future development of the additional 900 units and remaining commercial buildout capacity previously entitled for commercial uses, which is expected to occur anytime between October 2024 and October 2029.

Potential noise impacts associated with the operations of the proposed Project after buildout would be from Project-generated vehicular traffic on the nearby roadways and from onsite activities, as described below. The existing uses generate approximately 31,374 average daily trips (ADT). With the buildout of the proposed housing units and remaining commercial buildout capacity, the proposed project would generate approximately 36,857 ADT, resulting in 5,483 net new ADT.

Traffic Noise Impacts

Vehicle noise is a combination of the noise produced by the engine, exhaust and tires. The level of traffic noise depends on three primary factors (1) the volume of traffic, (2) the speed of traffic, and (3) the number of trucks in the flow of traffic.

As detailed in Section 5.9, *Transportation*, buildout of the proposed Project is anticipated to generate approximately 5,483 net new ADT, consisting of 458 trips during the AM peak hour and 469 trips during the PM peak hour. Regional access to the Project site is provided by I-55. Local access to the site is provided via Myford Road, El Camino Real, Byran Avenue, and Jamboree Road. Table 5.5-8 provides the traffic noise levels for the existing with and without Project scenarios and opening year with and without Project, and future year with and without Project scenarios. These noise levels represent the worst-case scenario, which assumes no shielding is provided between the traffic and the location where the noise contours are drawn.

As shown in Table 5.5-8, the increase in Project-related traffic noise would be no greater than 0.1 dBA from existing baseline conditions which is below the threshold of a 3.0 dBA noise level increase. Therefore, traffic noise impacts from buildout of the proposed Project on off-site sensitive receptors would be less than significant.

Stationary Noise Impacts

The Project and adjacent offsite land uses would be potentially exposed to stationary-source noise impacts from the proposed onsite heating, ventilation, and air conditioning (HVAC) equipment and truck deliveries and loading and unloading activities. It is expected that on-site stationary sources would meet the City of Tustin maximum noise level standards.

However, given that specific details related to stationary impacts of future development within The Market Place are not known at this time and will not be known until a development project is proposed, Mitigation Measure NOI-1 (MM NOI-1) is included. MM NOI-1 would require all future development projects to prepare a project-specific Final Acoustical Report to determine whether any proposed exterior noise sensitive areas would experience noise levels greater than 65 dBA CNEL and to identify any noise reduction features to the proposed development. Additionally, the Final Acoustical Report shall determine whether any proposed interior noise sensitive areas would experience noise levels greater than 45 dBA CNEL and to identify any noise reduction features to the proposed development (e.g. upgraded windows with Sound Transmission Class (STC) ratings of 30–35). Additionally, the Final Acoustical Report shall confirm that proposed siting of noise-generating stationary sources, if any, will not result in an exceedance of applicable noise thresholds at surrounding land uses. Thus, with implementation of MM NOI-1, impacts related to stationary noise impacts would be less than significant.

Table 5.5-8: Traffic Noise Levels Without and With Proposed Project

Roadway Segment	Existing		Opening Year – No Project		Opening Year – With Project			Future Year – No Project		Future Year – With Project		
	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)
Tustin Ranch Rd between Irvine Blvd & Bryan Ave	28,675	66.7	30,627	67.0	30,901	67.0	0.0	34,810	67.5	35,084	67.6	0.1
Tustin Ranch Rd between Bryan Ave & El Camino Real	34,366	67.5	36,561	67.7	37,285	67.8	0.1	41,264	68.3	41,988	68.3	0.0
Tustin Ranch Rd between El Camino Real & I-5 NB Ramps	42,480	68.4	43,052	68.4	43,776	68.5	0.1	44,277	68.6	45,001	68.6	0.0
Tustin Ranch Rd between I-5 NB Ramps & I-5 SB Ramps	43,223	68.5	44,607	68.6	45,331	68.7	0.1	47,573	68.9	48,297	68.9	0.0
Tustin Ranch Rd between I-5 SB Ramps & Walnut Ave	41,988	68.3	44,250	68.6	44,974	68.6	0.0	49,097	69.0	49,821	69.1	0.1
Myford Rd between Irvine Blvd & Bryan Ave	7,319	62.1	8,243	62.6	8,353	62.7	0.1	10,222	63.5	10,332	63.6	0.1
Myford Rd between Bryan Ave & El Camino Real	6,763	61.7	7,275	62.1	7,275	62.1	0.0	8,371	62.7	8,371	62.7	0.0
Jamboree Rd between Irvine Blvd & Bryan Ave	38,890	68.0	39,139	68.0	39,211	68.0	0.0	39,671	68.1	39,743	68.1	0.0
Jamboree Rd between Bryan Ave & El Camino Real	52,907	69.3	53,005	69.4	53,097	69.4	0.0	53,215	69.4	53,307	69.4	0.0

Roadway Segment	Existing		Opening Year – No Project		Opening Year – With Project			Future Year – No Project		Future Year – With Project		
	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)
Jamboree Rd between El Camino Real & I-5 NB Ramps	67,041	70.4	67,943	70.4	68,035	70.4	0.0	69,877	70.6	69,969	70.6	0.0
Jamboree Rd between I-5 NB Ramps & I-5 SB Ramps	62,509	70.1	63,350	70.1	63,442	70.1	0.0	65,154	70.2	65,246	70.3	0.1
Jamboree Rd between I-5 SB Ramps & Michelle Dr	66,502	70.3	67,397	70.4	67,715	70.4	0.0	69,316	70.5	69,634	70.5	0.0
Culver Dr between Irvine Blvd & Bryan Ave	39,362	65.1	41,442	65.3	41,442	65.3	0.0	45,898	65.8	45,898	65.8	0.0
Irvine Blvd between Tustin Ranch Rd & Myford Rd	29,413	67.0	30,561	67.1	30,585	67.2	0.1	33,021	67.5	33,045	67.5	0.0
Irvine Blvd between Myford Rd & Jamboree Rd	27,320	66.7	28,332	66.8	28,466	66.8	0.0	30,500	67.1	30,634	67.2	0.1
Irvine Blvd between Jamboree Rd & SR-261 SB Ramps	30,013	67.1	30,961	67.2	31,039	67.2	0.0	32,993	67.5	33,071	67.5	0.0
Irvine Blvd between SR-261 SB Ramps & SR-261 NB Ramps	29,591	67.0	30,283	67.1	30,322	67.1	0.0	31,764	67.3	31,803	67.3	0.0
Irvine Blvd between SR-261 NB Ramps & Culver Dr	30,598	67.2	31,219	67.2	31,219	67.2	0.0	32,549	67.4	32,549	67.4	0.0

Roadway Segment	Existing		Opening Year – No Project		Opening Year – With Project			Future Year – No Project		Future Year – With Project		
	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)
Bryan Ave between Tustin Ranch Rd & Myford Rd	16,837	60.6	17,005	60.6	17,481	60.7	0.1	17,364	60.7	17,840	60.8	0.1
Bryan Ave between Myford Rd & Jamboree Rd	17,537	60.7	17,742	60.8	18,108	60.9	0.1	18,181	60.9	18,547	61.0	0.1
Bryan Ave between Jamboree Rd & El Camino Real	20,581	61.4	20,829	61.5	21,171	61.5	0.0	21,360	61.6	21,702	61.7	0.1
Bryan Ave between El Camino Real & Culver Dr	17,497	60.7	17,733	60.8	18,075	60.9	0.1	18,237	60.9	18,579	61.0	0.1
El Camino Real between Tustin Ranch Rd & Myford Rd	19,677	61.5	20,039	61.6	20,039	61.6	0.0	20,815	61.7	20,815	61.7	0.0
El Camino Real between Myford Rd & Jamboree Rd	24,508	62.4	24,838	62.5	24,838	62.5	0.0	25,545	62.6	25,545	62.6	0.0
El Camino Real between Jamboree Rd & Bryan Ave	18,030	61.1	18,216	61.2	18,216	61.2	0.0	18,614	61.3	18,614	61.3	0.0

Source: Noise and Vibration Impact Analysis, 2024 (Appendix C).
Note: Traffic noise within 50 feet of the roadway centerline should be evaluated with site-specific information.
Shaded cells indicate roadway segments adjacent to the project site.
ADT = average daily traffic

IMPACT NOI-2: THE PROJECT WOULD NOT RESULT IN GENERATION OF EXCESSIVE GROUNDBORNE VIBRATION OR GROUNDBORNE NOISE LEVELS.

Less than Significant Impact.

Construction

As described in Section 3.0, *Project Description* of this DEIR, the proposed Project would consist of a SPA that would allow residential on the Project site that could accommodate up to 900 housing units on 18 acres in areas that are currently used for surface parking on the Project site. In addition, there is a remaining development potential of 13,032 SF of nonresidential land uses (i.e. retail, restaurant, office, etc.). This 13,032 SF of additional nonresidential development is the residual development capacity already entitled but not constructed. The proposed Project does not propose any specific development projects, therefore no physical development is proposed as part of this Project. However, the following analysis considers the future development of the additional 900 units and remaining commercial buildout capacity entitled for commercial uses, which is expected to occur anytime between October 2024 and October 2029.

Construction activities for future development of the proposed Project would include demolition of existing surface parking areas, excavation, and grading activities, which have the potential to generate low levels of groundborne vibration. People working in close proximity to the construction could be exposed to the generation of excessive groundborne vibration or groundborne noise levels related to construction activities. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. Site ground vibrations from construction activities very rarely reach the levels that can damage structures, but they can be perceived in the audible range and be felt in buildings very close to a construction site.

Demolition of existing surface parking areas, excavation, and grading activities would be required for the future buildout of the Project and could result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type. For example, FTA guidelines show that a building consisting of reinforced concrete, steel, or timber, sans plaster would not result in any construction vibration damage (LSA, 2024).

Based on the reference vibration levels provided by the FTA, a large bulldozer represents the peak source of vibration with a reference velocity of 0.089 in/sec peak particle velocity (PPV) or 87 vibration velocity decibels (VdB) of ground-borne vibration when measured at 25 feet as shown in Table 5.5-9.

Table 5.5-9: Vibration Source Levels for Construction Equipment

Equipment	Reference PPV/Lv at 25 feet	
	Peak Particle Velocity (inches/second)	Approximate Vibration Level (Lv) (VdB) at 25 feet
Pile Driver (Impact), Typical	0.644	104
Pile Driver (Sonic), Typical	0.170	93
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large Bulldozer[2]	**0.089**	**87**
Caisson Drilling	0.089	87
Loaded Trucks[2]	**0.076**	**86**
Jackhammer	0.035	79

Equipment	Reference PPV/Lv at 25 feet	
	Peak Particle Velocity (inches/second)	Approximate Vibration Level (Lv) (VdB) at 25 feet
Small Bulldozer	0.003	58

Source: Noise and Vibration Impact Analysis, 2024 (Appendix C)
[1] RMS vibration velocity in decibels (VdB) is 1 µin/sec.
[2] Equipment shown in bold is expected to be used on site.
µin/sec = microinches per second; ft = foot/feet; FTA = Federal Transit Administration; in/sec = inch/inches per second; LV = velocity in decibels; PPV = peak particle velocity; RMS = root-mean-square; VdB = vibration velocity decibels

A significant vibration impact could occur if construction activities of the future buildout generate vibration levels which exceed the FTA guidelines vibration threshold of 0.2 PPV in/sec at receiver locations or if construction were to occur during the City's prohibited hours.

The primary source of vibration during future construction would be from the operation of a bulldozer. As shown on Table 5.5-9, a large bulldozer would create a vibration level of 0.089 inch per second PPV at 25 feet. According to the Noise and Vibration Impact Analysis prepared for the proposed Project, the vibration level at the nearest offsite structure (110 feet away) would be 0.01 inch per second PPV during future buildout, as shown in Table 5.5-10, which is below the FTA vibration threshold of 0.2 PPV inch per second (LSA, 2024). Additionally, because construction activities are allowed only between the hours of 7:00 AM and 6:00 PM, Monday through Friday and 9:00 AM to 5:00 PM on Saturdays with no activity allowed on Sundays and City-observed federal holidays pursuant to the Tustin City Code Section 4616 (PPP NOI-1), vibration impacts would not occur during the more sensitive nighttime hours. Therefore, impacts related to construction vibration would be less than significant.

Table 5.5-10: Construction Vibration Levels at Nearest Receptors

Receptor (Location)	Reference Vibration Level (PPV) at 25 ft[1]	Distance (ft) [2]	Vibration Level (PPV)
Commercial (East)	0.089	220	0.003
Commercial (West)		130	0.008
Residential (Northeast)		110	0.01
Office (South)		700	0.001

Source: Noise and Vibration Impact Analysis, 2024 (Appendix C)
[1] The reference vibration level is associated with a large bulldozer which is expected to be representative of the heavy equipment used during construction.
[2] The reference distance is associated with the peak condition, identified by the distance from the perimeter of construction activities to surrounding structures.

Operation

Less than Significant Impact. As described previously, no physical development is proposed as part of this Project, thus the following analysis considers the future development of the additional 900 units and remaining commercial buildout capacity entitled for commercial uses, which could occur in the near future.

Potential vibration impacts associated with the operations of the proposed Project after buildout would be from vehicular traffic such as heavy trucks for residents moving in and out of the units, product deliveries to retail and restaurant uses, and garbage trucks for solid waste disposal. Truck vibration levels are dependent on vehicle characteristics, load, speed, and pavement conditions. However, vibration levels generated from Project-related traffic on the adjacent roadways by on road vehicles would not be excessive because the rubber tires and suspension systems of on-road vehicles provide vibration isolation. The residential

development contemplated by the Project would not generate a considerable level of heavy truck traffic or any other source of vibration. Likewise, the additional entitled 13,032 SF of nonresidential land uses would not generate enough heavy truck traffic on their own to result in an increase in vibration impacts beyond existing conditions, nor would they generate any other source of vibration during operations. Thus, operational vibration impacts would be less than significant.

IMPACT NOI-3: THE PROJECT WOULD NOT EXPOSE PEOPLE RESIDING OR WORKING IN THE PROJECT AREA TO EXCESSIVE NOISE LEVELS FOR A PROJECT LOCATED WITHIN THE VICINITY OF A PRIVATE AIRSTRIP OR AN AIRPORT LAND USE PLAN, OR WHERE SUCH A PLAN HAS NOT BEEN ADOPTED, WITHIN TWO MILES OF A PUBLIC AIRPORT OR PUBLIC USE AIRPORT.

No Impact. The Project site is located approximately 4.8 miles northeast of John Wayne Airport. According to Figure 5.5-2, *Airport Noise Contours,* of the John Wayne Airport AEUP, the Project site is not located within the 65 dBA CNEL noise contours. No other airports exist within the vicinity of the Project. Thus, implementation and development of the Project would not result in a safety hazard or exposure to excessive noise for people residing or working in the area, and impacts would be less than significant.

5.5.7 CUMULATIVE IMPACTS

Cumulative noise assessment considers development of the proposed Project in combination with ambient growth and other development projects within the vicinity of the Project area. As noise is a localized phenomenon, and drastically reduces in magnitude as distance from the source increases, only projects and ambient growth in the nearby area could combine with the proposed Project to result in cumulative noise impacts.

Future development of the proposed Project in combination with the related projects would result in an increase in construction-related and traffic-related noise. However, Tustin City Code Section 4616 limits noise producing construction activities to the hours of 7:00 AM and 6:00 PM on weekdays, between 9:00 AM and 5:00 PM on Saturdays, and prohibits noise producing construction activities anytime on Sunday and City-observed federal holidays. Also, construction noise and vibration is localized in nature and decreases substantially with distance. Consequently, in order to achieve a substantial cumulative increase in construction noise and vibration levels, more than one source emitting high levels of construction noise would need to be in close proximity to construction of the future buildout.

Table 5-1 in Section 5.0, *Environmental Impact Analysis,* lists the cumulative projects and provides a brief description and the distances from the Project site. The list includes 5 projects within the City of Santa Ana, 14 projects within the City of Tustin, and 2 projects within the City of Irvine. As shown on Figure 5-1, there are no cumulative projects adjacent to or within hearing distance of the Project site. The closest cumulative project is the Panettoni 2 Industrial Building (Cumulative Project No. 13), which proposes a 148,437 SF industrial building approximately 0.4 mile southwest of the Project site along Myford Road.

Cumulative construction could result in the exposure of people to the generation of excessive groundborne vibration and noise increases. However, the nearest cumulative Project is over 1,000 feet away from the proposed Project and the I-5 separates the proposed projects, providing intervening shielding and background noise. Construction activities for cumulative projects would also be required to adhere to City Code construction noise regulations. Thus, construction noise and vibration levels from the Project would not combine to become cumulatively considerable, and cumulative noise and vibration impacts associated with construction activities would be less than significant.

Cumulative mobile source noise impacts would occur primarily as a result of increased traffic on local roadways due to the proposed Project and related projects within the study area. Therefore, cumulative

traffic-generated noise impacts have been assessed based on the contribution of the proposed Project traffic volumes on the roadways in the Project vicinity. The increase in noise levels associated with the traffic volumes of the proposed Project were previously identified. As detailed, buildout of the proposed Project would result in noise levels much lower than the 3 dBA threshold. Therefore, the Project would not result in a cumulatively considerable impact when combined with existing and future development. Cumulative impacts would be less than significant.

5.5.8 EXISTING REGULATIONS AND PLANS, PROGRAMS, OR POLICIES

Existing Regulations

- Tustin City Code Article 4, Chapter 6, Sections 4614 - 4616

Plans, Programs, or Policies

PPP NOI-1 **Construction Hours.** Per the Tustin City Code Section 4616, construction activities are allowed only between the hours of 7:00 AM and 6:00 PM, Monday through Friday and between 9:00 AM to 5:00 PM on Saturdays with no activity allowed on Sundays and City-observed federal holidays.

5.5.9 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Prior to mitigation, Impact NOI-1 would be potentially significant. With compliance with existing regulations, Impact NOI-2 would be less than significant. No impact would occur related to Impact NOI-3.

5.5.10 MITIGATION MEASURES

MM NOI-1 All future development shall prepare a project-specific Final Acoustical Report to determine whether any proposed exterior noise sensitive areas would experience noise levels greater than 65 dBA CNEL and to identify any noise reduction features to the proposed development. Additionally, the Final Acoustical Report shall determine whether any proposed interior noise sensitive areas would experience noise levels greater than 45 dBA CNEL and to identify any noise reduction features to the proposed development (e.g. upgraded windows with Sound Transmission Class (STC) ratings of 30–35). Additionally, the Final Acoustical Report shall confirm that proposed siting of noise-generating stationary sources, if any, will not result in an exceedance of applicable noise thresholds at surrounding land uses.

5.5.11 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impact NOI-1 would be less than significant after mitigation.

5.5.12 REFERENCES

Airport Land Use Commission for Orange County. (2008, April). *Airport Land Use Commission*. Retrieved from John Wayne Airport Orange County: https://www.ocair.com/about/administration/airport-governance/commissions/airport-land-use-commission/

City of Tustin. (2024). *Chapter 6, Noise Control*. Retrieved from Tustin City Code: https://library.municode.com/ca/tustin/codes/code_of_ordinances?nodeId=ART4HESA_CH6NOCO_4617EX

Federal Transit Administration. (2006). *Transit Noise and Vibration Impact Assessment*. Retrieved from Department of Transportation: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://docs.vcrma.org/images/pdf/planning/ceqa/FTA_Noise_and_Vibration_Manual.pdf

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5.6 Population and Housing

5.6.1 INTRODUCTION

This section examines the existing population, housing, and employment conditions in the City of Tustin, and assesses the proposed Project's potential impacts related to unplanned direct and indirect growth. The demographic data and analysis presented in this section is based, in part, on the following documents and resources:

- *City of Tustin General Plan* (including 2021-2029 Housing Element), adopted November 2018 and updated October 2022.
- *Tustin City Code*.
- *E-5 City/County Population and Housing Estimates, 1/1/2023*, California Department of Finance (DOF).
- *Demographics and Growth Forecast,* 2024, Southern California Association of Governments (SCAG).

Although evaluation of population, housing, and employment typically involves economic and social, rather than physical environmental issues, population, housing, and employment growth are often precursors to physical environmental impacts. According to Section 15382 of the CEQA Guidelines, "[a]n economic or social change by itself shall not be considered a significant impact on the environment." Socioeconomic characteristics should be considered in an EIR only to the extent that they create adverse impacts on the physical environment.

5.6.2 REGULATORY SETTING

5.6.2.1 Federal Regulations

No federal laws, regulations, or executive orders apply to the Project.

5.6.2.2 State Regulations

California Housing Element Law

California Planning and Zoning Law requires each city and county to adopt a general plan to guide future growth (California Government Code Section 65300). Among other things, the general plan must include a housing element that identifies housing needs for all economic segments and provides opportunities for housing development to meet that need. At the state level, the California Department of Housing and Community Development Department (HCD) estimates the relative share of California's projected population growth that would occur in each county based on DOF population projections and historical growth trends. These figures are compiled by HCD in a Regional Housing Needs Assessment (RHNA) for each region of California. Where there is a regional council of governments, HCD provides the RHNA to the council. Such is the case for the City of Tustin, which is a member of the Southern California Association of Governments (SCAG). The council, in this case SCAG, then assigns a share of the regional housing need to each of its cities and counties. The HCD oversees the process to ensure that the council of governments distributes its share of the state's projected housing need.

Regional Housing Needs Allocation

The RHNA is mandated by state housing law as part of the periodic process of updating housing elements of local general plans. State law requires that housing elements identify RHNA targets set by HCD to encourage each jurisdiction in the state to provide its fair share of very low-, low-, moderate-, and upper-income housing. The RHNA provides a long-term outline for housing within the context of local and regional trends and housing production goals.

SCAG determines total housing need for each city and county in Southern California 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 households needed. All cities and counties are required to ensure that sufficient sites are planned and zoned for housing, such that area would be available to accommodate the projected housing needs, and to implement proactive programs that facilitate and encourage the production of housing commensurate with its housing needs.

The planning period for the 6th Cycle RHNA as prepared by SCAG, is an eight-year period from June 30, 2021, to October 15, 2029. The 6th Cycle RHNA allocated 6,782 housing units to the City of Tustin. The income breakdown of the required housing units is provided in Table 5.6-1.

Table 5.6-1: City of Tustin RHNA by Income Level

Income Level Category	Number of Housing Units	Percent of Total
Very Low (< 50% of AMI)	1,724	25%
Low (50% to 80% of AMI)	1,046	15%
Moderate (80% to 120% of AMI)	1,132	17%
Above Moderate (> 120% of AMI)	2,880	42%
Total	**6,782**	**100%**

Notes: AMI = Area Median Income
Source: (Southern California Associated of Governments, 2021)

SCAG Regional Transportation Plan/Sustainable Communities Strategy

On April 4, 2024, SCAG adopted "Connect SoCal," the 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Connect SoCal integrates transportation planning with economic development and sustainability planning to comply with state greenhouse gas (GHG) emissions reduction goals, such as Senate Bill 375. The RTP/SCS is updated every four years as required by federal and state regulations.

According to the RTP/SCS, by 2050, the population of Southern California is projected to increase by two million people, with an increase of 1.6 million housing units, and 1.3 million jobs. However, growth is not expected to be uniform across the region's counties or cities. During that time, transportation infrastructure will need to substantially expand while also meeting the GHG emissions-reduction targets set by the California Air Resources Board.

SCAG is empowered by state law to assess regional housing needs and provide a specific allocation of housing needs for all economic segments of the community for each of the region's counties and cities. The determination of each city's and county's share of regional housing needs that is required by law to be reflected in municipal general plan housing elements is based on the growth projections of the RTP/SCS.

SCAG Regional Growth Projections

SCAG is responsible for producing socioeconomic forecasts and developing, refining, and maintaining macro and small-scale forecasting models. The forecasts are developed in five-year increments. The current SCAG projections are provided through the year 2050. Consistency with the growth forecast, at the sub-regional level, is one criterion that SCAG uses in exercising its federal mandate to review "regionally significant" development projects for conformity with regional plans.

SCAG Connect SoCal projects that the number of local employment opportunities in the City of Tustin will increase from 51,700 in 2019 to 71,300 in 2050. Additionally, SCAG projects the City's housing units will increase from 27,000 in 2019 to 34,000 in 2050 (Southern California Association of Governments, 2024).

5.6.2.3 Local and Regional Regulations

City of Tustin General Plan

The following goals and policies from the City's 2021-2029 Housing Element are relevant to the proposed Project.

Goal 1: **Provision of 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 commensurate with the City's identified housing needs in the RHNA allocation.**

Policy 1.1: **Variety of Housing Choices.** Provide site opportunities inventory of vacant and underutilized land for development of housing that responds to diverse community needs in terms of housing type, cost and location, emphasizing locations near services and transit.

Policy 1.3: **Regulatory Incentives.** Support the use of regulatory incentives, such as density bonuses and deferment of impact fees, to offset the costs of affordable housing while ensuring that potential impacts are addressed.

Policy 1.4: **Development Streamlining.** Initiate development permit and zoning code streamlining strategies to encourage and expedite residential development (i.e. accessory dwelling units, affordable housing units, and investments in existing buildings) to reduce and eliminate regulatory barriers.

Policy 1.5: **Smart Growth Principles.** Encourage infill development or site redevelopment within feasible development sites for homeownership and rental units through the implementation of smart growth principles, allowing for 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 employment opportunities, community facilities and services, and amenities.

5.6.3 ENVIRONMENTAL SETTING

Project Site

The Project site consists of approximately 76.9 acres that are developed with existing commercial uses, including restaurant, retail, and office establishments, a paved parking lot, and landscaping. The area proposed for future implementation of residential uses is limited to approximately 18 acres of the existing parking lot area over seven parcels (APNs 500-291-06, -07, -11, -12, and -25 and 500-312-03 and -10) within the Project site.

The Project includes a GPA to establish that higher density residential uses are allowed in the PCCB land use designation when prescribed by a Housing Overlay (HO) district or a Specific Plan (SP). The Project also includes a SPA to modify the site's ETSP designation of MU to allow high density residential uses on the 18-acre site; and to establish a new High Density Residential specific plan zoning designation.

Population

According to the California DOF, the City of Tustin had a population of 79,558 in 2023 (California Department of Finance, 2023). The SCAG estimates that the City of Tustin had a population of 80,400 persons in 2019 and estimates that the City's population will increase to 93,317 in 2050[1], which is a 16.1 percent increase. In comparison, the SCAG projects the County of Orange will have a 7.8 percent increase in population between 2019 and 2050, as shown on Table 5.6-2.

Table 5.6-2: City and County Existing and Projected Population, 2019-2050

Year	City of Tustin Population	County of Orange Population
2019	80,400	3,191,000
2050	93,317	3,439,000
Projected Change	12,919	248,000
Projected Percent Change	16.1	7.8

Source: (Southern California Association of Governments, 2024)

Housing

The California DOF estimates that the City of Tustin contained 28,405 housing units in 2023. The housing types in the City of Tustin compared to those in the entire County are provided in Table 5.6-3. As shown, the County has a higher percentage of detached single-family housing units and a lower percentage of single-family attached and multi-family housing units than the City. In addition, the California DOF details that the City had an average household size of 2.88 persons per household. In comparison, the County had an average household size of 2.83 persons per household.

Table 5.6-3: City and County Housing Estimates by Type 2023

	City of Tustin Housing Units		County of Orange Housing Units	
Unit Type	**Number**	**Percent**	**Number**	**Percent**
Single-family detached	9,910	34.9%	570,763	49.6%
Single-family attached	3,944	13.9%	143,166	12.4%
Multi-family (2-4 units)	3,956	13.9%	94,541	8.2%
Multi-family (5+ units)	9,731	34.3%	309,290	26.9%
Mobile Homes	864	3.0%	32,183	2.8%
Total	28,405	100%	1,149,943	100%

Source: (California Department of Finance, 2023)

The California DOF population and housing estimates for 2023 detail that the City of Tustin has a vacancy rate of 3.4 percent. In comparison, the vacancy rate Countywide is higher at 5.1 percent.

[1] The 2050 population estimate was derived using the methodology presented in Section 4.5 of the SCAG Demographics & Growth Forecast which states an estimate of the future City-level population based on Connect SoCal's household forecast can be derived using a county-level Population:Housing ratio from TABLE 12 and applying it to the City's future household growth (Southern California Association of Governments, 2024).

As shown in Table 5.6-4, SCAG estimates that between 2019 and 2050, the number of housing units in the City will increase by 25.9 percent while the number of housing units in the County will increase by 17.2 percent.

Table 5.6-4: City and County Existing and Projected Housing Units, 2019-2050

Year	City of Tustin Housing Units	County of Orange Housing Units
2019	27,000	1,069,000
2050	34,000	1,253,000
Projected Change 2019-2050	7,000	184,000
Projected Percent Change 2019-2050	25.9	17.2

Source: (Southern California Association of Governments, 2024)

Employment

The City of Tustin is estimated to contain 51,700 employment opportunities as of 2019. The SCAG regional growth projections anticipate the number of jobs in the City of Tustin to increase by 37.9 percent to 71,300 jobs in the year 2050. In comparison, the County is projected to see a 11.9 percent increase in the number of jobs by 2050, as shown in Table 5.6-5.

Table 5.6-5: City and County Existing and Projected Employment, 2019-2050

Year	City of Tustin Employment	County of Orange Employment
2019	51,700	1,805,000
2050	71,300	2,019,000
Projected Change 2019-2050	19,600	214,000
Projected Percent Change 2019-2050	37.9	11.9

Source: (Southern California Association of Governments, 2024)

The SCAG 2019 Local Profile for Tustin identifies that 7.3 percent of Tustin residents work and live in the City, while 92.7 percent commute to other places (Southern California Association of Governments, 2019). Of the commuters residing in Tustin, the largest percentage commute to the City of Irvine (18.6 percent), Santa Ana (10.4 percent), Anaheim (5.5 percent), and Orange (5.2 percent).

Jobs – Housing Ratio

The jobs-housing ratio is a general measure of the total number of jobs and housing units in a defined geographic area, without regard to economic constraints or individual preferences. SCAG applies the jobs-to-housing ratio at the regional and subregional levels to analyze the fit between jobs, housing, and infrastructure. A major focus of SCAG's regional planning efforts has been to improve this balance. SCAG defines the jobs-housing balance as follows:

> Jobs and housing are in balance when an area has enough employment opportunities for most of the people who live there and enough housing opportunities for most of the people who work there. The region as a whole is, by definition, balanced…. Job-rich subregions have ratios greater than the regional average; housing-rich subregions have ratios lower than the regional average. Ideally, job-housing balance would… assure not only a numerical match of jobs and housing but also an economic match in type of jobs and housing.

There is no ideal ratio adopted in state, regional, or city policies. However, the American Planning Association recommends a target ratio of 1.5 jobs per housing unit; communities with more than 1.5 jobs per dwelling unit are considered jobs-rich; those with fewer than 1.5 are "housing rich," meaning that more housing is provided than employment opportunities in the area (Weitz, 2003). A job-housing imbalance can indicate potential air quality and traffic problems associated with commuting. Table 5.6-6 provides the projected jobs-to-housing ratios for the City, based on SCAG's 2024-2050 RTP/SCS.

Table 5.6-6: Jobs – Housing Trends in the City of Tustin

	Employment in 2019	Number of Dwelling Units in 2019	2019 Jobs to Housing Ratio	Employment in 2050	Number of Dwelling Units in 2050	2050 Jobs to Housing Ratio
City of Tustin	51,700	27,000	1.91	71,300	34,000	2.1
County of Orange	1,805,000	1,069,000	1.67	2,019,000	1,253,000	1.61

Source: (Southern California Association of Governments, 2024)

As shown on Table 5.6-6, the projected 2050 jobs-to-housing ratios for the City of Tustin and Orange County are 2.1 and 1.61, respectively. This indicates that both the City of Tustin and Orange County are jobs-rich. Therefore, it is possible that people employed in the City of Tustin are commuting from elsewhere.

5.6.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a Project could have a significant effect if it were to:

POP-1 Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

POP-2 Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

The Initial Study (Appendix A) established that the proposed Project would not result in impacts related to Threshold POP-2; therefore, no further assessment of this threshold is required in this Draft EIR.

5.6.5 METHODOLOGY

CEQA Guidelines Section 15064(e) states that a social or economic change generally is not considered a significant effect on the environment unless the changes can be directly linked to a physical adverse change. Additionally, CEQA Guidelines Appendix G indicates that a project could have a significant effect if it would induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure). Therefore, population impacts are considered potentially significant if growth associated with the proposed Project would exceed projections for the area and if such an exceedance would have the potential to create a significant adverse physical change to the environment.

The methodology used to determine population, housing, and employment impacts began with data collection regarding existing population and housing trends, which was obtained from the U.S. Census, state of California DOF, and SCAG. Population and household data was derived from the 2023 DOF Estimates, as this was the availble dataset at the time the NOP was released. The DOF benchmarked all 2023 population and housing estimates to the 2020 decennial census. SCAG projections were used to analyze long term population, household, and employment growth. U.S. Census data was used to capture the current employment statistics in the City of Tustin. If projected growth with the Project would exceed growth

projections for the City and could create a significant change to the environment, the resulting growth would be considered "substantial," and a significant impact would result.

5.6.6 ENVIRONMENTAL IMPACTS

IMPACT POP-1: THE PROJECT WOULD NOT INDUCE SUBSTANTIAL UNPLANNED POPULATION GROWTH IN AN AREA, EITHER DIRECTLY (FOR EXAMPLE, BY PROPOSING NEW HOMES AND BUSINESSES) OR INDIRECTLY (FOR EXAMPLE, THROUGH EXTENSION OF ROADS OR OTHER INFRASTRUCTURE).

Less than Significant.

Housing and Population Growth: The proposed Project would rezone an 18-acre within The Market Place site. A specific development project is not proposed as part of this Project. The Project site does not currently support residential uses. However, the development that could occur from future buildout of the proposed housing zone is 900 dwelling units and 13,032 SF of nonresidential buildout. As described previously, the City has an average of approximately 2.88 persons per household (California Department of Finance, 2023). Using this estimate, buildout of the proposed 900 units could result in an additional 2,592 residents in the City.

As shown in Table 5.6-2, population in the City of Tustin is expected to increase by 12,919 persons between 2019 and 2050. As shown in Table 5.6-4, housing stock in the City is expected to increase by 7,000 dwelling units between 2019 and 2050. Based on these growth projections, full buildout of the Project would represent approximately 20.1 percent of the projected population growth and 12.9 percent of the projected housing stock growth in the City. Thus, while the Project would result in an increase in population and housing units in an area not previously planned for housing, the increase in population and number of housing units that would result from the proposed Project would not exceed projections for the City.

Further, as reflected in Table 5.6-1, SCAG determined the City needs to provide a total of 6,782 housing units to meet their RHNA. The City's 2021–2029 Housing Element identifies several adequate sites that are able to accommodate the development of additional housing units for the City to meet its estimated housing growth needs identified in the SCAG's RHNA allocation. Of the Housing Element inventory sites, The Market Place (the Project site) was identified as necessary for rezoning under Housing Element Program 1.1f to allow for high density residential/mixed use development. Thus, while the proposed Project would result in an increase to projected planned population, the Project would in part satisfy the State requirements to provide new housing opportunities to increase housing supply. Additionally, the proposed Project supports goals and policies of the Housing Element (see page 5.6-3) aimed to support a variety of housing types and densities.

Employment Growth: As described in Chapter 3, *Project Description*, the Project also anticipates the future nonresidential capacity buildout of 13,032 SF within a portion of the Project site that allows non-residential development. Using employment generation rates from the 2001 SCAG Employment Density Report, buildout of the 13,032 SF of nonresidential space would result in approximately 40 employees (1 employee per 325 SF) (The Natelson Company, Inc., 2001).

As shown in Table 5.6-5, employment in the City of Tustin is expected to increase by 19,600 jobs between 2019 and 2050. Based on these growth projections, buildout of the nonresidential portion of the Project would represent approximately 0.2 percent of the projected employment growth in the City. Thus, while the Project would result in an increase in employment, the increase in the number of jobs that would result from the proposed Project would not exceed projections for the City.

Jobs-Housing Balance. Effects of the proposed Project on jobs-housing balance are evaluated by adding project-generated jobs and housing units to forecasts of employment and housing. As described previously,

the City of Tustin is jobs rich, with an existing jobs-housing ratio of 1.91. The proposed Project would reduce (improve) the jobs-housing ratio slightly by adding 900 residential units. The proposed Project would provide a regional beneficial effect of providing the opportunity for housing on the Project site in a jobs-rich area, where employees can easily travel to nearby employment opportunities.

In addition, because the area is jobs-rich, the addition of residential units in the area would not require additional jobs that could result in growth. Conversely, the new residents would fill the need for employees that are anticipated by SCAG projections. Thus, the additional residential units would not indirectly result in the need for additional employment opportunities, which could result in growth. Therefore, this indirect impact related to growth would be less than significant.

Construction. A specific development project is not proposed as part of this Project; however, construction of future residential uses that may occur as a result of this Project would result in a temporary increased demand for construction workers. Construction workers are anticipated to come from the City and surrounding jurisdictions and commute daily to the jobsite. Although it is possible that the demand for workers could induce some people to move to the region, this consideration would be de minimis, relative to the total number of construction workers in the region. According to the U.S. Census Bureau, 2,303 individuals are employed in the construction industry in the City of Tustin and 72,855 individuals are employed in the construction industry in Orange County as a whole (United States Census Bureau, 2022). The supply of general construction labor in the vicinity of the Project area is not expected to be constrained due to the temporary nature of construction projects. As such, the existing labor pool can meet the construction needs of the Project, and this labor pool would increase with the continued projected growth of Orange County. Therefore, implementation of the Project would not induce substantial unplanned population growth directly or indirectly through construction employment that could cause substantial adverse physical changes in the environment. Impacts would be less than significant.

Infrastructure. Future development of the Project may require expansion of infrastructure to serve the proposed uses at the site, including installation of new storm drains, wastewater, water (potable and reclaimed), and dry utilities that would connect to existing facilities within the Project site or adjacent to the Project area. However, as outlined in Section 3.0, *Project Description,* specific infrastructure improvements required to support residential development within The Market Place are not known at this time, and will not be known until a development project is proposed. Future development associated with allowed uses in accordance with the proposed Housing Zone would be required to undergo project-level environmental review under CEQA on a case-by-case basis. As such, future development projects would be required to analyze project-specific impacts related to infrastructure improvements and the City's existing population and housing stock.

5.6.7 CUMULATIVE IMPACTS

Impacts from cumulative population growth are considered in the context of their consistency with local and regional planning efforts. As discussed, SCAG's 2024-2050 RTP/SCS serves as a long-range vision plan for development in the counties of San Bernardino, Imperial, Los Angeles, Orange, Riverside, and Ventura. The Project would not exceed the SCAG population, housing, and employment growth projections for the City and would represent a nominal percentage of SCAG's overall projections for the City of Tustin. The Project could result in a generation of 900 residential units at full buildout. Based on the growth projections analyzed in SCAG's 2024-2050 RTP/SCS, full buildout of the Project would represent approximately 20.1 percent of the projected population growth and 12.9 percent of the projected housing stock growth in the City of Tustin. The Project is within the growth projections used to prepare RTP/SCS, thus, impacts related to cumulative growth would be less than significant and not cumulatively considerable.

5.6.8 EXISTING REGULATIONS AND PLANS, PROGRAMS, OR POLICIES

Existing Regulations

- California Government Code Sections 65300, 65580–65589

Plans, Programs, or Policies

- None.

5.6.9 PROJECT DESIGN FEATURES

None.

5.6.10 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impact POP-1 would be less than significant.

5.6.11 MITIGATION MEASURES

No mitigation measures are required.

5.6.12 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant unavoidable adverse impacts related to population and housing would occur.

5.6.13 REFERENCES

California Department of Finance. (2023, May). *E-5 Population and Housing Estimates for Cities, Counties, and the State — January 1, 2021-2023*. Retrieved from State of California Department of Finance.

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5.7 Public Services

5.7.1 INTRODUCTION

This section describes the existing fire protection, police protection, schools, and library facilities that serve the Project site and vicinity and evaluates the potential for implementation of the proposed Project to result in an impact. This section of the EIR addresses whether there are physical environmental effects of new or expanded facilities that are necessary to maintain acceptable service levels related to fire, police, schools, and library services. Park services are addressed in Section 5.8, *Parks and Recreation*. Public utilities and service systems, including water, wastewater, drainage, and solid waste, are addressed in Section 5.11, *Utilities and Service Systems*. Information within this section is based on the following:

- *City of Tustin General Plan* (including 2021-2029 Housing Element), adopted November 2018 and updated October 2022.
- *Tustin City Code*.
- *East Tustin Specific Plan,* adopted March 1986 and updated November 1997.
- Data provided by each service provider.

Because CEQA focuses on physical environmental effects, this section analyzes whether any physical changes resulting from an increase in service demands from development pursuant to the proposed Project could result in significant adverse environmental effects. Thus, an increase in staffing associated with public services, or an increase in calls for services, would not, by itself, be considered a physical change in the environment. However, physical changes in the environment resulting from the construction of new facilities or an expansion of existing facilities to accommodate the increased staff or equipment needs resulting from the proposed Project could constitute a significant impact.

5.7.2 FIRE PROTECTION SERVICES

5.7.2.1 FIRE PROTECTION REGULATORY SETTING

California Fire Code

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code, which include regulations concerning building standards (as also set forth in Title 24, Part 9 of the California Code of Regulations, the California Building Code), fire protection and notification systems, fire protection devices (such as extinguishers and smoke alarms), building evacuation and access standards, and fire suppression training.

California Health and Safety Code

Additional state fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code, which includes regulations for building standards, fire protection and notification systems, fire protection devices such as extinguishers, smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

California Occupational Safety and Health Administration

In accordance with the California Code of Regulations, Title 8 Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Fighting Equipment," California Occupational Safety and Health Administration

(Cal/OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire house sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

Orange County Fire Authority Fire Prevention Guideline B-09, Fire Master Plans for Commercial and Residential Development

The Orange County Fire Authority (OCFA) Fire Prevention Guideline B-09 requires new structures to meet standards related to access driveways, siting of hydrants, water supply, and building access, as required by the California Fire Code. The guideline requires specific information be provided during the submittal of plans for development projects to demonstrate compliance with all codes and other regulations governing water availability for firefighting and emergency access to sites and structures within the jurisdictions served by the OCFA. In addition, the guideline requires that plans be reviewed by the OCFA.

City of Tustin General Plan

The City's General Plan Public Safety Element contains the following goals and policies related to fire services.

Goal 5: **Reduce the risk to the community's inhabitants from fires or explosions.**

Policy 5.1: Work closely with the Orange County Fire Authority to continue to operate an education program regarding fire hazards.

Policy 5.2: Encourage the use of fire retardant roofing materials.

Policy 5.3: Establish and maintain mutual aid agreements with surrounding jurisdictions for fire protection.

Policy 5.4: Enforce building code requirements that assure adequate fire protection.

Policy 5.5: Study alternatives for upgrading emergency water line capacities in deficient areas.

Policy 5.6: Cooperate with Orange County Fire Authority to ensure the provision of adequate and cost-effective fire protection services.

Tustin City Code

Chapter 8100 – Building and Construction Codes Adopted by Reference. The Tustin City Code adopts the California Fire Code as published by the California Building Standards Commission and the International Code Council by reference. The California Fire Code is Title 24, Part 9 of the California Code of Regulations, and regulates new structures, alterations, additions, changes in use or changes in structures. The Code includes specific information regarding safety provisions, emergency planning, fire-resistant construction, fire protection systems, means of egress and hazardous materials.

East Tustin Specific Plan

The ETSP discusses fire safety services in Section 2.11, *Other Public Facilities*. Several new fire stations were anticipated and considered at the time of the ETSP approval. The ETSP notes that fire safety services are provided by the Orange County Fire Department[1] which, at the time of ETSP's adoption, operated two fire

[1] The Orange County Fire Department reorganized as the Orange County Fire Authority (OCFA) in December of 1994.

stations which provided first alarm service to the ETSP area. These consisted of Station 8 located at 10631 Skyline Drive in unincorporated Santa Ana and Station 21 located at 1241 Irvine Boulevard in Irvine. The ETSP noted that the Orange County Fire Department planned for the development of three additional fire stations by the year 2000 to serve the entire Orange County Fire Department service area. However, precise locations, facility requirements and timing of development of these three stations were not determined at the time the ETSP was adopted.

Additionally, the ETSP identified the possibility that a new station may be needed within the ETSP, in addition to the three planned fire stations within the Orange County Fire Department service area, to accommodate the additional proposed development within the ETSP. The ETSP did not determine a specific location for this fire station but identified a suitable location near the intersection of Portola Parkway and Myford Road, as it would be central to the plan area.

5.7.2.2 FIRE PROTECTION SERVICE ENVIRONMENTAL SETTING

Fire protection and emergency medical services in the City of Tustin are provided by the OCFA through a contract for services. The OCFA provides fire suppression, emergency medical, rescue, fire prevention, hazardous materials coordination, and wildland management services. OCFA serves 23 cities in Orange County and all unincorporated areas. Within the City of Tustin, OCFA provides services from three fire stations.

The Project site's primary responsibility area is split between Station 37 and Station 6 (T. Rivers, personal communication, April 8, 2024). Station 37 is located approximately 1.5 miles from the Project and Station 6 is located approximately 2.79 miles from the Project site. The location, equipment, and staffing of Station 37 and Station 6 are provided in Table 5.7-1.

Table 5.7-1: Location, Staffing and Equipment for Station 37 and Station 6

Fire Station	Location	Distance from Site[1]	Equipment	Staffing
Station 37	15011 Kensington Park Drive, Tustin, CA 92780	1.50 miles	-Division 4 -Medic Engine 37	Daily Staffing: -1 Division 4 Chief -1 Fire Captain -1 Fire Apparatus Engineer -2 Firefighters Total Station Staffing: 13
Station 6	3180 Barranca Pkwy, Irvine, CA 92606	2.79 miles	-Battalion 5 -Heavy Rescue 6 -Medic Engine 6	-1 Battalion Chief -2 Fire Captains -2 Fire Apparatus Engineers -4 Firefighters Total Station Staffing: 27

As provided by the OCFA 2022 Statistical Annual Report, there were 6,449 incident totals from the three fire stations in the City in 2022 (Orange County Fire Authority, 2022). Of the calls for service, 76.8 percent (4,953) were for emergency medical calls, 1.4 percent (93) were for fire incidents, and 28.3 percent (1,403) were for other incidents, which includes: cancelled service calls, ruptures, hazardous conditions, false alarms, and miscellaneous calls.

According to Table PS-3, Emergency Service Standards, of the Tustin General Plan, Tustin has a target response time of 5 minutes for 90 percent of incidents related to fire response and basic life support unit responses. The standard response time for the advanced life support unit is 10 minutes for 90 percent of incidents (City of Tustin, 2018).

The OCFA standard for first-due response is 8:30 minutes at the 90th percentile. First-due refers to the fire department that is responsible for responding to an emergency call in a specific area. The standard response time for the effective response force (initial response of three engines, one ladder truck and one Battalion Chief) is 11:30 minutes at the 90th percentile. Table 5.11-2 provides a summary of service and response metrics for the responding stations to the Project site (Station 37 and Station 6) in 2023. As shown, in 2023 the 90th percentile response time for Station 37 was 8:51 minutes, and 8:51 minutes for Station 6.

Table 5.7-2: OCFA Station 37, 21, and 43 Calls for Service and Response Data – 2023

Fire Station	Emergency Medical Calls	Fire Calls	Other Calls	Total Calls for Services	90th Percentile Response (min:second)
Station 37	1,544	33	533	2,111	8:51
Station 6	1,440	28	554	2,022	8:18

Source: Rivers, 2024

5.7.2.3 FIRE PROTECTION SERVICE THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services.

5.7.2.4 FIRE PROTECTION SERVICE METHODOLOGY

The potential impacts related to fire protection services were evaluated based on the ability of existing fire department staffing, equipment, and facilities to meet the additional demand for fire protection and emergency medical services resulting from implementation of the proposed Project. Impacts are considered significant if implementation of the proposed Project would result in inadequate staffing levels, response times, and/or increased demand for services that would require the construction or expansion of new or altered facilities that might have an adverse physical effect on the environment. For fire services, a significant impact could occur if the proposed Project generated the need for additional personnel or equipment that could not be accommodated within the existing stations and would require the construction of a new station or an expansion of an existing station.

5.7.2.5 FIRE PROTECTION SERVICE ENVIRONMENTAL IMPACTS

IMPACT PS-1: THE PROJECT WOULD NOT RESULT IN SUBSTANTIAL ADVERSE PHYSICAL IMPACTS ASSOCIATED WITH THE PROVISION OF NEW OR PHYSICALLY ALTERED FIRE SERVICE FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL IMPACTS, IN ORDER TO MAINTAIN ACCEPTABLE SERVICE RATIOS AND RESPONSE TIMES OR OTHER PERFORMANCE OBJECTIVES FOR FIRE PROTECTION SERVICES.

Less than Significant Impact. The proposed Project is a Housing Overlay (HO) district within The Market Place site. The Project site does not currently support residential uses. However, the development that could occur from future buildout of the proposed housing zone is 900 dwelling units and 13,032 SF of nonresidential buildout. No development is proposed as part of this Project. However, construction and operation of future residential and nonresidential development as a result of the proposed Project would increase demands for fire protection and emergency medical services beyond the existing site condition. As

described in Section 5.10, *Population and Housing*, the proposed Project is estimated to result in 2,592 residents and 40 employees at full buildout. The increased residential and employee population is expected to create the typical range of service calls to OCFA, largely related to medical emergencies. Medical emergencies accounted for 76.8 percent of service calls of OCFA service calls in Tustin during 2022, while fire calls consisted of 1.4 percent of service calls (OCFA 2022).

As described above in Section 5.7.2.2, *Environmental Setting*, the Project site's primary responsibility area is split between Station 37 and Station 6. Station 37 is located 1.5 miles from the site and Station 6 is located 2.79 miles from the site. The existing 90th percentile on-scene response time for emergency calls from Station 37 is 8:51 minutes, which slightly exceeds the response time standard 90th percentile of 8:30 minutes. The existing 90th percentile response time for emergency calls from Station 6 is 8:18 minutes, which is within the response time standard.

While a specific development project is not proposed as part of this Project, approval of the Project would allow up to 900 housing units and 13,032 SF of nonresidential space to be developed within the Project site. Therefore, calls for service from the future additional population at the Project site could result in an increase in response times, and result in Station 6 exceeding the existing standards for service or result in Station 37 further exceeding the existing standards for service if the calls coincide with other calls for service. However, because the Project site is within three miles of two existing fire stations, and the Project site is within a developed area that is currently served by these stations, the Project would not result in the requirement to construct a new fire station.

Additionally, future development as a result of the proposed Project would be developed pursuant to the most recent California building and fire codes, which would improve the fire safety of the Project site compared to the existing buildings. California's building/fire codes are published in their entirety every three years and were most recently updated in 2022. As all projects within the City, the proposed Project would be required per City permitting to comply with existing regulations, including the 2022 California Fire Code and the OCFA Fire Prevention Guideline B-09, Fire Master Plans for Commercial and Residential Development, which include regulations for water supply, built in fire protection systems, adequate emergency access, fire hydrant availability, and fire-safe building materials, such as the following:

- Structures would have automatic fire sprinkler systems per National Fire Protection Association Standard for the Installation of Sprinkler Systems (NFPA 13) as required by the California Building and Fire Codes.
- A fire alarm system would be installed per the requirements of the California Fire Code.
- Access to and around structures would meet OCFA and California Fire Code requirements.
- A water supply system to supply fire hydrants and fire hydrant spacing would meet OCFA and California Fire Code requirements.
- Turning radius and access in and around the Project site and buildings would be designed to accommodate large fire department vehicles and their weight per OCFA Fire Prevention Guideline B-09.
- All electrically operated gates shall install emergency opening devices as approved by the OCFA.
- High rise provisions would be required for buildings over 75 feet high.
- Occupancy permits are required prior to occupancy of any part of the proposed Project.

Overall, with the two existing fire stations within three miles of the Project site, the area has adequate nearby fire facilities to serve the proposed Project in addition to the existing service needs of the area; and construction of a new or expanded fire station would not be required as a result of the proposed Project. Thus, the proposed Project would not result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered fire protection facilities. Overall, impacts related to fire protection services would be less than significant..

Further, funding for fire facilities, equipment, and service personnel come from the City's General Fund. Funding from property taxes, as a result of population growth, would be expected to grow roughly proportional to any increase in residential units and businesses in the City. Therefore, the additional demand for fire services and protection generated by the proposed Project would be satisfied through the General Fund.

5.7.2.6 FIRE PROTECTION SERVICE CUMULATIVE IMPACTS

The geographic context for cumulative fire protection and emergency services is the OCFA service area. Like the proposed Project, cumulative projects in the City would be reviewed by City and OCFA staff prior to permit approval to ensure that the projects implement fire protection design features per the California Building Code and the California Fire Code, which are intended to reduce risk of fire and impacts on fire protection services. Additionally, property and sales tax collected from cumulative projects would increase the City's General Fund in rough proportion to population increases, providing funding for any improvements necessary to maintain adequate fire protection facilities, equipment, and/or personnel. Therefore, cumulative impacts associated with fire services would be less than cumulatively considerable.

5.7.2.7 FIRE PROTECTION SERVICE EXISTING STANDARD CONDITIONS AND PLANS, PROGRAMS OR POLICIES

The following standard regulations would reduce potential impacts related to fire protection services:

- OCFA Fire Prevention Guideline B-09, Fire Master Plans for Commercial and Residential Development
- Tustin City Code, Chapter 8100; Building and Construction Codes Adopted by Reference

5.7.2.8 FIRE PROTECTION SERVICE LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impact PS-1 would be less than significant.

5.7.2.9 FIRE PROTECTION SERVICE MITIGATION MEASURES

No mitigation measures are required.

5.7.2.10 FIRE PROTECTION SERVICE LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant unavoidable adverse impacts related to fire protection services would occur.

5.7.3 POLICE SERVICES

5.7.3.1 POLICE SERVICES REGULATORY SETTING

City of Tustin General Plan

The City's General Plan Public Safety Element contains the following goals and policies related to police services.

Goal 6: **Stabilize demand for law enforcement services.**

Policy 6.1: Provide appropriate levels of police protection within the community.

Policy 6.2: Periodically evaluate service levels and service criteria.

Policy 6.3: Pursue State and Federal monies to offset the cost of providing police protection.

Policy 6.4: Cooperate with the Orange County Sheriff's Department and surrounding police departments to provide back-up police assistance in emergency situations.

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.

Policy 6.6: Enhance public awareness and participation in crime prevention by developing new, and expanding existing, educational programs dealing with personal safety awareness, such as neighborhood watch, commercial association programs, and community-oriented policing.

East Tustin Specific Plan

The ETSP discusses police services in Section 2.11, *Other Public Facilities*. The ETSP discusses that buildout of the ETSP would result in additional police services demand. However, the ETSP discusses that the additional service needs generated by development within the ETSP would be provided by the City's existing police facilities and that no new facilities would need to be developed within the ETSP.

5.7.3.2 POLICE SERVICES ENVIRONMENTAL SETTING

The Tustin Police Department provides police services throughout the City, including to the Project site. Police Department headquarters are located at 300 Centennial Way which is approximately 2.4 roadway miles northwest of the Project site. Additionally, Tustin Police Department "Annex" is located at 15445 Lansdowne Road, approximately 3.4 roadway miles west of the Project site.

As of May 2024, the Tustin Police Department had 83 full time Sworn Police Officers, 7 part time Sworn Officers, 44 full time civilian support personnel and 12 part time civilian support personnel. According to the California Department of Finance, the City of Tustin had a population of 78,559 residents in 2023 (California Department of Finance, 2023). Based on this population estimate, the City's sworn officer to population ratio is 1.1 officers per 1,000 population.

Police Department Performance Standards

According to the Table PS-3, Emergency Service Standards, of the Tustin General Plan, the Tustin Police Department has a target response time of 3.5 minutes for emergency calls and 13 minutes for non-emergency calls (City of Tustin, 2018).

Tustin Police Department groups calls for service into four priority categories, described below.

- Priority 1: Immediate threat to life or significant threat to public safety. Priority 1 calls are dispatched immediately.
- Priority 2: Crimes in progress or other calls for service with a potential threat to public safety that do not rise to the level of a Priority 1 call. These calls are dispatched as soon as possible.
- Priority 3: Calls for service with a reporting party who is waiting for an officer.
- Priority 4: Report calls with a delay in reporting and limited suspect information.

Average response times for each call type between January 1, 2023, to December 31, 2023, City wide are provided below.

- Priority 1 – 00:05:43

- Priority 2 – 00:14:25
- Priority 3 – 00:42:27
- Priority 4 – 00:53:36

5.7.3.3 POLICE SERVICES THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to result in substantial adverse physical impacts associated with the provision of new or physically altered police department 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 services.

5.7.3.4 POLICE SERVICES METHODOLOGY

The potential impacts related to police services were evaluated based on the ability of existing and planned Police Department staffing, equipment, and facilities to meet the additional demand for police services resulting from implementation of the proposed Project. Impacts are considered significant if implementation of the proposed Project would result in inadequate staffing levels, response times, and/or increased demand for services that would require the construction or expansion of new or altered facilities that might have an adverse physical effect on the environment. For police services, a significant impact could occur if the proposed Project generated the need for additional personnel or equipment that could not be accommodated within the existing station and substations and would require the construction of a new station or an expansion of an existing station.

5.7.3.5 POLICE SERVICES ENVIRONMENTAL IMPACTS

IMPACT PS-2 THE PROJECT WOULD NOT RESULT IN SUBSTANTIAL ADVERSE PHYSICAL IMPACTS ASSOCIATED WITH THE PROVISION OF NEW OR PHYSICALLY ALTERED POLICE SERVICE FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL IMPACTS, IN ORDER TO MAINTAIN ACCEPTABLE SERVICE RATIOS AND RESPONSE TIMES OR OTHER PERFORMANCE OBJECTIVES FOR POLICE SERVICES.

Less than Significant Impact. The Project site does not currently support residential uses. However, the development that could occur from future buildout of the proposed Project is 900 dwelling units and 13,032 SF of nonresidential uses. No development is proposed as part of this Project. However, construction and operation of future residential and nonresidential development as a result of the proposed Project would increase demands for police protection services beyond the existing site condition. As described in Section 5.10, *Population and Housing*, the proposed Project is anticipated to result in 2,592 residents and 40 employees at full occupancy. This residential and employee population is expected to create the typical range of police service calls.

Crime and safety issues during Project construction may include theft of building materials and construction equipment, malicious mischief, graffiti, and vandalism. During operation, the proposed Project is anticipated to generate a typical range of police service calls, such as vehicle burglaries, residential thefts, commercial shoplifting, and disturbances. Additionally, future applicants would be required to coordinate with the Tustin Police Department prior to project approval to ensure that adequate security precautions and design features are in place.

Based on the City's current ratio of officers to residents (1.1 sworn officers per 1,000), future buildout of the proposed Project would result in the need for three additional police officers (2,592/1,000 * 1.1 = 2.85). Although future buildout of the proposed Project 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 and expansion of facilities, personnel, and equipment is from the City's General Fund. Funding from property taxes, as a result of population growth, would be expected to grow roughly proportional to any increase in residential units and businesses in the City. Tustin Police Department would continue to add staff and equipment on an as-needed basis to accommodate the incrementally increasing demands from future development, including the proposed Project. Therefore, the additional demand for police services and protection generated by the proposed Project would be satisfied through the General Fund. Therefore, impacts would be less than significant.

5.7.3.6 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 cumulative 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. Further, should any new or altered facilities be required in the future, these facilities would be subject to a separate CEQA review. Therefore, cumulative impacts associated with police services would be less than significant.

5.7.3.7 POLICE SERVICES EXISTING STANDARD CONDITIONS AND PLANS, PROGRAMS OR POLICIES

There are no applicable regulations related to police services that would reduce potential impacts.

5.7.3.8 POLICE SERVICES LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impact PS-2 would be less than significant.

5.7.3.9 POLICE SERVICES MITIGATION MEASURES

No mitigation measures are required.

5.7.3.10 POLICE SERVICES LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant unavoidable adverse impacts related to police services would occur.

5.7.4 SCHOOL SERVICES

5.7.4.1 SCHOOL SERVICES REGULATORY SETTING

California State Assembly Bill 2926: School Facilities Act of 1986

In 1986, AB 2926 was enacted to authorize the levy of statutory fees on new residential and commercial/industrial development in order to pay for school facilities. AB 2926 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 statutory fees by developers serves as CEQA mitigation to satisfy the impact of development on school facilities.

California Senate Bill 50

The passage of SB 50 in 1998 defined the needs analysis process that is codified in Government Code Sections 65995.5 through 65998. Under the provisions of SB 50, school districts may collect fees to offset the costs associated with increasing school capacity as a result of development. Level I fees are assessed based upon the proposed square footage of residential, commercial/industrial, and/or parking structure uses. Level II fees require the developer to provide one-half of the costs of accommodating students in new schools, and the state provides the other half. Level III fees require the developer to pay the full cost of accommodating the students in new schools and are implemented at the time the funds available from Proposition 1A (approved by the voters in 1998) are expended. School districts must demonstrate to the state their long-term facilities needs and costs based on long-term population growth in order to qualify for this source of funding.

City of Tustin General Plan

The City's General Plan Land Use Element contains the following goals and policies related to school services.

Goal 8: **Ensure that necessary public facilities and services should be available to accommodate development proposed on the Land Use Policy Map.**

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.

Goal 9: **Continue to provide for a planned community in East Tustin compatible with the land use characteristics of the local area and sensitive to the natural environment.**

Policy 9.2: Provide for supporting land uses in East Tustin, including neighborhood commercial centers, park and recreational facilities, and schools, to serve the residential community.

East Tustin Specific Plan

School services are discussed within Section 2.1, *Land Use*, and Section 2.10, *Schools*. The ETSP is within the boundaries of the Tustin Unified School District (TUSD). TUSD determined the ETSP would require additional school facilities as well as use of some of the existing school facilities within the District. The ETSP's Land Use Plan anticipated three elementary schools and one intermediate school to be distributed throughout the ETSP area based on full buildout. However, the ETSP did not include precise locations and size of future school sites as demand for schools is dependent on the location, rate, and amount of buildout.

Goal: Provide school facilities that meet the needs of the new community.

Objectives: Work with the School District to determine the number, size, and location of elementary schools, intermediate schools and high school.

Combine school and public park sites where appropriate to optimize play area efficiency and minimize maintenance costs.

5.7.4.2 SCHOOL SERVICES ENVIRONMENTAL SETTING

The Project site is located within the Tustin Unified School District (TUSD) boundary which includes the City of Tustin, portions of the City of Irvine and portions of unincorporated areas of Orange County. TUSD has a total of 29 schools including: 16 elementary schools, two Kindergarten through 8TH grade schools, one Kindergarten through 12TH grade online school, four middle schools, one 6TH grade through 12TH grade academy, four high schools, and one adult education school.

According to the data from California Department of Education, TUSD has an enrollment of 21,830 students in the 2022/2023 school year (California Department of Education, 2024). The Project site is in the attendance areas of Tustin Ranch Elementary School (12950 Robinson Drive), which is approximately 1.3 linear miles from the Project site; Pioneer Middle School (2700 Pioneer Road), which is approximately 3.1 linear miles from the Project site; and Beckman High School (3588 Bryan Avenue), which is approximately 1.2 linear miles from the Project site (PowerSchool, 2024). Table 5.7-3 shows the total capacity, the 2022-2023 school year enrollments, and the remaining capacity of the schools that would serve students residing on the Project site. As shown on Table 5.7-3, Tustin Ranch Elementary School and Beckman High School do not have remaining capacity to serve additional students while Pioneer Middle School has remaining capacity to serve approximately 224 additional students.

Table 5.7-3: Existing School Capacity of Schools Serving the Project Site

School	2023/2024 Capacity	2023/2024 Enrollment	Remaining Capacity
Tustin Ranch Elementary School (K-5)	500	530	-75
Pioneer Middle School (6-8)	1,187	941	224
Beckman High School (9-12)	2,623	2,711	-76
Total	**4,310**	**4,182**	**73**

Source: (Special District Financing & Administration, April 2024)

5.7.4.3 SCHOOL SERVICES THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for school services.

5.7.4.4 SCHOOL SERVICES METHODOLOGY

The potential impacts related to school services were evaluated based on the ability of existing and planned schools to accommodate the student population that would be generated by the proposed Project. Specifically, impacts on schools are determined by analyzing the estimated increase in student population, as a result of Project build out, and comparing the increase to the capacity of schools that would serve the Project site to determine whether new or altered facilities would be required, the construction of which could result in adverse environmental effects.

As described in the TUSD Fee Justification Report for Residential and Commercial/Industrial Development, school districts anticipate the number of students that would be generated by new residential development to plan for needed facilities. The generation rates used by the TUSD are listed in Table 5.7-4.

Table 5.7-4: Tustin Unified School District Student Generation Rates

School Type	Generation Rate (All Dwelling Types)
Elementary School (K–5)	0.1602
Intermediate School (6–8)	0.0906
High School (9–12)	0.1208

Source: (Special District Financing & Administration, April 2024)

5.7.4.5 SCHOOL SERVICE ENVIRONMENTAL IMPACTS

IMPACT PS-3 THE PROJECT WOULD NOT RESULT IN SUBSTANTIAL ADVERSE PHYSICAL IMPACTS ASSOCIATED WITH THE PROVISION OF NEW OR PHYSICALLY ALTERED SCHOOL FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL IMPACTS.

Less than Significant Impact. The proposed Project is a rezone within The Market Place site. A specific development is not proposed as part of this Project. The Project site does not currently support residential uses. However, the development that could occur from future buildout of the proposed housing zone is 900 dwelling units and 13,032 SF of nonresidential uses. Future buildout of the Project would provide housing for families that may have school children. As shown in Table 5.7-5, based on the TUSD student generation rates, the proposed Project would result in 150 elementary students, 81 intermediate students, and 125 high school students, which would total 335 students at Project buildout. The student population would account for approximately 14 percent of the total 2,592 residents at full occupancy.

Table 5.7-5: Students at Project Buildout

School Type	Generation Rate (All Dwelling Types)	Dwelling Units	Project Generated Students
Elementary School (K–5)	0.1602	900	144
Intermediate School (6–8)	0.0906	900	82
High School (9–12)	0.1208	900	109
		Total Students	**335**

Source: (Special District Financing & Administration, April 2024)

As shown in Table 5.7-6, at buildout of the proposed Project, Tustin Ranch Elementary School and Beckman High School would be over-capacity and additional or expanded facilities may be needed, while Pioneer Middle School retains additional capacity for future students. A service letter was sent to TUSD requesting information regarding the District's ability to service the Project. On April 5, 2024, Tom Rizzuti, Director of Facilities and Planning, responded stating TUSD has no current plans to build new schools in the District. Additionally, the response stated that the District reserves the right to send students generated by the Project to other schools in the District if space is not available at the current schools of attendance. Thus, although two of the schools serving the Project site are over capacity, the District could send students generated by the Project to other schools within the District that have capacity to accommodate additional students.

Table 5.7-6: Remaining School Capacity with Buildout of the Proposed Project

School	2023/2024 Capacity	2023/2024 Enrollment	Remaining Capacity	Project Generated Students	Remaining Capacity with Project
Tustin Ranch Elementary School (K-5)	500	530	-75	144	-219
Pioneer Middle School (6-8)	1,187	941	224	82	142
Beckman High School (9-12)	2,623	2,711	-76	109	-185

Source: (Special District Financing & Administration, April 2024) (California Department of Education, 2024)

As described within the Regulatory Setting, the need for additional school facilities is addressed through compliance with school impact fee assessment. SB 50 (Chapter 407 of Statutes of 1998) sets forth a state school facilities construction program that includes restrictions on a local jurisdiction's ability to condition a project on mitigation of a project's impacts on school facilities in excess of fees set forth in the Government Code. These fees are collected by school districts at the time of issuance of building permits for commercial, industrial, and residential projects. The existing TUSD development impact fee is $4.08 per square foot for all new residential development, and $0.66 per square foot for new commercial development. Effective June 21, 2024, the development impact fee for residential development will be %5,17 per square foot and $0.48 per square foot for commercial development (Tustin Unified School District, 2024). Pursuant to Government Code Section 65995, applicants pay developer fees to the appropriate school districts at the time building permits are issued; and payment of the adopted fees provides full and complete mitigation of school impacts. As a result, impacts related to school facilities would be less than significant with the Government Code required fee payments.

5.7.4.6 SCHOOL SERVICES CUMULATIVE IMPACTS

The geographic context for cumulative impacts to schools is the TUSD boundaries. The proposed Project and other development within TUSD could generate additional students resulting in the need to expand or construct new schools. As described above, at buildout, the proposed Project could generate approximately 335 additional students. Some of these students would be accommodated by the existing schools with additional capacity available for cumulative projects. However, some students would be transferred by the District into other schools within TUSD that have additional capacity.

The attendance boundaries of Tustin Ranch Elementary, Pioneer Middle School, and Beckman High School include areas anticipating several residential development projects that are anticipated to generate additional students within the attendance boundaries of these schools. Thus, the proposed Project in combination with related projects would result in the exceedance of capacity at a minimum of two school facilities. Thus, Tustin Ranch Elementary and Pioneer Middle School may be over capacity with implementation of the proposed Project in combination with related projects.

However, as described above, the state provided authority for school districts to assess impact fees for both residential and non-residential development projects. Fees collected in accordance with Government Code Section 65995(b) allow TUSD to plan and construct for future growth. Furthermore, the payment of those fees constitutes full mitigation for the impacts generated by new development, per Government Code Section 65995, which would reduce potential impacts related to the Project's cumulative school service impacts to a less than significant level.

5.7.4.7 SCHOOL SERVICES EXISTING STANDARD CONDITIONS AND PLANS, PROGRAMS OR POLICIES

- Government Code Section 65995(b)

5.7.4.8 SCHOOL SERVICES LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impact PS-3 would be less than significant.

5.7.4.9 SCHOOL SERVICES MITIGATION MEASURES

No mitigation measures are required.

5.7.4.10 SCHOOL SERVICES LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant unavoidable adverse impacts related to school services would occur.

5.7.5 LIBRARY SERVICES

5.7.5.1 LIBRARY SERVICES REGULATORY SETTING

There are no federal, state, or local regulations related to library services.

5.7.5.2 LIBRARY SERVICES ENVIRONMENTAL SETTING

The Orange County Public Library (OCPL) provides library services to the City, including the Project site. OCPL has 33 branch libraries in 24 incorporated cities and unincorporated areas of Orange County and has a system-wide collection of approximately 2.5 million items (Orange County Public Libraries, 2020). The City of Tustin has one branch library operated by OCPL: the Tustin Library, located at 345 East Main Street, approximately 1.8 miles northwest of the Project site.

The Tustin Library branch has amenities such as public computers with internet access, a Memory Lab for library users to digitize their own documents, a local history collection featuring books specific to the Tustin community and surrounding area and OC Read. OC Read is a program designed to support adult learners to further their work, family, and personal goals.

OCPL also operates the Katie Wheeler Branch Library at 13109 Old Myford Rd, Irvine, which is located approximately 0.5 miles from the Project site. The Katie Wheeler Branch has amenities such as public computers, a book store, study rooms, free public wi-fi and restored historic structures.

OCPL has a service standard of 0.2 SF of library facility per capita for the purpose of projecting the need for additional library services (Orange County, 2020).

5.7.5.3 LIBRARY SERVICES THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to result in substantial adverse physical impacts associated with the provision of a new or physically altered library facility, 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.

5.7.5.4 LIBRARY SERVICES METHODOLOGY

The potential impacts related to library services were evaluated based on the ability of existing and planned libraries to accommodate the population that would be generated by the proposed Project. Specifically, impacts on libraries are determined by identifying the extent to which the Project would increase demand for services and analyzing the estimated increase in capacity of libraries that would serve the Project site to determine whether new or altered facilities would be required, the construction of which could result in adverse environmental effects.

The potential impacts related to libraries are considered in the context of the capacity and use of existing libraries. Due to the wide availability of information online, library usage has been declining in recent years and library service needs are changing with increasing resources being available online and the availability of high-speed internet services. As a result, library service standards (e.g., a certain number of volumes or SF of building space per thousand residents) are no longer appropriate when assessing the needs of a municipal library. A more appropriate standard is related to the physical usage of the library facility in relation to its physical capacity.

Commercial and employment-generating land uses do not typically generate a demand for library services. As such, the analysis of impacts on library services is based on the number of residents generated by the proposed Project and their anticipated usage of library facilities.

5.7.5.5 LIBRARY SERVICES ENVIRONMENTAL IMPACTS

IMPACT PS-4 THE PROJECT WOULD NOT RESULT IN SUBSTANTIAL ADVERSE PHYSICAL IMPACTS ASSOCIATED WITH THE PROVISION OF NEW OR PHYSICALLY ALTERED LIBRARY FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL IMPACTS.

Less than Significant Impact. As described previously, the proposed Project would allow for the development of up to 900 residential units on the Project site. As described in Chapter 5.06, *Population and Housing*, buildout of the Project could result in an additional 2,592 residents in the City. This increase in population would increase the demand for library services in the City. Based on OCPL's service standards of 0.2 square feet of library space per capita, the Project would require approximately 518 SF of library space. Funding for OCPL services is provided through County property taxes dedicated to the library. These funds would be used to upgrade and expand existing facilities, as needed (The Davis Company, 2010). Project impacts are anticipated to be adequately funded by an increase in tax revenue, over an extended period of time, relative to the increase in development intensity. Therefore, future buildout of the proposed Project would not result in the need for new or physically altered library facilities, the construction of which could cause significant environmental impacts. Therefore, impacts to library services would be less than significant.

5.7.5.6 LIBRARY SERVICES CUMULATIVE IMPACTS

The geographic scope for cumulative library services is the OCPL service area. Development of the proposed Project and cumulative projects would proportionally contribute to property taxes, a portion of which would be dedicated to OCPL services. Cumulative projects could introduce residents into OCPL's service area and increase demand for library services. However, all projects in the County would contribute towards County property taxes that fund OCPL services throughout the County. These funds would be utilized to upgrade and expand existing and/or planned library facilities and resources, as needed. Further, should any new or altered facilities be required in the future, these facilities would be subject to a separate CEQA review. Therefore, impacts from cumulative impacts associated with library services would be less than significant.

5.7.5.7 LIBRARY SERVICES EXISTING STANDARD CONDITIONS AND PLANS, PROGRAMS OR POLICIES

None.

5.7.5.8 LIBRARY SERVICES LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impact PS-4 would be less than significant.

5.7.5.9 LIBRARY SERVICES MITIGATION MEASURES

No mitigation measures are required.

5.7.5.10 LIBRARY SERVICES LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant unavoidable adverse impacts related to library services would occur.

5.7.6 REFERENCES

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5.8 Recreation

5.8.1 INTRODUCTION

Pursuant to the requirements of CEQA, this section of the EIR analyzes whether the proposed Project would (1) increase the use of existing parks and recreational facilities, such that substantial physical deterioration or degradation of the facilities would occur or be accelerated, and/or (2) result in substantial adverse construction-related effects associated with the provision of new or physically altered parks and recreational facilities, whether on site or offsite. Information within this section is based on the following:

- *City of Tustin General Plan* (including 2021-2029 Housing Element), adopted November 2018 and updated October 2022.
- *Tustin City Code*.
- *East Tustin Specific Plan,* adopted March 1986 and updated November 1997.

New housing can result in substantial population growth and the need for additional park and recreation facilities. Because CEQA focuses on physical environmental effects, this section analyzes whether any physical changes resulting from an increase in demands for park and recreation facilities from the proposed Project could result in significant adverse environmental effects. Thus, an increase in use of parks and recreation facilities would not, by itself, be considered a physical change in the environment. However, physical changes in the environment resulting from the construction of new facilities or an expansion of existing facilities to accommodate the increased staff or equipment needs related to substantial physical deterioration could constitute a significant impact. The proposed Project has also been evaluated to determine its consistency with the City's zoning code provisions related to the provision of park and recreation facilities and the ETSP.

5.8.2 REGULATORY SETTING

5.8.2.1 Federal Regulations

There are no federal regulations related to recreation that are applicable to the Project.

5.8.2.2 State Regulations

Mitigation Fee Act

The California Mitigation Fee Act, Government Code Sections 66000, et seq., allows cities to establish fees to be imposed upon development projects for the purpose of mitigating the impact that the development projects have upon a city's ability to provide specified public facilities. To comply with the Mitigation Fee Act, a city must follow four primary requirements:

1. Make certain determinations regarding the purpose and use of a fee and establish a nexus or connection between a development project or class of project and the public improvement being financed with the fee;
2. Segregate fee revenue from the General Fund in order to avoid commingling of capital facilities fees and general funds;
3. For fees that have been in the possession of the city for five years or more and for which the dollars have not been spent or committed to a project the city must make findings each fiscal year describing the continuing need for the money; and
4. Refund any fees with interest for developer deposits for which the findings noted above cannot be made.

As described below, the City of Tustin has adopted a parkland dedication and/or in-lieu fee that is included in Tustin City Code Section 9331(d).

5.8.2.3 Local and Regional Regulations

General Plan

The City's General Plan Conservation, Open Space, and Recreation Element contains the following goals and policies related to recreation.

Goal 1: **Reduce air pollution through proper land use, transportation and energy use planning.**

Policy 1.4: Develop neighborhood parks near concentrations of residents to encourage pedestrian travel to the recreation facilities.

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.**

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.

Policy 14.2: Design new and renovated parks for convenient and accessible use by the disabled, elderly, and otherwise less mobile persons within the community.

Policy 14.5: Coordinate with the Tustin Unified School District and other public and quasi-public agencies for the maximum feasible use of public facilities to meet recreational needs.

Policy 14.6: Encourage all future public neighborhood and community parks in the City to be designed as joint-use facilities contiguous with public schools and sharing playfields, playgrounds, and other amenities wherever possible.

Policy 14.7: Require the incorporation and maintenance of open space areas which are located within and primarily benefit particular subdivisions to be a financial responsibility of the benefitting property owners.

Policy 14.8: Encourage and, where appropriate, require the inclusion of recreation facilities and open space within future residential, industrial and commercial developments.

Policy 14.12: Ensure that the City's laws and related implementation tools relating to park dedication and development (e.g., ordinances, regulations, in-lieu fee schedules, etc.) reflect current land and construction costs, and are, in fact, providing adequate park land and facilities concurrent with population growth.

Goal 17: **Operate and maintain existing and future parks and recreation facilities so they are safe, clean, and attractive to the public; and preserve, protect, and enhance both existing and potential natural recreation areas to ensure that long-term public investments and values are not unreasonably preempted, compromised, or prevented by neglect or short-term considerations.**

Policy 17.2: Require park designs (including landscape treatments, buildings, irrigation, etc.) that are durable, reasonably standardized, and economical to maintain.

Tustin City Code

Article 9, Chapter 3, Part 3, Section 9331(d) 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: (1) there is no public park or recreational facility required within the proposed subdivision; (2) the subdivision is less than 50 parcels; or (3) 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 that 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."

East Tustin Specific Plan

The Market Place is located within the East Tustin Specific Plan (ETSP). The overall land use concept for the ETSP is intended to provide a planned community that expands and enhances the existing amenities of the City. In order to accomplish this, the Plan allows a wide variety of residential product types, employment centers, commercial complexes, school facilities, parks, recreation and open space amenities; and a comprehensive vehicular circulation system. The following standards are applicable to the Project.

Section 2.8 – Parks: The specific park requirement for each residential project is based on the number of units constructed in each project and the persons per unit for each density category in each project (density assumptions provided in Section 2.8 of the ETSP: Estate 4.2, Low 3.4, Medium low 3.4, Medium 2.8, and Medium High 2.2 persons per unit). The ETSP defers to the City's Park Ordinance that specifies for each 1,000 persons, three acres of parkland shall be dedicated, and/or an equivalent value of park improvements shall be constructed, and/or in lieu fees shall be paid (hereafter referred to as the "park requirements"). Where park dedication acreage is more than required on any project and/or sector, the excess acreage may be used as credit for other residential development within the ETSP.

Per the ETSP, there are three types of parks to be located within the ETSP area to meet these park requirements: community park, public neighborhood park, and private neighborhood park. These types constitute a three-tiered recreation system, each serving a particular category of recreation need in the community. Fifty percent of the park requirements shall be allocated to community parks and 50 percent shall be allocated to neighborhood parks. Neighborhood parks shall be allocated between public and private parks, provided that private parks do not exceed 25 percent of the total park requirement. For statistical purposes, in this Specific Plan, it is assumed that private neighborhood parks provide 25 percent of the total park requirement (the maximum allowed).

The following goals and objectives are included in the ETSP and related to the Project.

Goal: Create a Specific Plan which includes a mix of residential, commercial, employment, and recreational opportunities.

Objectives:

- Plan for commercial uses to serve the needs of the community.

- The residential housing mix should provide for a broad range of densities from estate to medium high; provide flexibility to incorporate a variety of housing types to meet housing demands; provide opportunities for affordable housing in both owner occupied and rental housing; and provide housing opportunities for families to move up to more traditional housing types.
- Plan for a mixed use area with freeway and arterial exposure so as to maximize the opportunity to develop viable and marketable commercial retail and hotel/motel uses and also maintain flexibility to provide other non-residential, non-retail business-related uses in the event that the entire mixed use area is too large to accommodate viable commercial retail uses.
- Plan for adequate park and recreational facilities for the new community.
- Plan for neighborhood commercial centers to conveniently serve surrounding residents. This is especially important in the northern area. Locate these facilities to maximize access and identity.

Goal: Create a system of both public and private recreation and open space which meet the needs of the new community.

Objectives:

- The Plan should incorporate a high quality golf course: not City owned, but open to the public.
- The Plan should recognize the study area for Peters Canyon Regional Park as well as recognize the regional trail system for Peters Canyon Wash.
- Plan for public park sites in combination with school sites where appropriate.
- The Plan should consider Peters Canyon Wash as both a potential recreational amenity as well as a flood control and drainage facility.
- If feasible, locate a park site as part of the Regional Park System, for passive recreational activities at Lower Peters Canyon Reservoir once other higher park priorities can be achieved within the overall park allocation for the planning area.
- Equestrian trails should not intrude into existing and proposed residential areas.
- If there is a choice in number and types of community parks, the following is an order of priority related to park uses: 1) active; 2) cultural; and, 3) passive.

5.8.3 ENVIRONMENTAL SETTING

According to the City's General Plan, in 2011, the City had 113 acres of existing local and community parks, but needed an additional 114 acres to serve its population based on a standard of 3 acres per 1,000 persons and the January 2011 City population of 75,781 (City of Tustin, 2018). As of March 2024, the City of Tustin has 183.2 acres[1] of parkland (C. Clanton, personal communication, March 18, 2024). As discussed in Section 5.10, *Population and Housing,* the City had a population of 77,558 in 2023. Therefore, the City has approximately 2.36 acres of public park and/or recreational space per 1,000 residents. Thus, the City of Tustin is currently parkland deficient and is not meeting its City standard of three acres of parkland per 1,000 residents.

There are no existing parks within the Project site. The closest existing park and recreation facilities to the Project site (within 2 miles) in the City of Tustin are listed in Table 5.8-1. As shown, the City currently has 11 existing parks that provide 98.7 acres of parkland within 2 miles of the Project site.

[1] Note: This total includes Linear Park at Tustin Legacy which has not yet been constructed, but has been set aside to be developed in the future.

Table 5.8-1: Tustin Park Facilities within 2 Miles of the Project Site

Park Name and Address	Amenities	Park Acreage	Distance from Project Site	Travel Time from Project Site[1]
Laurel Glen Park 13301 Myford Road Tustin, CA 92780	ADA Accessible, Large Turf Area, Parcourse, Parking, Picnic Areas, Picnic Tables, Playground, and Restrooms	4.0 acres	0.5 miles	Walking: 13 minutes Driving: 4 minutes
Camino Real Park 13602 Parkcenter Lane Tustin, CA 92782	ADA Accessible, Basketball Courts (2 1/2 Courts), BBQs, Chairs, Large Turf Area, Parking, Picnic Areas, Picnic Tables (5 Tables), Playground, Restrooms, and water	4.8 acres	0.68 mile	Walking: 21 minutes Driving: 5 minutes
Heritage Park 2350 Kinsman Circle Tustin, CA 92782	ADA Accessible, Basketball Courts (4 1/2 Courts), BBQs, Courtside Team Benches, Large Turf Area, Parking, Picnic Areas, Picnic Tables (12 Tables), Playground, Restrooms, Roller Hockey Rink (7' x 30'), Tables, and a walking trail	5.0 acres	0.72 mile	Walking: 24 minutes Driving: 5 minutes
Tustin Sports Park 12850 Robinson Drive Tustin, CA 92782	ADA Accessible, Baseball / Softball Diamonds (3), Basketball Courts (4 1/2 Courts), BBQs, Concessions, Courtside Team Benches, Large Turf Area, Multi-Use Play Fields (2), Parking (224 Cars), Picnic Shelter, Picnic Tables (8 Tables), Playground, Restrooms, Soccer Field, Tables, Tennis Courts (6), and a Walking Trail	22 acres	0.82 mile	Walking: 29 minutes Driving: 5 minutes
Magnolia Tree Park 2274 Fig Tree Drive Tustin, CA 92780	ADA Accessible, Basketball Court (1/2 Court), BBQs, Large Turf Area, Parking, Picnic Areas, Picnic Shelter, Picnic Tables (5 Tables), Playground, Restrooms, and Tennis Courts (3 Lighted Courts)	5.2 acres	1.08 miles	Walking: 37 minutes Driving: 5 minutes
Pine Tree Park 1402 Bryan Avenue Tustin, CA 92780	ADA Accessible, BBQs, Large Turf Area, Parcourse, Parking, Picnic Areas, Picnic Shelter, Picnic Tables (5 Tables), Playground, Restrooms, Sand Volleyball Court, and a Walking Trail	4.3 acres	1.4 miles	Walking: 37 minutes Driving: 6 minutes
Tustin Sports Park 12850 Robinson Drive Tustin, CA 92782	ADA Accessible, Baseball / Softball Diamonds (3), Basketball Courts (4.5 Courts), BBQs, Concessions, Courtside Team Benches, Large Turf Area, Multi-Use Play Fields (2), Parking, Picnic Shelter, Picnic Tables (8), Playground, Restrooms, Soccer Field, Tennis Courts (6), and a Walking Trail	22 acres	1.2 miles	Walking: 21 minutes Driving: 4 minutes
Frontier Park 1400 Mitchell Avenue Tustin, CA 92780	ADA Accessible, BBQs, Disc Golf Course, Large Turf Area, Parking, Picnic Areas, Picnic Shelter, Picnic	5.5 acres	1.9 miles,	Walking 44 minutes Driving: 5 minutes

Park Name and Address	Amenities	Park Acreage	Distance from Project Site	Travel Time from Project Site[1]
	Tables (3), Playground, Restrooms, Walking Trail, and Water Feature Play Area			
Centennial Park 14722 Devonshire Avenue Tustin, CA 92780	Basketball Courts (2.5), BBQs (5), Large Turf Area, Tree-Shaded Picnic Area, Tables (7), Playgrounds (4), Restrooms, and a Sand Volleyball Court	9 acres	2 miles	Walking 44 minutes Driving: 6 minutes
Citrus Ranch Park 2910 Portola Parkway Tustin, CA 92780	ADA Accessible, BBQs, Hilltop Gazebo, Large Turf Area, Lemon Tree Orchard, Nature Trail, Parking, Pavilion, Picnic Shelter, Picnic Tables (4), Playground, Restrooms, Trails	16.9 acres	2 miles	Walking 44 minutes Driving: 6 minutes

Notes: [1]Estimates per Google Maps
Source: (City of Tustin, 2019)

5.8.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a Project could have a significant effect if it were to:

REC-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.

REC-2 Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

5.8.5 METHODOLOGY

The analysis below considers the increase in use of parks and recreation facilities that would be generated by the proposed Project in relation to the ability of existing park and recreation facilities to accommodate the increased use. The analysis considers whether an increase in use would result in the substantial physical deterioration of existing recreational facilities, such as accelerated wear on sports facilities and fields, or in the need for new or expanded facilities.

The analysis uses a parkland-to-population ratio to measure demand for recreational facilities that is based upon the City's General Plan policy to attain three acres of park and recreation facilities per 1,000 residents. The EIR evaluates the amount of recreational use areas that would be required by the proposed Project and the extent of increased usage of existing parks and recreational facilities that might result in the substantial physical deterioration of existing recreational facilities.

5.8.6 ENVIRONMENTAL IMPACTS

IMPACT REC-1: THE PROJECT WOULD NOT 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.

Less than Significant.

The Project involves rezoning an 18-acre portion of the Project site to allow residential development on the Project site. No development is proposed as part of the Project. However, implementation of the proposed Project would permit the development of 900 residential units within the Project site. The proposed Project would not directly affect park and recreational facilities; however, it would increase the allowed residential density of the Project site, which in turn may result in an increased number of residents who would use the existing parks and would contribute to the cumulative demand for regional and local parks and recreational facilities and services in Tustin.

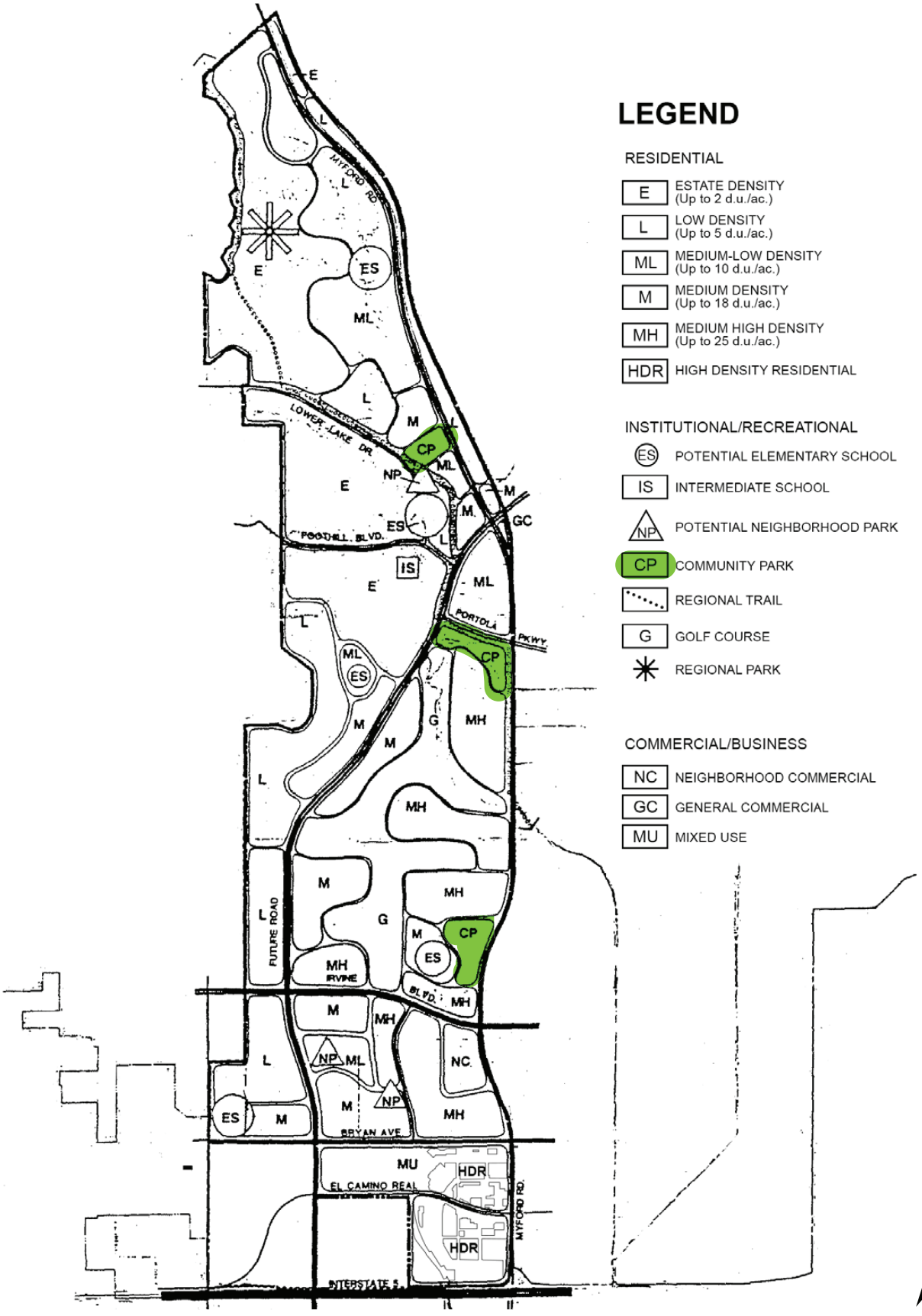
As described in Section 5.8.3 above, as of March 2024, the City had a total of 183.2 acres of parkland, or approximately 2.36 acres of parkland per 1,000 residents. Thus, the City is currently parkland deficient and is not meeting its City standard of 3 acres per 1,000 residents. As described in Section 5.6, *Population and Housing*, the Project is anticipated to result in 2,592 residents at full occupancy. This increase in residents could increase demand for park and recreational facilities. Using the City's standard of 3 acres per 1,000 residents, the proposed Project would result in a demand for approximately 7.8 acres of parkland to support the additional residents. Therefore, the proposed Project would exacerbate the City's parkland deficiency. However, future implementation of development projects would be required to determine their fair share of park facilities and either provide adequate park facilities or pay in lieu fees in accordance with Tustin City Code Section 9331 (PPP R-1).

Section 2.8 of the ETSP specifies percentage allocations to various parkland categories. The ETSP standard for park space is that 50 percent of total required park space is implemented as community park and 50 percent is implemented as neighborhood park. No more than 25 percent of total required neighborhood park space shall be private (PPP R-2).

Community Park

Three community parks are shown on the ETSP Land Use Plan (see Figure 5.8-1, below), and the acreages are identified on the ETSP Statistical Summary, although the actual size and configuration may vary. It is assumed that the entire park requirement for community parks will be fulfilled by land dedication and that the City will be responsible for all improvements and maintenance. However, the City may choose to grant some park credit for developer improvements to the community parks in accordance with the Park Ordinance.

ETSP Land Use Plan



The Market Place Rezone Project
City of Tustin

Figure 5.8-1

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Public Neighborhood Park

For the purposes of clarification and delineation, the Public Neighborhood Parks are conceptually located on the ETSP Land Use Plan and acreages are estimated on the ETSP Statistical Summary. The actual location, size and configuration may vary, subject to the criteria in the Park Ordinance. It is assumed that the entire park requirement for public neighborhood parks would be fulfilled by land dedication and that the City would be responsible for all improvements and maintenance. However, the City may choose to grant some park credit for developer improvement to the public neighborhood parks in accordance with the Park Ordinance.

Private Neighborhood Park

Private Neighborhood Parks are not shown on the ETSP Land Use Plan and Statistical Summary. They would be identified on future residential site plans. Private neighborhood parks would serve the residents of the development in which they are located and would be privately owned and maintained. Eligibility of private park land for the park requirement shall be based on the Park Ordinance criteria.

Additionally, as listed in Table 5.8-1, there are 98.7 acres of parkland within 2 miles of the Project site available for use by the proposed residents. Further, there is also an abundance of existing recreational facilities within the region, such as Peters Canyon Regional Park, Santiago Canyon, and Crystal Cove State Park, that would be available for use by future residents. Therefore, due to the limited increase of residents that would occur from implementation of the proposed Project and the amount of available park space within the vicinity of the Project site, future residents are not anticipated to increase the use of existing parks and recreation facilities such that substantial physical deterioration of such parks and facilities would occur. Therefore, impacts would be less than significant.

IMPACT REC-2: THE PROJECT WOULD NOT INCLUDE RECREATIONAL FACILITIES OR REQUIRE THE CONSTRUCTION OR EXPANSION OF RECREATIONAL FACILITIES WHICH MIGHT HAVE AN ADVERSE PHYSICAL EFFECT ON THE ENVIRONMENT.

Less than Significant.

As discussed above, the Project involves rezoning an 18-acre portion of the Project site to allow residential-only development. The Project does not include the construction or expansion of parks. As described above, future implementing developments may increase the population by approximately 2,592 persons resulting in the need for approximately 7.8 acres of parkland to serve the future population. However, future implementation of development projects would be required to determine park needs and to pay development fees to contribute to the construction or expansion of recreational facilities. Should new facilities be required as a result of new development within the Project site, these new developments would pay an impact fee to the City pursuant to Tustin City Code Section 9331 (PPP R-1). Any new or expanded facilities would be constructed by the City, since they are the responsible party that acquires, constructs, and maintains new parks and recreation areas. Thus, the Project would have less-than-significant impact on the construction or expansion of recreational facilities or services.

5.8.7 CUMULATIVE IMPACTS

The cumulative area of recreation impacts for the proposed Project includes the City of Tustin. As detailed previously, the City currently has approximately 2.36 acres of public park and/or recreational space per 1,000 residents which is below the City's parkland standard of 3 acres of parkland per 1,000 residents. Based on 3 acres of public park and/or recreational space per 1,000 residents, buildout of the proposed Project results in a need for approximately 7.8 acres of parkland to serve the 2,592 new residents of the Project site. However, future implementing development projects would be required to determine their fair

share of park facilities and either provide adequate park facilities or pay in lieu fees in accordance with Tustin City Code Section 9331 (PPP R-1). Although there is currently a deficit of City park space, all future proposed Project and cumulative projects would be required to provide park and recreational facilities and/or pay in-lieu fees as required by the Tustin City Code, as described in the General Plan and City Municipal Code. Therefore, the proposed Project's impacts related to the amount of parkland within the City would not result in a cumulatively considerable impact related to parks and recreational facilities.

5.8.8 EXISTING REGULATIONS AND PLANS, PROGRAMS, OR POLICIES

Existing Regulations

California Code Sections 66000 (Mitigation Fee Act)

Plans, Programs, or Policies

PPP R-1: City Park Requirements. Tustin City Code Section 9331 – Dedications, Reservations and Development Fees. All future development shall be consistent with this standard.

PPP R-2: ETSP Park Requirements. Section 2.8 of the ETSP specifies percentage allocations to various parkland categories. The ETSP standard for park space is that 50 percent of total required park space is implemented as community park and 50 percent is implemented as neighborhood park. No more than 25 percent of total required neighborhood park space shall be private. All future development shall be consistent with this standard.

5.8.9 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impacts REC-1 and REC-2 would be less than significant.

5.8.10 MITIGATION MEASURES

No mitigation measures are required for the proposed Project.

5.8.11 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant unavoidable adverse impacts related to recreation would occur.

5.8.12 REFERENCES

City of Tustin. (1997). *East Tustin Specific Plan.*

City of Tustin. (2018). *City of Tustin General Plan.*

City of Tustin. (2019). *Parks Information.* Retrieved from Tustin Parks and Recreation: https://www.tustinca.org/715/Parks-Information

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5.9 Transportation

5.9.1 INTRODUCTION

This section addresses potential transportation impacts that may result from implementation of the Project. The following discussion addresses the existing transportation conditions in the Project area, identifies applicable regulations, evaluates the proposed Project's consistency with applicable goals and policies, identifies and analyzes environmental impacts, and, if necessary, recommends measures to reduce or avoid adverse impacts anticipated from implementation of the proposed Project. This analysis has been prepared in accordance with CEQA requirements to evaluate potential transportation impacts based on vehicle miles traveled (VMT). Information within this section is based on the following:

- *City of Tustin General Plan* (including 2021-2029 Housing Element), adopted November 2018 and updated October 2022.
- *East Tustin Specific Plan,* adopted March 1986 and updated November 1997.
- *Tustin City Code.*
- *Connect SoCal 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS), adopted April 2024.
- *The Tustin Market Place Project Vehicle Miles Traveled (VMT) Analysis*, EPD Solutions, April 2024, Appendix D.
- *City of Tustin VMT Analysis Guidelines,* March 2024.

Transportation Terminology

- **Major:** A six- to nine-lane divided roadway with no on-street parking, with a typical right-of-way width of 120 to 144 feet and a curb-to-curb pavement width of 102 to 126 feet. Major arterials typically carry a significant volume of regional traffic. When the traffic volumes warrant a major arterial highway in areas where a full 120 to 144 feet of right-of-way is not feasible due to existing structures or topography, a lesser right-of-way (no less than 100 feet) can be used to accommodate a six-lane facility. This is referred to as a "modified major" on the City Arterial Highway Plan.
- **Primary:** A four-lane divided roadway, with a typical right-of-way width of 100 feet and curb-to-curb pavement width of 84 feet. Regional traffic will typically be less than for a major arterial, but primary arterials form an important component of the regional transportation system. When the traffic volumes warrant a primary arterial highway in areas where a full 100 feet of right-of-way is not feasible due to existing structures or topography, a lesser right-of-way (no less than 80 feet) can be used to accommodate a four-lane facility. This is referred to as a "modified primary" on the City Arterial Highway Plan.
- **Secondary:** A four-lane undivided roadway, with a typical right-of-way width of 80 feet and a curb-to-curb pavement width of 64 feet. These roadways serve as collectors, distributing traffic between local streets, and major and primary arterials.
- **Collector:** A two-lane undivided roadway, with a minimum right-of-way width of 66 feet and a minimum curb-to-curb width of 50 feet. The width may be increased to accommodate roadway features such as bicycle lanes, on-street parking, and turn lanes. At LOS "C," this road type accommodates up to approximately 10,000 vehicle trips per day. This road functions as a collector facility, however it tends to move traffic between two arterials rather than between local streets, it has been added to the City's arterial highway system because it provides network continuity and is regionally significant and may serve through traffic demand where projected volumes do not warrant a higher classification such as Secondary.

- **Divided Collector:** A two-lane, two-way divided roadway, with a minimum right-of-way width of 80 feet and a minimum curb-to-curb width of 56 feet including on-street parking and bike lanes. The width may be decreased when no parking spaces are provided or increased to accommodate roadway features such as turn lanes. At LOS "C," this road type accommodates up to approximately 15,000 vehicle trips per day. Similar to Collectors, this road functions as a collector facility, however it tends to move traffic between two arterials rather than between local streets, it has been added to the City's arterial highway system because it provides network continuity and is regionally significant and may serve through traffic demand where projected volumes do not warrant a higher classification such as Secondary.
- **Class I Bike Path or Bike Trail.** Provides a completely separated right-of-way designated for the exclusive use of bicycles and pedestrians; crossflows with motorized vehicles minimized. Minimum width for Class I (two-way) is 8 feet, with a desired width of 10-12 feet, and minimum shoulder width of 2 feet on each side. Minimum width for Class I (one-way) is 5 feet, with a minimum shoulder width of 2 feet on each side.
- **Class II Bike Lane.** Provides a restricted right-of-way on a roadway's shoulder designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited; vehicle parking and crossflows by pedestrians and motorists permitted. Vehicle parking in a Class II bike lane is not desirable and should be discouraged and/or restricted where possible. Additional lane width (12 feet minimum and 13 feet desirable) shall be required if on-street parking is permitted. The typical width is 8 feet. A reduction in width to allow for restriping of an existing roadway or for added turning lanes may be permitted. In such cases, a 5-foot width, or gutter width plus 3 feet, whichever is greater, is the minimum width.
- **Class III Bikeway.** Provides for shared use of roadway facilities. These bikeways share the street with motor vehicles or share the sidewalk with pedestrians. In both conditions, bicycle use is a secondary function of the pavement.
- **Traffic Analysis Zone (TAZ).** Traffic Analysis Zone (TAZ) refers to the geographic unit used for traffic analysis within transportation planning models, such as the Orange County Transportation Analysis Model (OCTAM) VMT Screening Tool model. A TAZ is a special area delineated by state and/or local transportation officials for tabulating traffic-related data especially journey-to-work and place-of-work statistics. A TAZ usually consists of one or more census blocks, block groups, or census tracts.
- **Transit Priority Area (TPA).** As defined by Senate Bill (SB) 743, a Transit Priority Area (TPA) is an area located within a one-half mile of an existing or planned "major transit stop" or an existing stop along a "high quality transit corridor." Per Public Resources Code, Section 21064.3, "'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods." Per Public Resources Code, Section 21155, a high-quality transit corridor means a "corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours."
- **Vehicle Miles Traveled (VMT).** VMT is defined as the total miles traveled by vehicles (within a transportation network).
- **Low VMT Area.** The City of Tustin defines low VMT areas as traffic analysis zones (TAZs) with a total daily VMT per capita or VMT per employee that is less than the base level for the city.

5.9.2 REGULATORY SETTING

5.9.2.1 State Regulations

Senate Bill 743 (Steinberg, 2013)

On September 27, 2013, Senate Bill 743 (SB 743) was signed into State law. The California legislature found that with the adoption of the Sustainable Communities and Climate Protection Act of 2008 (SB 375), the State had signaled its commitment to encourage land use and transportation planning decisions and investments that reduce vehicle miles traveled (VMT) and thereby contribute to the reduction of greenhouse gas (GHG) emissions, as required by the California Global Warming Solutions Act of 2006 (AB 32).

SB 743 requires the California Governor's Office of Planning and Research to amend the State CEQA Guidelines to provide an alternative to level of service (LOS) as the metric for evaluating transportation impacts under CEQA. Particularly within areas served by transit, SB 743 requires the alternative criteria to promote the reduction of greenhouse gas emissions, development of multimodal transportation networks, and diversity of land uses. The alternative metric for transportation impacts detailed in the State CEQA Guidelines is vehicle miles traveled (VMT). Jurisdictions had until July 1, 2020, to adopt and begin implementing VMT thresholds for traffic analysis.

AB 1358: California Complete Streets Act

The California Complete Streets Act was implemented on January 1, 2011, which required circulation elements to address the transportation system from a multimodal perspective. The bill states that streets, roads, and highways must "meet the needs of all users…in a manner suitable to the rural, suburban, or urban context of the general plan." This bill requires a circulation element to plan for all modes of transportation where appropriate—including walking, biking, car travel, and transit. The Complete Streets Act also requires circulation elements to consider the multiple users of the transportation system, including children, adults, seniors, and people with disabilities.

California Fire Code

The California Fire Code sets requirements pertaining to fire safety and life safety, including for emergency access and evacuation (California Code of Regulations Title 24 Part 9). The California Fire Code is incorporated by reference in Article 8 Chapter 8100 of the Tustin City Code.

5.9.2.2 Local and Regional Regulations

Regional Transportation Plan/Sustainable Communities Strategy

The Southern California Association of Governments (SCAG) is the designated metropolitan planning organization for six Southern California counties: Ventura, Los Angeles, San Bernardino, Riverside, Orange, and Imperial. As the designated metropolitan planning organization, SCAG is mandated by the federal and State governments to prepare plans for regional transportation and air quality conformity. The most recent plan adopted by SCAG is the 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), also known as Connect SoCal, which was adopted in April 2024. The RTP/SCS integrates transportation planning with economic development and sustainability planning and aims to comply with State GHG emissions reduction goals, such as SB 375. With respect to transportation infrastructure, SCAG anticipates, in the RTP/SCS, that the six-county region will have to accommodate 20,909,000 residents by 2050 while also meeting the GHG emissions reduction targets set by the California Air Resources Board. SCAG is empowered by State law to assess regional housing needs and provide a specific allocation of

housing needs for all economic segments of the community for each of the region's counties and cities. In addition, SCAG has taken on the role of planning for regional growth management.

City of Tustin General Plan

The City's General Plan includes the following policies related to transportation in the Circulation Element and Growth Management Element:

Circulation Element

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.**

Policy 1.2: Develop and implement circulation system standards for roadway and intersection classifications, right-of-way width, pavement width, design speed, warrant requirements, capacity, maximum grades and associated features such as medians and bicycle lanes or trails that are adjacent or off-road.

Policy 1.3: Coordinate roadway improvements with applicable regional, state and federal transportation plans and proposals.

Policy 1.4: Develop and implement thresholds and performance standards for acceptable levels of service.

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.

Policy 1.11: Encourage new development which facilitates transit services, provides for non-vehicular circulation and minimizes vehicle miles traveled.

Policy 1.15: Ensure construction of existing roadways to planned widths, as new developments are constructed.

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.

GOAL 5: **Support development of a public transportation system that provides mobility to all City inhabitants and encourages use of public transportation as an alternative to automobile travel.**

Policy 5.2: Require new development to fund transit facilities, such as bus shelters and turn-outs, where deemed necessary to meet public needs arising in conjunction with development.

Policy 5.5: Promote new development that is designed in a manner which facilitates provision or expansion of transit service and provides non-automobile circulation within the development.

GOAL 6: **Increase the use of non-motorized modes of transportation.**

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.

Policy 6.2: Maintain existing pedestrian facilities and require new development to provide pedestrian walkways between developments, schools and public facilities.

Policy 6.8: Support retrofit installation of sidewalks in industrial districts and Planned Community Business Parks as development occurs.

Policy 6.14: Require new development to dedicate land and fund improvement of bicycle, pedestrian and equestrian facilities, where deemed necessary to meet public needs arising in conjunction with development.

GOAL 7: Provide for well-designed and convenient parking facilities.

Policy 7.1: Consolidate parking, where appropriate, to eliminate the number of ingress and egress points onto arterials.

Policy 7.2: Provide sufficient off-street parking for all land uses.

Growth Management Element

Goal 2: Ensure adequate transportation facilities are provided for existing and future inhabitants of the City.

Policy 2.1: Require that all new development pay its share of the street improvement costs associated with the development, including regional traffic mitigation.

East Tustin Specific Plan

The East Tustin Specific Plan (ETSP), Section 2.2, *Circulation,* includes the vehicular circulation system for the ETSP area. This section of the ETSP includes established arterial highway alignments and street cross section standards for each roadway classification type. The plan identifies Myford Road (now identified as Jamboree Road) as a major arterial, Bryan Avenue as a primary arterial, and El Camino Real as a secondary arterial roadway. Sidewalks are required for all roadway types per the ETSP street cross section standards.

5.9.3 ENVIRONMENTAL SETTING

The public roadway network serving the Project site includes the following roadways described below and listed in Table 5.9-1.

- **Myford Road** is a five-lane undivided roadway oriented in the northeast and southwest direction that extends from I-5 to Irvine Boulevard in the City of Tustin. In the City of Tustin General Plan, the specific designation for Myford Road is a secondary arterial; which includes an overcrossing of the I-5 Freeway. Although the overcrossing is not existing, it is still on the City's Circulation Element and right-of-way was reserved for its construction should the need for such a facility be established in the future. The sections of roadway north and south of the freeway are on the City's Arterial Highway Plan. Myford Road has sidewalks on both sides of the roadway, has no bike lanes, and has a posting of 35-40 miles per hour (mph). On-street parking is not permitted on either side of this roadway. South of El Camino Real, Myford Road is a two-lane undivided roadway that has a partial sidewalk.
- **El Camino Real** is a four-lane divided roadway with a vegetated center median that runs adjacent to I-5 from 1ST Street to just east of SR 261 and is designated as a secondary arterial within the Project site per the City of Tustin General Plan. The roadway is oriented in the northwest and southeast direction, has sidewalks on both sides, has no bike lanes, and has a posting of 35-40 mph. On-street parking is not permitted on either side of the roadway.
- **Bryan Avenue** is a four-lane divided roadway from Newport Avenue to Jeffery Road with sidewalks on both sides that is designated as a secondary arterial between Newport Avenue to Browning Avenue and a primary arterial between Browning Avenue to Jamboree Road in the City of Tustin General Plan.

Bryan Avenue is oriented in the northwest and southeast direction, has bike lanes, and has a posting of 35-45 mph. On-street parking is not permitted on either side of this roadway.

- **Jamboree Road** is an eight- to nine-lane divided roadway with a vegetated center median that runs from Highway 1 (Pacific Coast Highway) to Irvine Regional Park and is designated as a major arterial in the City of Tustin General Plan. The roadway has sidewalks on both sides. Jamboree Road is oriented in the northeast and southwest direction, has bike lanes in the City of Tustin north of El Camino Real, and has a posting of 40 mph. On-street parking is not permitted on either side of the roadway.
- **1-5 Freeway** is a 12-lane divided roadway oriented regionally in the north-south direction. The posted speed limit is 65 mph and it is classified as a freeway. On-street parking is not permitted along this roadway.

Table 5.9-1, *Existing Roadway Characteristics within Project Area*, shows the roadway characteristics of the roadways directly serving the Project site.

Table 5.9-1: Existing Roadway Characteristics within Project Area

Roadway	Designation	Number of Lanes Fronting Project Site	Sidewalks?	Bike Lane?
Myford Road (NE/SW)	Secondary	5-Lane Undivided.	Yes, both sides (Partial south of El Camino)	No
El Camino Real (W/E)	Secondary Arterial	4-Lane Divided.	Yes, both sides	No
Bryan Avenue (NW/SE)	Major Arterial	4-Lane Divided.	Yes, both sides	Yes
Jamboree Road (NE/SW)	Major Arterial	8-to 9-Lane Divided.	Yes, both sides	Yes
I-5 (N/S)	Freeway	12-Lane Divided	No	No

Existing Site Access

Vehicular access to the northern and southern portion of the Project site is currently provided via signalized driveways, West Drive and East Drive, and on El Camino Real. West Drive wraps around to the north and connects to Jamboree Road within the northeast portion of the site. Additional access is available via Myford Road, which provides access to the parking areas in the western portion of the Project site, south of El Camino Real.

Existing Transit Service

Public transit bus service for the City is provided by the Orange County Transportation Authority (OCTA). The Project site includes a bus stop at the intersection of Bryan Avenue and Myford Road for Route 79 with bus service every 30 minutes. Route 79 (Larwin Square) provides service from Newport Transportation Center, along Culver Boulevard, to Bryan Avenue, finally terminating at the commercial center located at East 1ST Street and Newport Avenue (Larwin Square).

The Metrolink Orange County Line and Inland Empire-Orange County commuter lines travel through Tustin, with stops at the Tustin Metrolink Station, located approximately 1.5 miles south of the Project site. In addition, passenger rail service is provided from two Amtrak depots in neighboring cities; Irvine to the east and Santa Ana to the west, which connects travelers to neighboring communities throughout Los Angeles and San Diego counties.

Existing Bicycle and Pedestrian Facilities

As shown in Table 5.9-1, there are several bike lanes on the public roadway network currently serving the Project site. Class II bicycle lanes currently exist along Bryan Avene and Jamboree Road (City of Tustin,

2018). Class II bike lanes provide a restricted right-of-way on a roadway's shoulder designated for the exclusive or semi-exclusive use of bicycles with thru travel by motor vehicles or pedestrians prohibited. Sidewalks currently exist on both sides of all roadways that border and transect the Project site. The Project site is highly urbanized and walkable, providing access to adjacent commercial and residential uses.

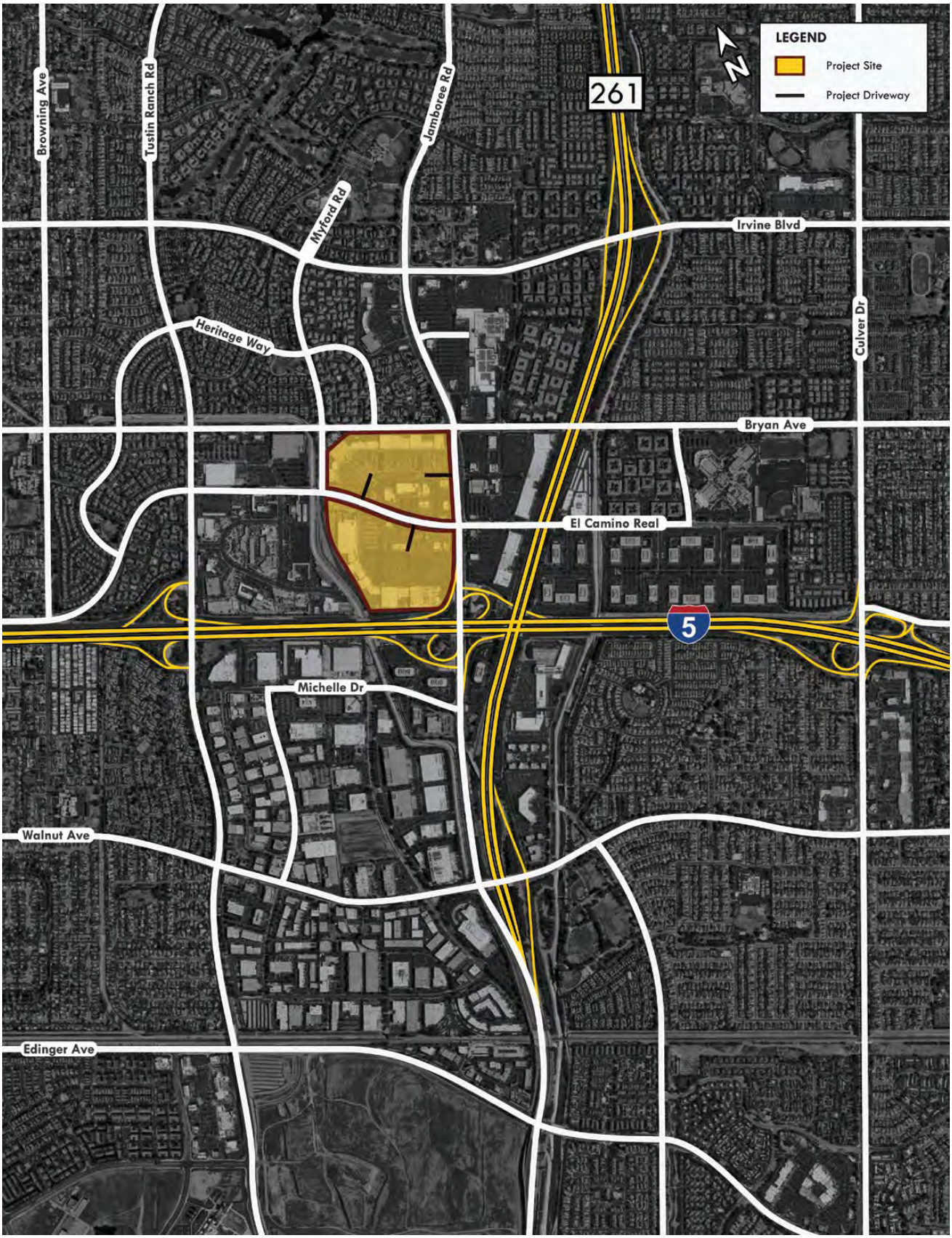
Existing VMT

As identified in Section 3.0, *Project Description*, the existing land uses that were modeled consist of The Market Place that is currently developed with 747,205 square feet (sf) of commercial business uses, including 57,456 sf of restaurant use, 23,662 sf of community center use, 24,483 sf of retail use, 5,559 sf of office use, and surface parking lots. The analysis was conducted using land use codes *High Turnover (Sit Down Restaurant), Strip Mall, General Office Building*, *Health Club,* and *Parking Lot*. Trip generation rates used in CalEEMod for the existing uses were based on the trip generation rate of 31,374 average daily trips (ADT).

Low vehicle miles traveled (VMT) generating areas are defined as traffic analysis zones (TAZs) with a total daily VMT per capita or VMT per employee that is less than the base level for the city. The Project is not located in a low VMT area per capita (residential); however, the Project site is located in a low VMT area per employee (nonresidential). The City of Tustin average city-wide VMT under the 2016 Base Model Year is 15.0 home-based VMT per capita. As detailed in Table 5.9-2, *Proposed Project Trip Generation*, in Section 5.9.6, *Environmental Impacts*, the Project site currently has a VMT of 8.9 per capita.

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Project Site Circulation



The Market Place Rezone Project
City of Tustin

Figure 5.9-1

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5.9.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a Project could have a significant effect if it were to:

TRA-1 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

TRA-2 Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b).

TRA-3 Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

TRA-4 Result in inadequate emergency access.

Vehicle Miles Traveled Significance Criteria

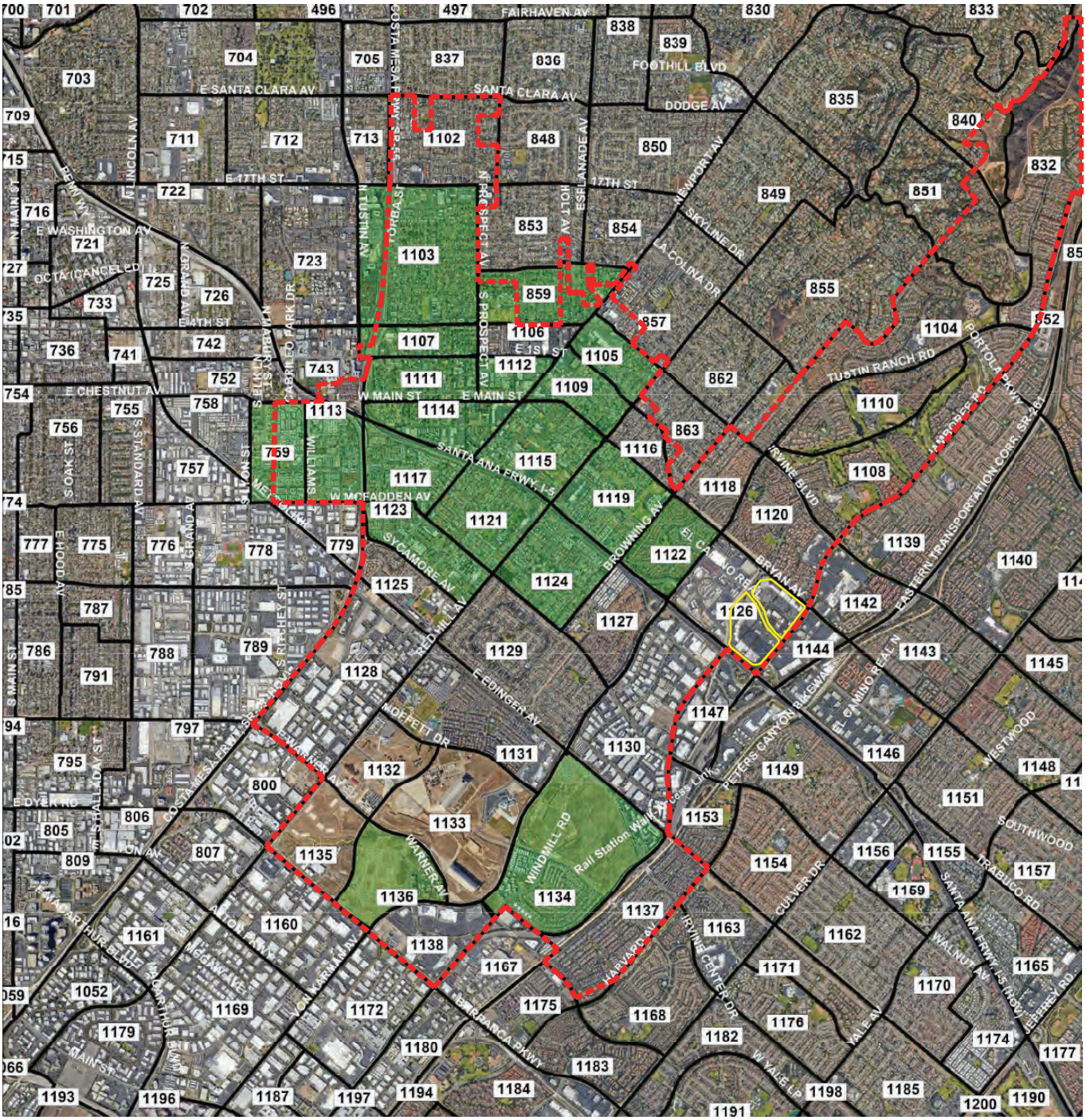
State CEQA Guidelines Section 15064.3(b)(1) provides that for land use projects:

> VMT traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within 0.5 mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.

The Project is located in the City of Tustin. The City's Guidelines provide the following screening thresholds to assess whether further VMT analysis is required. If a project meets one of the following criteria, then the VMT impact of the project would be considered less-than-significant and no further analysis of VMT would be required:

- Projects which consist of 100% affordable housing.
- Projects located within one half mile of qualifying transit. Qualifying transit is defined as follows:
    - Major transit stop is defined as a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. (Pub. Resources Code, § 21064.3)
    - High-quality transit corridor is defined as a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. (Pub. Resources Code, § 21155).
- Projects which propose local serving retail (retail projects less than 50,000 square feet) or other local serving uses. The types of projects considered local serving include K-12 schools, local parks, day care centers, gas stations, libraries, fire stations, and other local serving civic uses.
- Projects located in a low VMT generating area and are proposing a project similar to the conditions already constructed in the area. Low VMT generating areas are defined as traffic analysis zones (TAZs) with a total daily VMT per capita or VMT per employee that is less than the base level for the city.
- Projects which generate less than 500 daily vehicle trips.

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Legend:

= VMT/capita less than or qual to City of Tustin 2016 citywide average VMT/capita

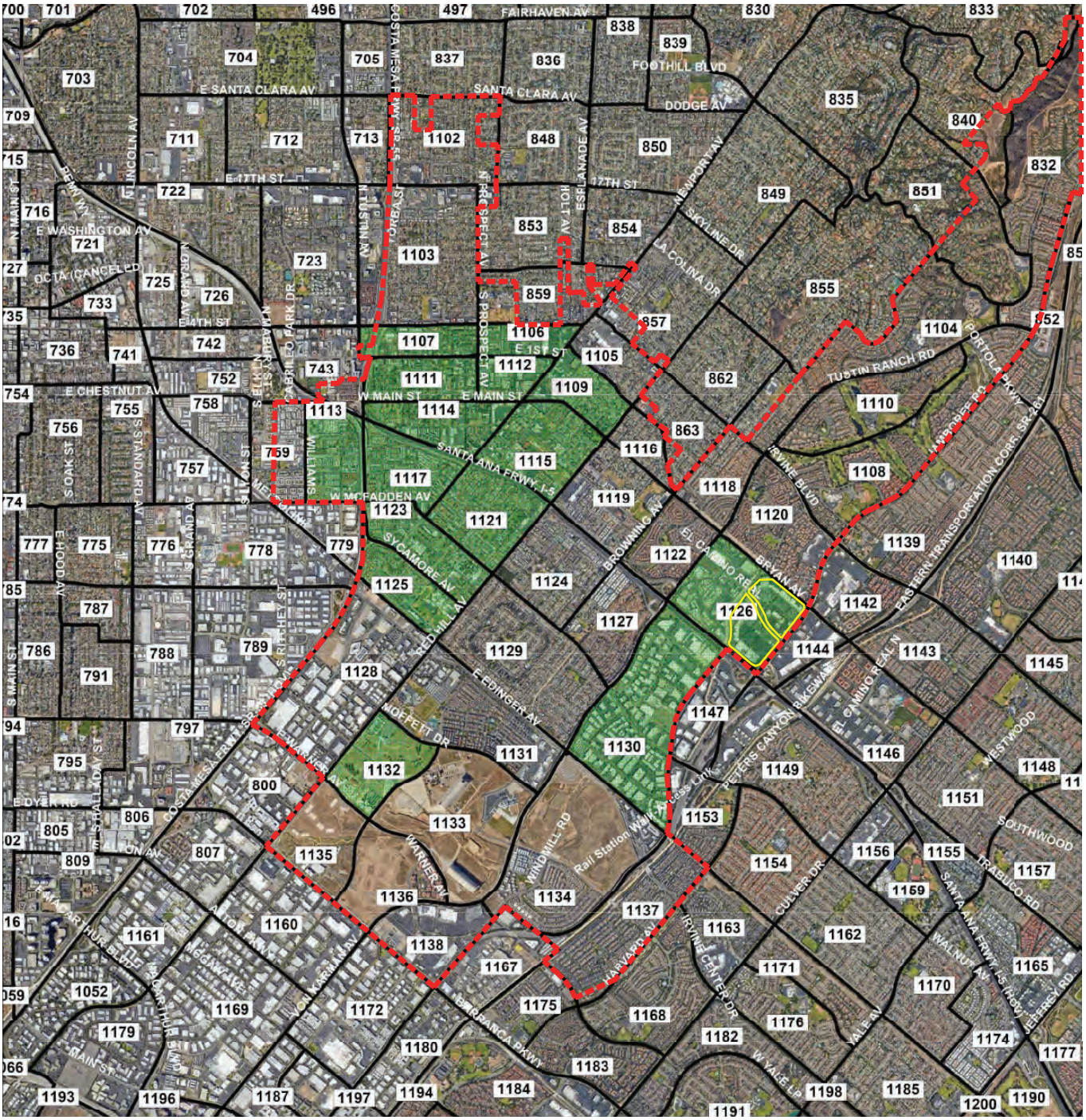
= City of Tustin Boundary

= Project Site

N

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VMT Per Employee



Legend:

- = VMT/employee less than or equal to City of Tustin 2016 citywide average VMT/employee
- = City of Tustin Boundary
- = Project site

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5.9.5 METHODOLOGY

To determine whether the potential future buildout of the Project would result in a significant impact related to conflict with a program, plan, ordinance, or policy related to the effectiveness of the circulation system, the extent to which the proposed Project would provide facilities to enhance the use of public transit, pedestrian, and bicycle mobility, the proposed Project was compared to adopted plans for public transit, pedestrian mobility, and bicycle facilities. A significant impact would result if the proposed Project resulted in a conflict that could result in an impact on the environment.

As outlined in CEQA Guidelines Section 15064.3, except as provided for roadway capacity transportation projects, a project's effect on automobile delay shall not constitute a significant environmental impact. Therefore, this analysis has been prepared in accordance with CEQA requirements to evaluate potential transportation impacts based on VMT. The City of Tustin Vehicle Miles Traveled Analysis Guidelines provides criteria for projects that would be considered to have a less-than-significant impact on VMT and therefore could be screened out from further analysis, and those that would have the potential to result in a VMT impact and therefore require a VMT analysis based on VMT reduction thresholds. Consistent with the City's Guidelines, the VMT screening thresholds were used to identify if the proposed Project could have an impact on VMT, which is detailed below. Trips generated by the proposed Project have been estimated based on trip generation rates provided by the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition, 2021*.

Vehicle Miles Traveled Analysis Methodology

Consistent with the City's Guidelines, the VMT screening thresholds were used to identify if the Project could have an impact on VMT. When a project fails to meet any of the aforementioned screening criteria, a more comprehensive VMT analysis may be warranted. The City's guidelines require use of the OCTAM for preparation of VMT analysis. The Model includes validated scenarios for the years 2016 and 2045. These scenarios have been validated using existing traffic counts. Data for years between 2016 and 2045 can be extrapolated using linear interpolation between the 2016 and 2045 Model output.

The City of Tustin VMT Guidelines utilizes recommendations provided by the California Office of Planning and Research (OPR) and modeling data provided by OCTA to establish the following VMT thresholds of significance projects. The City's significance threshold for residential projects is based on the project's home-based VMT per capita and the City's significance threshold for non-residential projects is based on the project's employment VMT per employee. The significance criteria from the City's guidelines are as follows:

Residential Projects: A significant transportation impact occurs if:

1. The project's base year home-based VMT per capita exceeds the OCTAM base model year citywide average VMT per capita for the City of Tustin.
2. The project's future year home-based VMT per capita exceeds the OCTAM base model year citywide average VMT per capita for the City of Tustin.

Non-Residential Projects: A significant transportation impact occurs if:

1. The project's base year employment VMT per employee exceeds the OCTAM base model year citywide average VMT per employee for the City of Tustin.
2. The project's future year employment VMT per employee exceeds the OCTAM base model year citywide average VMT per employee for the City of Tustin.

The Project is located within Model TAZ 1126. The total population and employed population of the Project was calculated using the current household average in nearby TAZs because no housing currently exists within

TAZ 1126. The Project total households and population was entered into TAZ 1126. Employment growth in TAZ 1126 was already accounted for by the model. The metric utilized as the residential VMT threshold of significance for the City of Tustin is the average city-wide VMT under 2016 Base Model Year, which has been calculated to be 15.0 home-based VMT per capita. The Project is located in a low VMT area per employee and screens out of VMT analysis for nonresidential per the City of Tustin VMT Guidelines.

5.9.6 ENVIRONMENTAL IMPACTS

IMPACT TRA-1: THE PROJECT WOULD NOT CONFLICT WITH A PROGRAM, PLAN, ORDINANCE, OR POLICY ADDRESSING THE CIRCULATION SYSTEM, INCLUDING TRANSIT, ROADWAY, BICYCLE, AND PEDESTRIAN FACILITIES.

Less than Significant.

The following analysis has been prepared pursuant to SB 743, which requires that VMT thresholds be utilized for traffic analysis, and State CEQA Guidelines Section 15064.3 that states that a project's effect on automobile delay shall not constitute a significant environmental impact. A VMT Analysis was prepared for the Project, included as Appendix D and has been incorporated throughout the discussion below (EPD Solutions, 2024).

Project Trip Generation: As described above under Section 5.9.5, *Methodology*, the Project trip generation was calculated using trip rates from the Institute of Transportation Engineers, *Trip Generation 11th Edition*, 2021. Existing conditions (Baseline) were assessed using trip rates for Land Use Code 932 (High-Turnover Sit-Down Restaurant), 495 (Community Center), 820 (Retail), and 710 (Office). Based on the density of the potential future housing, trip rates for Land Use Code 221 (Multifamily Housing (Mid-Rise)) were used. As shown in Table 5.9-2 below, the Project would generate approximately 5,483 daily trips, including 458 trips during the AM peak hour and 469 trips during the PM peak hour.

Roadway: Regional access to the Project site is provided by I-5. Local access to the site is provided via Myford Road, El Camino Real, Bryan Avenue, and Jamboree Road, as described above and in Table 5.9-1. The proposed Project would continue to provide vehicular access to the site from the adjacent roadways and there would be no changes to the roadway access points. However, potential future development facilitated by the Project may include driveway and roadway improvements. Specific roadway improvements required to support residential development within the Project site are not known at this time and will not be known until a development project is proposed. Future projects under the proposed Project would be required to comply with the circulation system standards and to adhere to uniform standards and practices. Compliance with standards for roadway and intersection classifications, right-of-way width, pavement width, design speed, warrant requirements, capacity, maximum grades and associated features such as medians would be ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits. The proposed Project would not conflict with existing facilities and would provide additional facilities as needed. Thus, impacts related to pedestrian facilities would not occur.

Transit Services: As described previously, the Project vicinity is served by OCTA. The Project site includes a bus stop for Route 79 at the corner of Bryan Avenue and Myford Road. Additionally, the Metrolink Inland Empire-Orange County Line has a stop 1.5 miles south of the Project of the Project site, at the Tustin Metrolink Station. This existing transit service would continue to serve its ridership in the area. Furthermore, specific infrastructure improvements required to support residential development within the Project site are not known at this time and will not be known until a development project is proposed. However, potential future projects would be required, if deemed necessary, to fund transit facilities as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits. Therefore, the proposed Project

would not alter or conflict with existing roadway facilities addressed in the circulation element, and impacts related to roadway facilities would not occur.

Bicycle Facilities: As detailed previously, there are bike lanes currently serving the Project site. In addition, the City's General Plan Circulation Element, Figure C-*5 Master Bikeway Plan*, Bryan Avenue is shown as having a Class II On-Street Bike Lane that extends east from Tustin Ranch Road past the Project site; Jamboree Road is shown as having an existing Class II Bike Lane partially along the eastern boundary of the Project site, from El Camino Real extending north past Bryan Avenue; and the portion of Myford Road that extends from El Camino Real to Bryan Avenue is shown as having a planned Class I Bike Path. Figure C-*5* shows a Class I off-road regional trail along the Peters Canyon Wash on the eastern boundary of the City of Tustin then through City of Irvine and back to City of Tustin on Jamboree Road north of the Project site. This trail is part of the ETSP and Lower Peters Canyon Specific Plans and provides facilities for pedestrians and equestrians. The trail also extends north of Tustin Ranch Road along Pioneer Way, then inland adjacent to the Cedar Grove Park site and hillside areas to the west, providing access to Peters Canyon Regional Park. The General Plan indicates the improvements on Bryan Avenue, Jamboree Avenue, and Peter's Canyon Wash are "pending items", subject to street upgrade; however, these sites have since been improved and are fully functional.

The Project site has been developed with commercial uses, and planned bike facility improvements within and bordering the site have already been implemented. Implementation of the Project would not alter or conflict with existing or planned bike lanes or bicycle transportation. Any future development that would be constructed under the Project would be reviewed by the City during plan check for consistency with City bicycle facilities (e.g., driveways, cutouts, and safety considerations) per the City General Plan and ETSP. Thus, impacts related to bicycle facilities would not occur.

Pedestrian Facilities: Sidewalks currently exist on both sides of Myford Road, El Camino Real, Bryan Avenue, and Jamboree Road within and surrounding the Project site. The Project does not propose a specific development or any demolition, including sidewalks. Potential future development facilitated by the Project may include sidewalk improvements. Specific sidewalk improvements proposed as part of future development within the Project site are not known at this time and will not be known until a development project is proposed. Future projects under the Project would be required to comply with and adhering to uniform standards and practices, including designation of bicycle lanes and adequate sidewalk as ensured and verified by the city during the plan check and permitting process, prior to obtaining building permits. Per the City's ETSP, sidewalks shall be provided on a private street for attached and detached residential products in accordance with Standard B102 of the City's Construction Standards, Storm Drain and On-Site Private Improvements, and is subject to compliance with applicable accessibility requirements of the American Disabilities Act, Title 24 of the Uniform Building Code as locally amended, and the Department of Housing and Urban Development's Fair Housing Accessibility Guidelines (PPP T-1). Therefore, the proposed Project would not conflict with pedestrian facilities, but instead would provide additional facilities. Thus, impacts related to pedestrian facilities would not occur.

Policies: Section 5.4, *Land Use*, includes a list of applicable goals and policies related to the Project. Table 5.4-2 through 5.4-4 includes analysis of the Project's consistency with the 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy, City of Tustin General Plan, and the ETSP. As discussed in Section 5.4, the Project would be consistent with all applicable goals and policies. Thus, impacts related to conflict with a program, plan, ordinance, or policy addressing the circulation system of the Project site and surrounding area would not occur.

Table 5.9-2: Proposed Project Trip Generation

Scenario	Land Use	ITE Code	Unit	ITE Daily Trip Rate/Unit	Project Size	Project ADTs	ITE AM Trip Rate/Unit	Project AM Trips	ITE PM Trip Rate/Unit	Project PM Trips
Existing Conditions (Baseline)	Restaurant	932	KSF	107.20	57.456	6,159	9.57	550	9.05	520
	Community Center	495	KSF	28.82	23.662	682	1.91	45	2.50	59
	Retail	820	KSF	37.01	661.528	24,483	0.84	556	3.40	2249
	Office	710	KSF	10.84	4.559	49	1.52	7	1.44	7
Existing Conditions (Baseline) TOTAL TRIPS						**31,374**		**1,158**		**2,835**
Proposed Housing Units + Remaining Buildout Capacity (Project)	Proposed Multi-Family Housing	221	DU	4.54	900	4,086	0.37	333	0.39	351
	Future Commercial Center (assumed restaurant)	932	KSF	107.20	13.032	1,397	9.57	125	9.05	118
Proposed Project TOTAL TRIPS						**5,483**		**458**		**469**
Existing Conditions + Proposed Housing Units + Remaining Buildout Capacity (Total)	Restaurant	932	KSF	107.20	70.488	7,556	9.57	675	9.05	638
	Community Center	495	KSF	28.82	23.662	682	1.91	45	2.50	59
	Proposed Multi-Family Housing	221	DU	4.54	900	4,086	0.37	333	0.39	351
	Retail	820	KSF	37.01	661.528	24,483	0.84	556	3.40	2249
	Office	710	KSF	10.84	4.559	49	1.52	7	1.44	7
Existing Conditions + Proposed Housing Units + Remaining Buildout Capacity (Total) TOTAL TRIPS						**36,857**		**1,616**		**3,304**

Notes: ADT = Average Daily Trips
DU = Dwelling Unit
ITE = Institute of Transportation Engineers Trip Generation Manual 11th Edition, 2021
KSF = Thousand Square Feet

IMPACT TRA-2: THE PROJECT WOULD NOT CONFLICT OR BE INCONSISTENT WITH CEQA GUIDELINES § 15064.3, SUBDIVISION (B).

Less than Significant.

As described previously, State CEQA Guidelines Section 15064.3(b) focuses on determining the significance of VMT-related transportation impacts. The City of Tustin Guidelines contain screening thresholds to assess whether a project has the potential to result in an impact, and further VMT analysis is required. If none of the screening criteria are met, then the project may require mitigation measures and/or VMT modeling to determine if the VMT thresholds are exceeded.

The applicability of each criterion to the Project is discussed below.

Screening Criteria 1 – Affordable Housing Screening

As per the City's guidelines, projects that consist of 100% affordable housing will have a less than significant impact on VMT. The Project does not consist of 100% affordable housing and therefore would not satisfy the requirements of Screening criteria 1 - Affordable Housing Screening.

Screening Criteria 2 – High Quality Transit Screening

As per the City's guidelines, projects located within one half mile of qualifying transit may be presumed to have a less than significant impact. The Project is located approximately 1.5 miles away from qualifying transit; therefore, the Project would not satisfy the requirements of Screening Criteria 2 – High Quality Transit screening.

Screening Criteria 3 - Project Type Screening

As per the City's guidelines, projects which propose local serving retail (retail projects less than 50,000 square feet) or other local serving uses would have a less than significant impact on VMT. The types of projects considered local serving include K-12 schools, local parks, day care centers, gas stations, libraries, fire stations, and other local serving civic uses.

Screening Criteria 3 would not apply to the residential portion of the Project. Therefore, the residential portion of the Project would not satisfy the requirements of Screening Criteria 3 - Project Type Screening.

However, potential future buildout of the Project would include locally serving retail use with an area of 13,032 sf, which is less than 50,000 sf. Therefore, the nonresidential portion of the Project would satisfy the requirements of Screening Criteria 3 - Project Type Screening.

Screening Criteria 4 - Low VMT Area Screening

The City's guidelines include a screening threshold for projects located in a low VMT generating area. Low VMT generating area is defined as traffic analysis zones (TAZs) with a total daily VMT per capita or VMT per employee that is less than the base level for the city.

As shown in Figure 5.9-2, the Project is not located in a low VMT area per capita. Therefore, the residential portion of the Project would not satisfy the requirements of Screening Criteria 4 – Low-VMT Area Screening.

As shown in Figure 5.9-3, the Project is located in a low VMT area per employee. Therefore, the commercial portion of the Project would satisfy the requirements of Screening Criteria 4 – Low-VMT Area Screening.

Screening Criteria 5 - Generating less than 500 daily vehicle trips

As per the City's guidelines, projects which generate less than 500 daily vehicle trips would have a less-than-significant impact on VMT.

As shown in Table 5.9-2, the Project is forecasted to generate 5,483 daily trips, which is more than 500 daily vehicle trips. Therefore, the Project would not meet Screening Criteria 5.

Screening Conclusions

The commercial portion of the Project would meet Screening Criteria 3 – Project Type Screening; and Screening Criteria 4 – Low-VMT Area Screening, and therefore the commercial portion of the Project's impact on VMT would be considered less than significant.

The VMT analysis presented in this analysis evaluates the VMT impacts of the residential portion of the Project proposed.

As described previously, State CEQA Guidelines Section 15064.3(b) focuses on determining the significance of VMT-related transportation impacts. As stated above, according to the City's Guidance, a project's VMT impacts are considered significant if the project's base year home-based VMT per capita exceeds the OCTAM base model year citywide average VMT per capita for the City of Tustin. Additionally, if the project's future year home-based VMT per capita exceeds the OCTAM base model year citywide average VMT per capita for the City of Tustin.

As shown in Table 5.9-3, the Project's home based VMT per capita would be lower than the OCTAM base model year citywide average home based VMT per capita for the City of Tustin under both base and future year conditions. The Project's home-based VMT per capita would be 40.3 percent below the City's threshold under base conditions and 44.3 percent below the City's threshold under future conditions; therefore, the residential portion of the Project would result in a less than significant VMT impact.

Table 5.9-3: VMT Analysis of Residential of Project Impact per City Guidelines

	Base Year 2016	Future Year 2045
Project TAZ 1126 Zone Total Home-based VMT	24,500	22,877
TAZ 1126 Total Residents	2,745	2,745
Project 1126 Home-based VMT per capita	**8.9**	**8.3**
City of Tustin Baseline Home-based VMT	1,356,977	1,356,977
City of Tustin Baseline Total Residents	90,762	90,762
City of Tustin Baseline Home-based VMT per capita	**15.0**	**15.0**
Percent Above/Below Threshold	-40.3%	-44.3%
Impact?	**No**	**No**

Source: VMT Analysis (Appendix L)

Overall, pursuant to the City's VMT analysis guidelines and guidance from OPR and CEQA Guidelines Section 15064.3(b), the entire Project can be assumed to have a less-than-significant VMT impact.

IMPACT TRA-3: THE PROJECT WOULD NOT SUBSTANTIALLY INCREASE HAZARDS DUE TO A GEOMETRIC DESIGN FEATURE (E.G., SHARP CURVES OR DANGEROUS INTERSECTIONS) OR INCOMPATIBLE USES (E.G., FARM EQUIPMENT).

Less than Significant.

The Project would include a General Plan Amendment (GPA) and Specific Plan Amendment (SPA) to allow for future development of up to 900 housing units over 18 acres of the Project site. Additionally, the Project anticipates the future buildout of 13,032 sf of nonresidential development as allowed under existing conditions. Although the Project does not propose a specific development, the Project would provide for future proposed development through implementation of the SPA (Hight Density Residential District) and the

City's certified 2021-2029 Housing Element. Therefore, future residential development may result in temporary construction activities for roadway and driveway improvements.

All roadway improvements would be constructed in accordance with applicable local, State, and federal roadway standards and practices. As part of the grading plan and building plan review processes for future development, City permits would require appropriate measures to facilitate the passage of persons and vehicles through/around any required road closures and measures to properly route heavy-duty construction vehicles entering and leaving the site (as applicable) consistent with the City of Tustin Standard Plans and Design Standards (City of Tustin Department of Public Works, 2022) (PPP T-2). As a result, impacts related to vehicular circulation design features and incompatible uses during construction of the proposed Project would be less than significant.

Additionally, any proposed roadway improvements, restriping, and related street, and bikeway improvements of local streets and internal driveways would be conducted in conformance with City design standards for roadway improvements. Compliance with existing regulations would be ensured through the City's traffic engineering review and construction permitting process for all future developments (PPP T-2). As part of the Project, the City has developed objective design standards (ODS) that include parking, siting, and additional standards consistent with the City of Tustin Standard Plans and Design Standards (City of Tustin Department of Public Works, 2022) for any future development proposed under the Project. Further, roadways, sidewalks, and bicycle improvements associated with the future development of commercial and residential mixed uses allowed under the proposed Project would be similar to surrounding uses and would not result in incompatible vehicular uses that could increase hazards. Additionally, Section 2.2 of the ETSP includes roadway cross-section designs for future roadways constructed as part of the ETSP. All future development would be subject to the design requirements of the ETSP or ODS (whichever is more stringent, as applicable) (City of Tustin, 1997). As a result, impacts related to hazardous vehicular circulation design features and incompatible uses during construction and operation of future development provided by the proposed Project would be less than significant.

IMPACT TRA-4: THE PROJECT WOULD NOT RESULT IN INADEQUATE EMERGENCY ACCESS.

Less than Significant.

Construction

As described above, the Project does not propose a specific development. However, the Project would provide for future proposed development through implementation of the SPA. Future development allowed under the SPA is speculative, but may require construction activities, including equipment and supply staging and storage. However, all future development would be required to ensure emergency access in accordance with Section 503 of the California Fire Code (Title 24, California Code of Regulations, Part 9), which would be ensured through the City's permitting process. Additionally, all potential road closures would be subject to review and approval by the City, including issuance of an encroachment permit. Once the offsite roadway, utility, pedestrian, and other potential improvements are completed, all road conditions will be restored to normal. Thus, implementation of the Project, including potential future development through the City's permitting process, would ensure existing regulations are adhered to. Therefore, impacts related to inadequate emergency access during construction activities would be less than significant.

Operation

Operation of potential future development would also not result in inadequate emergency access or access to nearby uses. Future applicants would be required to design and construct internal access and provide fire suppression facilities (e.g., hydrants and sprinklers) in conformance with City's *Standard Plans and Design Standards* (PPP T-2). Additionally, the City's Fire Department (OCFA) would review the development plans prior to approval to ensure adequate emergency access pursuant to the requirements in the International

Fire Code and Section 503 of the California Fire Code (Title 24, California Code of Regulations, Part 9). As a result, the proposed Project would not result in inadequate emergency access or access to nearby uses, and no impacts would occur.

5.9.7 CUMULATIVE IMPACTS

Vehicle Miles Traveled

The cumulative traffic study area for the proposed Project includes the City of Tustin and surrounding jurisdictions. The information utilized in this cumulative analysis is based on the potential to combine with impacts from projects in the vicinity of the proposed Project, as discussed in Table 5-1 of Section 5.0, *Environmental Impacts*, and projections contained within OCTAM.

OPR's *Technical Advisory on Evaluating Transportation Impacts in CEQA* states that "a project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact." As discussed under Impact TR-2, the Project would have a less than significant VMT impact. Therefore, the proposed Project would not result in a cumulatively considerable impact related to VMT and cumulative traffic impacts would also be less than significant.

Design and Roadway Hazards

The evaluation of Impact TRA-3 concluded that the proposed Project would result in a less-than-significant impact associated with increasing hazards due to a geometric design feature. Cumulative development in the City and surrounding jurisdictions would be subject to similar site-specific reviews, including reviews of roadway design, geometrical design features, and future infrastructure improvements, which would ensure projects are consistent with roadway design standards and would not result in unsafe traffic conditions. The Project would be consistent with all applicable plans and policies; and therefore, the Project's impact to increase in hazardous conditions would be less than significant, and the Project would not contribute to a cumulatively considerable impact associated with hazardous design features.

Alternative Transportation

The evaluation of Impact TRA-1 concluded that the proposed Project would not result in significant impacts related to alternative transportation or policies addressing the circulation system. Cumulative development in the City and surrounding jurisdictions would be subject to site-specific reviews, including reviews of sidewalk, bike lane, and bus stop designs that would not allow potential cumulatively considerable impacts related to alternative transportation. Therefore, the Project would not cumulatively combine with other projects to result in impacts related to alternative transportation. The Project would be consistent with all applicable plans and policies; and therefore, the Project would not contribute to a cumulatively considerable impact associated with alternative transportation.

5.9.8 EXISTING REGULATIONS AND PLANS, PROGRAMS, OR POLICIES

Existing Regulations

- Section 503 of the California Fire Code (Title 24, California Code of Regulations, Part 9)
- City of Tustin General Plan Circulation Element
- Tustin City Code
- East Tustin Specific Plan
- City of Tustin VMT Analysis Guidelines

Plans, Programs, or Policies

PPP T-1: Sidewalk Standards. Per the ETSP, sidewalks shall be provided on a private street for attached and detached residential products in accordance with Standard B102 of the City's Construction Standards, Storm Drain and On-Site Private Improvements, and is subject to compliance with applicable accessibility requirements of the American Disabilities Act, Title 24 of the Uniform Building Code as locally amended, and the Department of Housing and Urban Development's Fair Housing Accessibility Guidelines.

PPP T-2: Traffic Control/Utilities. All future development constructed under the Project shall be subject to the traffic control standards specified by the City's latest *Standard Plans and Design Standards*, which includes the requirement for Traffic Control Plan during construction, the process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design.

5.9.9 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impact TRA-1 through TRA-4 would be less than significant.

5.9.10 MITIGATION MEASURES

No mitigation measures are required for the proposed Project.

5.9.11 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impact TRA-1 through TRA-4 would be less than significant.

5.9.12 REFERENCES

City of Tustin. (1997, November). *East Tustin Specific Plan*. Retrieved from https://www.tustinca.org/DocumentCenter/View/704/East-Tustin-Specific-Plan-PDF?bidId=

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RK Engineering Group, Inc. (2024). *City of Tustin Vehicle Miles Traveled Analysis Guidelines*.

State of California Office of Planning and Research. (2018, April). *Technical Advisory on Evaluating Transportation Impacts in CEQA* . Retrieved from https://opr.ca.gov/docs/20180416-743_Technical_Advisory_4.16.18.pdf

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5.10 Tribal Cultural Resources

5.10.1 INTRODUCTION

This section addresses potential impacts to tribal cultural resources (TCRs) from implementation of the proposed Project. Information within this section is based on the following:

- *City of Tustin General Plan* (including 2021-2029 Housing Element), adopted November 2018 and updated October 2022.
- *Archaeological Resources Records Search Results for the Market Place Project, Tustin, California (APNs 500-291-02, -04, -06 through -08, -11, -12, -21, and -23 through -27, and 500-312-01, -02, -03, -04, -06, -08, -09, and -10)*, BFSA Environmental Services, August 2023 (Appendix E).

Additionally, part of this analysis is based upon Project-specific coordination and consultation with California Native American tribes that are traditionally and culturally affiliated with the Project region. In accordance with Public Resources Code Section 15120(d), certain information and communications that disclose the location of archaeological sites and sacred lands are allowed to be exempt from public disclosure.

5.10.2 REGULATORY SETTING

5.10.2.1 Federal Regulations

Archaeological Resources Protection Act

The Archaeological Resources Protection Act (ARPA) of 1979 regulates the protection of archaeological resources and sites on federal and Native American lands. The ARPA regulates authorized archaeological investigations on federal lands; increased penalties for looting and vandalism of archaeological resources; and required that the locations and nature of archaeological resources be kept confidential in most cases. In 1988, amendments to the ARPA included a requirement for public awareness programs regarding archaeological resources.

Native American Graves Protection and Repatriation Act (NAGPRA)

NAGPRA is a federal law passed in 1990 that mandates museums and federal agencies to return certain Native American cultural items—such as human remains, funerary objects, sacred objects, or objects of cultural patrimony—to lineal descendants or culturally affiliated Indian tribes.

5.10.2.2 State Regulations

California Public Resources Code

Archaeological resources are protected pursuant to a wide variety of State policies and regulations enumerated under the California Public Resources Code (PRC). In addition, cultural resources are recognized as nonrenewable resources and therefore receive protection under the PRC and the California Environmental Quality Act (CEQA).

PRC Sections 5097.9 to 5097.991 provide protection to Native American historical and cultural resources and sacred sites and identify the powers and duties of the Native American Heritage Commission (NAHC). These sections also require notification to descendants of discoveries of Native American human remains and provide for treatment and disposition of human remains and associated grave goods.

California Senate Bill 18

Senate Bill 18 (SB 18) (California Government Code Section 65352.3) sets forth requirements for local governments to consult with California Native American tribes identified by the California NAHC to aid in the protection of TCRs. The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early stage of planning to protect, or mitigate impacts on, TCRs. The *Tribal Consultation Guidelines: Supplement to General Plan Guidelines* (OPR, 2005), identifies the following contact and notification responsibilities of local governments:

- Prior to the adoption or any amendment of a general plan or specific plan, a local government must notify the appropriate tribes on the contact list maintained by the NAHC of the opportunity to conduct consultations for the purpose of preserving, or mitigating impacts to, cultural places located on land within the local government's jurisdiction that is affected by the proposed plan adoption or amendment. Tribes have 90 days from the date on which they receive notification to request consultation unless a shorter timeframe has been agreed to by the tribe (Government Code Section 65352.3).
- Prior to the adoption or substantial amendment of a general plan or specific plan, a local government must refer the proposed action to those tribes that are on the NAHC contact list and have traditional lands located within the city or county's jurisdiction. The referral must allow a 45-day comment period (Government Code Section 65352). Notice must be sent regardless of whether prior consultation has taken place. Such notice does not initiate a new consultation process.
- Local government must send a notice of a public hearing, at least 10 days prior to the hearing, to tribes who have filed a written request for such notice (Government Code Section 65092).

Because the proposed Project includes approval of a Specific Plan Amendment, it is subject to the statutory requirements of SB 18 Tribal Consultation Guidelines.

California Assembly Bill 52

Assembly Bill 52 (AB 52) established a requirement under CEQA to consider "tribal cultural values, as well as scientific and archaeological values when determining impacts and mitigation." PRC Section 21074(a) defines "tribal cultural resources" (TCRs) as "[s]ites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" that are either "[i]ncluded or determined to be eligible for inclusion in the California Register of Historical Resources" or "in a local register of historical resources." Additionally, defined cultural landscapes, historical resources, and archaeological resources may be considered TCRs. PRC Section 21074(b), (c). The lead agency may also in its discretion treat a resource as a TCR if it is supported with substantial evidence.

Projects for which a notice of preparation for a Draft EIR was filed on or after July 1, 2015, are required to have lead agencies offer California Native American tribes traditionally and culturally affiliated with the project area consultation on CEQA documents prior to submitting an EIR in order to protect TCRs. PRC Section 21080.3.1(b) defines "consultation" as "the meaningful and timely process of seeking, discussing, and considering carefully the views of others, in a manner that is cognizant of all parties' cultural values and, where feasible, seeking agreement." Consultation must "be conducted in a way that is mutually respectful of each party's sovereignty [and] recognize the tribes' potential needs for confidentiality with respect to places that have traditional tribal cultural significance." The consultation process is outlined as follows:

1. California Native American tribes traditionally and culturally affiliated with the project area submit written requests to participate in consultations.

2. Lead agencies are required to provide formal notice to the California Native American tribes that requested to participate within 14 days of the lead agency's determination that an application package is complete or decision to undertake a project.
3. California Native American tribes have 30 days from receipt of notification to request consultation on a project.
4. Lead agencies initiate consultations within 30 days of receiving a California Native American tribe's request for consultation on a project.
5. Consultations are complete when the lead agencies and California Native tribes participating have agreed on measures to mitigate or avoid a significant impact on a TCR, or after a reasonable effort in good faith has been made and a party concludes that a mutual agreement cannot be reached (PRC Sections 21082.3(a), (b)(1)-(2); 21080.3.1(b)(1)).

AB 52 requires that the CEQA document disclose significant impacts on TCRs and discuss feasible alternatives or mitigation to avoid or lessen an impact.

California Health and Safety Code Section 7050.5

Health & Safety Code Section 7050.5 requires that if human remains are discovered within the project site, disturbance of the site shall halt and remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of any 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. If the coroner determines the remains are not subject to his or her authority and recognizes or has reason to believe the human remains are those of a Native American, he/she shall contact, by telephone within 24 hours, the NAHC.

California Public Resources Code Sections 5097.9 to 5097.991

PRC Sections 5097.9 to 5097.991 provide protection to Native American historical and cultural resources and sacred sites and identify the powers and duties of the NAHC. These sections also require notification to descendants of discoveries of Native American human remains and provide for treatment and disposition of human remains and associated grave goods.

5.10.2.3 Local and Regional Regulations

General Plan

Conservation/Open Space/Recreation Element

Goal 12 **Maintain and enhance the City's unique culturally and historically significant building sites or features.**

Policy 12.1 Identify, designate, and protect facilities of historical significance, where feasible.

Policy 12.2 Retain and protect significant areas of archaeological, paleontological, or historical value for education and scientific purposes.

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.

Goal 13 **Preserve Tustin's archaeological and paleontologic resources.**

Policy 13.1 Require a site inspection by certified archaeologists or paleontologists for new development in designated sensitive areas.

Policy 13.2 Require mitigation measures where development will affect archaeological or paleontological resources.

5.10.3 ENVIRONMENTAL SETTING

Tribal Cultural Resources

A records search from the South Central Coastal Information Center (SCCIC) at California State University, Fullerton was completed and encompassed the Project site and a 500-foot buffer surrounding the Project (BFSA Environmental Services, 2023). Based on the records search results, no resources are recorded within the Project site or within the 500-foot search buffer. Additionally, the records search revealed that the Project site was partially overlapped by five previous cultural resource studies. However, none of the studies are directly related to the Project site. Four of the studies surveyed the southern corner of the Project area and were focused on the Interstate 5 exchange. The fifth study surveyed an 11-mile-long and two-to-three-mile-wide section of land from Interstate 5 to Highway 91. Further, the records search identified an additional eleven previous studies within the 500-foot buffer search radius. However, none of these studies overlap with the Project area.

Sacred Lands File Search

TCRs can include archaeological sites, built environment resources, locations of events or ceremonies, resource procurement areas, and natural landscape features with special significance to one or more indigenous groups. The City requested a Sacred Lands File (SLF) Search from the NAHC and received the results on October 19, 2023. The SLF returned negative results, indicating that no known tribal resources are located in the Project area.

5.10.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a Project could have a significant effect if it were to:

TCR-1 Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 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:

i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

ii) 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 § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

5.10.5 METHODOLOGY

The City requested a SLF Search from the NAHC and received the results on October 19, 2023. The SLF returned negative results, indicating that no known tribal resources are located in the Project area.

In compliance with SB 18 and AB 52, on August 28, 2023, and October 26, 2023, the City sent letters to the following Native American tribes that may have knowledge regarding TCRs in the Project vicinity:

- Campo Band of Diegueno Mission Indians
- Ewiiaapaayp Band of Kumeyaay Indians
- Gabrieleno Band of Mission Indians Kizh Nation
- Gabrieleno Tongva San Gabriel Mission Indians
- Gabrieleno Tongva San Gabriel Band of Mission Indians
- Gabrielino Tongva Indians of California Tribal Council
- Gabrielino Tongva Tribe
- Juaneno Mission Indians Acjachemen Belardes
- Juaneno Band of Mission Indians Acjachemen Nation 84A
- La Posta Band of Diegueno Mission Indians
- Manzanita Band of Kumeyaay Nation
- Mesa Grande Band of Diegueno Mission Indians
- Pala Band of Mission Indians
- Santa Rosa Band of Cahuilla Indians
- Soboba Band of Luiseno Indians

The Gabrieleño Band of Mission Indians – Kizh Nation responded on November 14, 2023. Consultation with the Gabrieleño Band of Mission Indians – Kizh Nation occurred via email and the Tribe provided requested mitigation measures. None of the other tribes have responded to the letters at the time of this Draft EIR.

5.10.6 ENVIRONMENTAL IMPACTS

IMPACT TCR-1: THE PROJECT WOULD NOT CAUSE A SUBSTANTIAL ADVERSE CHANGE IN THE SIGNIFICANCE OF A TRIBAL CULTURAL RESOURCE, DEFINED IN PUBLIC RESOURCES CODE § 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:

(I) LISTED OR ELIGIBLE FOR LISTING IN THE CALIFORNIA REGISTER OF HISTORICAL RESOURCES, OR IN A LOCAL REGISTER OF HISTORICAL RESOURCES AS DEFINED IN PUBLIC RESOURCES CODE SECTION 5020.1(K), OR

(II) 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 § 5024.1. IN APPLYING THE CRITERIA SET FORTH IN SUBDIVISION (C) OF PUBLIC RESOURCE CODE § 5024.1, THE LEAD AGENCY SHALL CONSIDER THE SIGNIFICANCE OF THE RESOURCE TO A CALIFORNIA NATIVE AMERICAN TRIBE.

Less than Significant with Mitigation Incorporated.

Potential future Project construction could include demolition, site preparation, grading, building construction, architectural coating, and paving activities. Project buildout would include the development of 900 residential units and the buildout of 13,032 sf of nonresidential development within the undeveloped (paved parking lot and landscape) space of the existing site. Project construction would include excavation at depths that could reach native, undisturbed soils that may contain unknown tribal cultural resources. Project

excavation and construction could result in impacts to inadvertent tribal cultural resource finds that could cause substantial adverse change to the significance of such resources.

AB 52 requires meaningful consultation between lead agencies and California Native American tribes regarding potential impacts on TCRs. TCRs are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either eligible or listed in the California Register of Historical Resources or local register of historical resources (PRC Section 21074). Based on literature review (i.e., records check and archival research), no prehistoric resource sites or isolates—including a historic TCR—as defined by PRC Section 5020.1(k) have been identified within the Project site.

As described above, a SLF search and a list of Native American tribes who may have knowledge of cultural resources in the Project area was requested from the Native American Heritage Commission. The NAHC responded with a list of Native American tribes and that the SLF search yielded negative results for known TCRs or sacred lands within the Project area. To identify if any TCRs are potentially located within the Project site, the City sent notices to the Native American tribes provided by the NAHC on August 28, 2023, and October 26, 2023, regarding the Project.

One response was received from the Gabrieleño Band of Mission Indians – Kizh Nation on November 14, 2023. The tribe requested to consult over email and provided mitigation measures to be incorporated into the Project. As a result, Mitigation Measure TCR-1 is included which requires prior to the commencement of ground-disturbing activities, retainment of a Native American monitor with preference given to the consulting tribe. In addition, Mitigation Measure TCR-2 is incorporated and provides procedures to follow in case of an inadvertent TCR discovery. Mitigation Measure TCR-3 is incorporated which complies with State Health and Safety Code Section 7050.5, which states that no further disturbance may occur in the vicinity of the body until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. Measures would ensure the avoidance of impacts to buried tribal cultural resources that may be present on site.

No construction is proposed as part of this Project. However, future development associated with the Housing Zone would be required to adhere to Mitigation Measures TCR-1, TCR-2, and TCR-3. Implementation of Mitigation Measures TCR-1, TCR-2, and TCR-3 would ensure that potential impacts a result of the inadvertent discovery of TCRs during future development would be less than significant.

5.10.7 CUMULATIVE IMPACTS

The cumulative study area for TCRs includes City of Tustin, which contains the same general tribal historic setting. Other projects throughout the City that would involve ground disturbances could reveal buried TCRs.

Cumulative impacts to TCRs would be reduced by compliance with applicable regulations and consultations required by SB 18 and AB 52. As described above, the Project site and vicinity is not known to contain TCRs; however, Mitigation Measures TCR-1, TCR-2 and TCR-3 would be implemented to ensure that impacts would not occur in the case of an inadvertent discovery of a potential TCR. These mitigation measures would ensure that the proposed Project would not contribute to a cumulative loss of TCRs. Therefore, cumulative impacts would be less than significant.

5.10.8 EXISTING REGULATIONS AND PLANS, PROGRAMS, OR POLICIES

Existing Regulations

- California Government Code Sections 5097.9-5097.99
- California Health and Safety Code Section 7050.5

- California Public Resources Code Sections 21073 et seq. (AB 52)

Plans, Programs, or Policies

The following Plans, Programs, or Policies (PPP) related to TCRs are incorporated into the Project and would reduce impacts related to TCRs. These actions will be included in the Project's Mitigation Monitoring and Reporting Program (MMRP):

PPP TCR-1: Native American historical and cultural resources and sacred sites are protected under PRC Sections 5097.9 to 5097.991, which require that descendants be notified when Native American human remains are discovered and provide for treatment and disposition of human remains and associated grave goods.

PPP CUL-1: Human Remains. Should human remains or funerary objects be discovered during Project construction, the Project would be required to comply with State Health and Safety Code Section 7050.5, which states that no further disturbance may occur in the vicinity of the body (within a 100-foot buffer of the find) until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission, which will determine the identity of and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD must complete the inspection within 48 hours of notification by the NAHC.

5.10.9 PROJECT DESIGN FEATURES

None.

5.10.10 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Without mitigation, Impact TCR-1 would be potentially significant.

5.10.11 MITIGATION MEASURES

TCR-1: Retain a Native American Monitor Prior to Commencement of Ground-Disturbing Activities

a. Prior to the issuance of demolition or grading permits for any projects that would disturb previously undisturbed soils (native soils) or soils that have native fill, the project applicant/developer shall retain a Native American Monitor, with first preference given to the Gabrieleño Band of Mission Indians – Kizh Nation, who responded to the City's request for consultation on November 14, 2023 (first preference Tribe, Tribe). The applicant/developer shall allow 45 days from the initial contact with the first preference tribe to enter into a contract for monitoring services. If the applicant/developer is unable to contact the Kizh Nation after three documented attempts or is unable to secure an agreement, the applicant shall report to the lead agency, and the lead agency will contact the Kizh Nation to validate that the parties were unable to enter into an agreement. The applicant/developer shall have made three documented attempts to directly contact the Kizh Nation to enter into a tribal monitoring agreement. If the applicant/developer can demonstrate they were unable to secure an agreement with the first preference tribe, as validated and documented by the Community Development Department in writing, or if the contracted tribe fails to fulfill its obligation under the contract terms, then the applicant/developer may retain an alternative qualified tribal monitor from a culturally affiliated tribe if approved by the City.

The monitor shall be retained prior to the issuance of a demolition permit or grading permit, and the commencement of any development related "ground-disturbing activity" for the subject project at all project locations (i.e., both on-site and any off-site locations that are included in the project description/definition and/or required in connection with the project, such as public improvement work). "Ground-disturbing activity" shall include, but is not limited to, demolition, pavement removal, auguring, grubbing, boring, grading, excavation, drilling, and trenching for the purposes of reconstruction and new development. "Ground-disturbing activity" shall not include minor maintenance activities such as potholing, tree removal, and parking lot maintenance. This mitigation measure does not apply to projects that would only disturb soils made up of artificial fill, as verified by a soils or geotechnical report.

b. A copy of the executed monitoring agreement shall be submitted to the lead agency prior to the commencement of any ground-disturbing activity, or the issuance of any permit necessary to commence a ground-disturbing activity.
c. The monitor will complete daily monitoring logs that will provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the Kizh Nation. Monitor logs will identify and describe any discovered TCRs, including but not limited to, Native American cultural and historical artifacts, remains, places of significance, etc., (collectively, tribal cultural resources, or "TCR"), as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs will be provided to the project applicant/lead agency upon written request to the consulting tribe. If a monitor is selected from a tribe other than the Kizh Nation, the Kizh Nation shall be contacted if any discoveries are found.
d. On-site tribal monitoring shall conclude upon the latter of the following (1) written confirmation to the consulting tribe from a designated point of contact for the project applicant/lead agency that all ground-disturbing activities and phases that may involve ground-disturbing activities and that have the potential to impact local TCRs on the project site or in connection with the project are complete.

TCR-2: Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial)

A. Upon discovery of any TCRs, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 50 feet) and shall not resume until the discovered TCR has been fully assessed by the tribal monitor and consulting archaeologist. If the consulting tribe is other than the Gabrieleño Band of Mission Indians – Kizh Nation, the Kizh Nation shall be contacted and the consulting tribe will recover and retain all discovered TCRs in the form and/or manner the Kizh Nation deems appropriate, in the Kizh Nation sole discretion, and for any purpose the Kizh Nation deems appropriate, including for educational, cultural and/or historic purposes.

TCR-3: Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects

a. Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in Public Resources Code Section 5097.98, are also to be treated according to this statute.
b. If Native American human remains and/or grave goods are discovered or recognized on the project site, then Public Resource Code 5097.9 as well as Health and Safety Code Section 7050.5 shall be followed.
c. Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2).
d. Preservation in place (i.e., avoidance) is the preferred manner of treatment for discovered human remains and/or burial goods.
e. Any discovery of human remains/burial goods shall be kept confidential to prevent further disturbance.

5.10.12 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The Mitigation Measures identified above, along with existing regulatory programs, would reduce potential impacts associated with TCRs for Impact TCR-1 to a level that is less than significant. Therefore, no significant unavoidable adverse impacts related to TCRs would occur.

5.10.13 REFERENCES

(OPR), Governor's Office of Planning and Research. (2005). *State of Califonria Tribal Consultation Guidlines.*

BFSA Environmental Services. (2023). *Archaeological Resources Records Search Results for the Market Place Project, Tustin, California (APNs 500-291-02, -04, -06 through -08, -11, -12, -21, and -23 through -27, and 500-312-01, -02, -03, -04, -06, -08, -09, and -10).*

City of Tustin. (2018). *City of Tustin General Plan.*

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5.11 Utilities and Service Systems

5.11.1 INTRODUCTION

This section of the EIR evaluates the potential effects on utilities and service systems from implementation of the proposed Project by identifying anticipated demand and existing and planned utility availability. This includes water supply and infrastructure, wastewater, drainage, and solid waste. Electric power, natural gas, telecommunications, and renewable energy resources are described in Section 5.3, *Energy*.

Water supply and infrastructure capacity information in this section is based on the following:

- *City of Tustin General Plan* (including 2021-2029 Housing Element), adopted November 2018 and updated October 2022.
- *Tustin City Code*.
- *East Tustin Specific Plan,* adopted March 1986 and updated November 1997
- *City of Tustin 2020 Urban Water Management Plan*.
- *Tustin Market Place Water Supply Assessment,* Irvine Ranch Water District, February 2024, Appendix E.
- Data provided by each service provider.

Because CEQA focuses on physical environmental effects, this section analyzes whether increases in demand for water, wastewater, stormwater drainage, and solid waste utilities that would result from the proposed Project would result in significant adverse physical environmental effects. For example, physical changes in the environment resulting from the construction of new facilities or an expansion of existing wastewater facilities could constitute a significant impact under CEQA.

5.11.2 WATER

5.11.2.1 WATER REGULATORY SETTING

Safe Drinking Water Act

The United States Environmental Protection Agency (U.S. EPA) administers the Safe Drinking Water Act, which is the primary federal law that regulates the quality of drinking water and establishes standards to protect public health and safety. The State Water Resources Control Board, Division of Drinking Water (DDW) implements the requirements of the Act and oversees public water system quality statewide. USEPA establishes legal drinking water standards for contaminants that could threaten public health.

California Urban Water Management Planning Act

Section 10610 of the California Water Code established the California Urban Water Management Planning Act (CUWMPA). CUWMPA requires urban water suppliers to initiate planning strategies to ensure an appropriate level of reliability in its water service. CUWMPA states that every urban water supplier that provides water to 3,000 or more customers, or that annually provides more than 3,000 acre-feet of water service, should make every effort to ensure the appropriate level of reliability in its water service to meet the needs of its various categories of customers during normal, dry, and multiple-dry years. The CUWMPA describes the contents of Urban Water Management Plan's (UWMP) as well as methods for urban water suppliers to adopt and implement the plans. As described below, the City of Tustin has an updated 2020 UWMP that addresses water supply and demand through 2045.

Senate Bill 610

Senate Bill (SB) 610 requires public urban water suppliers with 3,000 or more service connections to identify existing and planned sources of water for planned developments of a certain size. It further requires the public water system to prepare a specified water supply assessment (WSA) for projects that meet the following criteria:

a) A proposed residential development of more than 500 dwelling units;

b) A proposed shopping center employing more than 1,000 persons or having more than 500,000 SF of floor space;

c) A commercial office building employing more than 1,000 persons or having more than 250,000 SF of floor space;

d) A hotel or motel, or both, with more than 500 rooms;

e) An industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 SF of floor area; and

f) A mixed-use project that includes one or more of the projects above.

The components of a WSA include a summary of existing water demand, future water demand by the project, and confirmation that water is available for the project during normal years, a single dry year, and multiple dry years during a 20-year future projection period. The WSA must also describe whether the project's water demand is accounted for in the water supplier's UWMP.

Senate Bill 221

SB 221 requires the local water provider to provide "written verification" of "sufficient water supplies" to serve the project. SB 221 applies only to residential projects of 500 units or more (infill or low-income or very-low-income housing subdivisions are exempt) and requires the land use planning agency to include as a condition of approval of a tentative map, parcel map, or development agreement a requirement that "sufficient water supply" be available. Sufficiency under SB 221 differs from SB 610 in that it is determined by considering the availability of water over the past 20 years; the applicability of any urban water shortage contingency analysis prepared per Water Code Section 10632; the reduction in water supply allocated to a specific use by an adopted ordinance; and the amount of water that can be reasonably relied upon from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer. In most cases, the WSA prepared under SB 610 meets the requirement for proof of water supply under SB 221.

Senate Bill 1262

SB 1262, which amends Section 66473.7 of the Government Code and Section 10910 of the Water Code requires WSAs to include additional information regarding sustainable groundwater management if water supply for a project includes groundwater, including:

- Whether the department has identified the basin as being subject to critical conditions of overdraft pursuant to Section 12924.
- If a groundwater sustainability agency has adopted a groundwater sustainability plan or has an approved alternative, a copy of that alternative or plan.

As described below, the City obtains a portion of its water supply from the Orange County groundwater basin. Thus, this additional information is provided in the Project-specific WSA (Appendix E, herein).

CALGreen Building Code

California Code of Regulations Title 24, Part 11, establishes the California Green Building Code or CALGreen. The CALGreen Code is updated every three years and sets forth water efficiency standards (i.e., maximum flow rates) for all new plumbing and irrigation fittings and fixtures. Article 8, Chapter 1, Section 8100 of the Tustin City Code adopts the California Green Building Standards Code by reference.

Sustainable Groundwater Management Act of 2014

The 2014 Sustainable Groundwater Management Act (SGMA) requires governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. The Department of Water Resources (DWR) categorizes the priority of groundwater basins. For critically over-drafted basins, sustainability should be reached by 2040. For the remaining high and medium priority basins, 2042 is the deadline. The SGMA also requires local public agencies and Groundwater Sustainability Agency's in high- and medium-priority basins to develop and implement Groundwater Sustainability Plans (GSP) or Alternatives to GSPs. GSPs are detailed road maps for how groundwater basins will reach long term sustainability. If a basin is adjudicated, then a GSA does not need to be formed, nor does a GSP need to be prepared.

The Project overlies the Orange County Groundwater Basin (OC Basin). Pursuant to the SGMA, the DWR has designated the OC Basin, (also known as Basin 8-1), as a medium priority basin for purposes of groundwater management. The SGMA specifically calls for Orange County Water District (OCWD), which regulates the OC Basin, to serve as the GSA. The SGMA allows Special Act Districts created by statute, such as OCWD, to prepare and submit an alternative to a GSP that is "functionally equivalent" to a GSP. Basin 8-1 includes the OCWD service area and several fringe areas outside of OCWD that are within the Basin 8-1 boundary. Per the requirements of SGMA, an Alternative Plan must encompass the entire groundwater basin as defined by DWR. On January 1, 2017, OCWD and the overlying agencies within Basin 8-1, including Irvine Ranch Water District (IRWD), jointly prepared and submitted an alternative plan in compliance with SGMA (Basin 8-1 Alternative). The Basin 8-1 Alternative was updated in January 2022 (Appendix F).

City of Tustin General Plan

The Tustin General Plan Conservation/Open Space/Recreation Element includes the following goals and policies that are related to water supply and the proposed Project.

Goal 5: **Protect water quality and conserve water supply.**

Policy 5.2: Protect groundwater resources from depletion and sources of pollution.

Policy 5.3: Conserve imported water by requiring water conservation techniques, water conserving appliances, and drought-resistant landscaping.

Policy 5.4: Support the expansion of reclaimed water production and use wherever possible and economically feasible.

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.

Policy 5.6: Coordinate water quality and supply programs with all responsible water agencies, and cooperate and participate in plan preparation and programs.

Tustin City Code

Article 9, Chapter 7 – Water Efficient Landscapes. The City promotes water use efficiency through water efficient landscape requirements which were adopted by Ordinance in December 2015. The code applies to new landscape projects 500 square feet or greater and rehabilitated landscape projects 2,500 square feet or greater. The code section provides implementation procedures and water use standards for the purpose of providing water efficient landscapes in compliance with State law.

Article 4, Chapter 10 – Water Management Plan. The City created a comprehensive Water Conservation Program pursuant to the California Water Code based upon the need to conserve water supplies and to avoid or minimize the effects of any future shortages. The Water Conservation Program establishes permanent water use restrictions and regulations to be implemented during times of declared water shortages. It establishes six (6) levels of drought response actions to be implemented in times of shortage, with increasing restrictions on water use in response to worsening drought conditions and decreasing available supplies.

East Tustin Specific Plan

Section 2.6 – Water Concept Plan:

Domestic Water System

The Specific Plan discusses that the ETSP area is within the boundaries of the IRWD; however, IRWD did not supply water to the ESTP area at the time the ETSP was approved. An IRWD Water Master Plan from July 1983 showed that IRWD had sufficient water capacity to serve the ETSP area.

The ETSP's proposed preliminary infrastructure domestic water improvements were based upon review of the Specific Plan Area Map and the IRWD 1983 Water Master Plan. The ETSP planned all infrastructure pipelines to be located in future planned streets. The proposed facilities included a 16-inch water line in future Myford Road from the Santa Ana Freeway to Portola Parkway, a 12-inch water line in future Jamboree Road from the Santa Ana Freeway to Portola Parkway, 12-inch water lines in Irvine Boulevard and Bryan Avenue between Jamboree Road and Myford Road, and a 12-inch looping water main in pressure Zone 3 north of Portola Parkway. No reservoirs were included as part of the infrastructural facilities for the ETSP area.

Irrigation/Reclaimed System

The ETSP included a preliminary infrastructure reclaimed water system improvements based upon review of the ETSP area and the 1984 IRWD Irrigation/Reclamation Master Plan. The Master Plan shows a 12-inch reclaimed water line in Myford Road extending from the Santa Ana Freeway to Bryan Avenue. Also, 12-inch mains are proposed for Bryan Avenue east of Jamboree Road and Irvine Boulevard east of Myford Road. Additional eight-inch mains are planned in Jamboree Road north to Irvine Boulevard, Irvine Boulevard east to Myford Road, and Myford Road between Bryan Avenue and Irvine Boulevard. The Master Plan also identified a second looped network that connects to the untreated Irvine Lake Pipeline, located along the northerly boundary of the District. The system consists of 14-inch and 12-inch mains extending southerly in Myford Road to the proposed Portola Parkway and 8-inch mains east of Myford Road. All the irrigation water used in the network system is effluent from the IRWD Michelson Water Reclamation Plant.

5.11.2.2 WATER ENVIRONMENTAL SETTING

Water is supplied to East Tustin by the IRWD. IRWD provides water services to a 181-square mile service area that includes all of the City of Irvine and portions of the surrounding cities of Tustin, Santa Ana, Orange, Costa Mesa, Lake Forest, Newport Beach, and unincorporated areas of Orange County.

Water Supply and Demand

IRWD's water supply is a combination of groundwater, imported water, and recycled water. Approximately 50 percent of IRWD's water supplies comes from local groundwater wells in the Orange County Groundwater Basin (OC Basin), and the Irvine and Lake Forst sub-basins. Imported water from the Metropolitan Water District of Southern California (MWD) makes up less than one-fifth of IRWD's supply. Water imported to Orange County comes from two sources; the Sacramento-San Joaquin Delta in Northern California through the State Water Project (SWP), and from the Colorado River through the Colorado River Aqueduct. IRWD meets about a quarter of the service area's water demands with recycled water.

Table 5.11-1 provides IRWD's total projected supply capacities expected to be available to IRWD through 2040. These future planned water supplies are based on historical groundwater production, planned future supply projects, as well as information from Metropolitan and Municipal Water District of Orange County's (MWDOC) 2020 UWMPs.

Table 5.11-1: IRWD Projected Water Supply

Source	Additional Information on Source	Projected Water Supply (acre-feet)			
		2025	2030	2035	2040
Purchased or Imported Water	Potable	51,027	51,027	51,027	51,027
Surface Water (not desalinated)	Baker WTP Local Surface Water	3,048	3,048	3,048	3,048
Groundwater (not desalinated)	Potable	49,480	49,480	49,480	49,480
Purchased or Imported Water	Untreated	17,347	17,347	17,347	17,347
Recycled Water		42,012	42,012	42,012	42,012
Groundwater (not desalinated)	For Recycled System	3,461	3,461	3,461	3,461
Groundwater (not desalinated)	Future Potable Water	12,352	12,352	12,352	12,352
Total Projected Water Supplies		**178,727**	**178,727**	**178,727**	**178,727**

Source: (Irvine Ranch Water District, 2021)

The 2020 UWMP also describes that water demands per capita have been decreasing in recent years due to new state and local regulations related to water conservation. The 2020 UWMP describes that IRWD used 95 gallons per capita per day (GPCD) in 2020, which is below the target of 171 GPCD for 2020 (Irvine Ranch Water District, 2021). As shown in Table 5.15-2, the 2020 MWD UWMP indicates that IRWD has supply capabilities that would be sufficient to meet demands from 2025 to 2045 under the normal, single dry-year, and multiple dry years. Thus, IRWD would continue to be able to utilize imported water supply as needed.

Table 5.11-2: IRWD Supply and Demand with Project Buildout During Normal, Dry, and Multiple Dry Year Scenarios (AF)

Forecast Year	2025	2030	2035	2040	2044
Normal Year					
Maximum Supply Capability	101,911	104,711	104,711	104,711	104,711
Existing Demand	76,467	80,981	83,748	83,958	84,126
Project Demand	76,468	81,430	83,850	84,060	84,228
Cumulative Buildout Demand	76,468	81,430	83,850	84,060	84,228
Reserve Supply with Project	25,443	23,281	20,861	20,651	20,483
Single-Dry Year					
Maximum Supply Capability	99,863	102,663	102,663	102,663	102,663
Existing Demand	81,820	86,649	89,611	89,835	90,015
Project Demand	81,821	87,130	89,719	89,944	90,124
Cumulative Buildout Demand	81,821	87,130	89,719	89,944	90,124
Reserve Supply with Project	18,042	15,532	12,943	12,719	12,539
Multiple-Dry Year					
Maximum Supply Capability	99,863	102,663	102,663	102,663	102,663
Existing Demand	81,820	86,649	89,611	89,835	91,015
Project Demand	81,821	87,130	89,719	89,944	90,125
Cumulative Buildout Demand	81,821	83,173	89,719	89,944	90,124
Reserve Supply with Project	18,042	15,532	12,943	12,719	12,539

Notes: Existing Demand = 756,791 SF nonresidential buildout
Project Demand = 756,791 SF nonresidential buildout and 900 residential dwelling units
Cumulative Buildout Demand = potential demands for all presently undeveloped areas of IRWD based on current general plan information, modified by more specific information available to IRWD, as more fully described in Chapter 2 of IRWD's Water Resources Master Plan (see Appendix F).
Source: Water Supply Assessment, Appendix F

Groundwater: As described previously, 50 percent of IRWD's water supply is groundwater that is pumped from the OC Basin. The OC Basin covers an area of approximately 350 square miles, bordered by the Puente Hills and Chino Hills to the north, the Santa Ana Mountains to the northeast, and the Pacific Ocean to the southwest. The basin boundary extends to the Orange-Los Angeles county line to the northwest. Replenishment supplies for the OC Basin include capture of increasing Santa Ana River flows, purified recycled water, purchases of replenishment water from Metropolitan, and expansion of local supplies (Irvine Ranch Water District, 2021).

The Orange County Water District (OCWD) manages the areas of the Basin that are located within the OCWD boundary under the Orange County Water District Act, Water Code App., Ch 40 (Act). The majority of the groundwater rights of the producers within the Basin have not been adjudicated. IRWD holds an adjudicated right to the use of up to 4,500 acre-feet (AF) of groundwater from the Basin pursuant to a 1933 Judgment that pre-dates the formation of OCWD. This adjudicated water right was quit-claimed to IRWD by the Irvine Company in 2006. The Basin is managed by OCWD for the benefit of municipal, agricultural, and private groundwater producers. OCWD is responsible for the protection of water rights to the Santa Ana River in Orange County as well as the management and replenishment of the Basin. The Irvine sub-basin is located within the OCWD boundary; however, the Lake Forest area sub-basin is outside of the OCWD boundary.

OCWD manages the OC Basin through a Basin Production Percentage (BPP) that is determined each water year based on groundwater conditions, availability of imported water supplies, water year precipitation,

Santa Ana River runoff, and basin management objectives. While there is no legal limit as to how much an agency pumps from the OC Basin, there is a financial disincentive to pump above the BPP. Groundwater production above the BPP is charged a Basin Equity Assessment (BEA) fee. The BEA is set so that the cost of groundwater pumping above the BPP is greater than the cost of imported water. Each year, OCWD sets a target amount of pumping, the BPP, and assesses a BEA on all water pumped above that limit. For example, if the BPP is set at 77 percent for 2023-2024, all pumpers within the Basin, including IRWD, can supply 77 percent of their water needs from groundwater supplies at a cost significantly less than the cost of imported water. If groundwater production is equal to or less than the BPP (i.e., less than 77 percent in the example above), all producers within the Basin pay a replenishment assessment fee which is used to fund groundwater replenishment and recharge programs aimed at ensuring the long-term viability and stability of the Basin. A component of OCWD's BPP policy is to manage the groundwater basin so that the BPP will not fluctuate more than 5 percent from year to year. OCWD anticipates being able to sustain the BPP at 85 percent starting in 2025 (Irvine Ranch Water District, 2021).

Imported Water: Approximately 13 percent of IRWD's potable water needs are met by imported water purchased and supplied by Metropolitan through MWDOC. IRWD receives imported potable water supplies from the Colorado River and the State Water Project (SWP) through Metropolitan's Diemer Filtration Plant and Weymouth Treatment Plant. IRWD also purchases untreated imported water supplied by Metropolitan through MWDOC. Both Metropolitan and MWDOC's 2020 UWMP's describe in detail the assessment and summary of imported water service reliability outlook through 2045. Metropolitan finds that it has supply capabilities sufficient to meet expected demands from 2025 through 2045 in a normal year condition, under a single dry-year condition, and in a period of drought lasting five consecutive water years. IRWD has made conservative estimates of annual imported supplies based on connected imported water delivery capacity from historical use evaluations and based on Metropolitan's stated reliability through 2045. Additionally, IRWD can also recover and deliver supplemental water stored in its water banking projects in Kern County, California, to IRWD's service area under a short-term Metropolitan water supply allocation and major supply interruptions (Irvine Ranch Water District, 2021).

Surface Water: IRWD's local surface water sources are the drainage tributary areas to the Irvine Lake and Harding Canyon Reservoir. On average, approximately 4,000 AFY of local surface water is captured by Irvine Lake for IRWD's use. During dry years, IRWD's annual use of local surface water could be as little as 1,000 AFY. With the completion of the Baker Water Treatment Plant (WTP), local surface water in Irvine Lake can be supplied for treatment as a potable water supply source. The Irvine Lake ownership is 75% to IRWD and 25% to Serrano Water District (SWD) with the right to divert and store up to 28,000 AFY. Local surface water supplies are distributed to IRWD and SWD based on an allocation formula in accordance with a 1928 Agreement, and subsequent amendments and agreements. The 1928 Agreement divides the stored local surface water by a formula which allocates to IRWD one-half of the first 1,000 AF, plus increments that generally yield three-fourths of the amount over 1,000 AF.

The other local surface water supply, or local runoff, available to IRWD is from the Harding Canyon Dam area via the Manning WTP, located in the Santiago Canyon area. The Manning WTP is located approximately 6,000 feet downstream of the Harding Canyon Dam. The Manning WTP has been expanded from an operational flowrate of 300 gallons per minute (gpm) to a 500 gpm capacity. The water supplies available from the Harding Canyon Reservoir are often limited due to dry weather conditions within the drainage area.

Recycled Water: Recycled water meets approximately one third of IRWD's water demands. In 1967, IRWD began sewage collection and tertiary treatment at its Michelson Water Recycling Plant (MWRP). At the time, recycled water was delivered solely to agricultural users. IRWD later expanded recycled water use to include other State-approved uses including landscape irrigation at parks, golf courses, school grounds and play fields, community associations, open space area, and green belts. IRWD eventually made recycled

water available for front and backyard irrigation at large estate-sized residential lots, toilet and urinal flushing at large commercial dual-plumbed buildings, industrial uses, composting, construction dust control, compaction, and cooling tower applications. IRWD's recycled water program has allowed IRWD to reduce its demands for potable imported water and extend its drinking water supplies.

5.11.2.3 WATER THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to:

UT-1 Require or result in the construction of new water facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects; or

UT-2 Have sufficient water supplies available to serve the project and reasonably foreseeable development during normal, dry, and multiple dry years.

HYD-1 Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

HYD-2 Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

5.11.2.4 WATER SERVICE METHODOLOGY

The evaluation of water supply considers the amount of water that would be required to support operation of the proposed Project and compares the demand to IRWD's available water supply to identify if sufficient water supplies are available to serve the proposed Project and reasonably foreseeable development during normal, dry, and multiple dry years. Additionally, the water supply infrastructure in the Project area was identified and evaluated to ensure design capacity would be adequate to supply the Project site, or to identify if expansions would be required to serve the proposed development.

5.11.2.5 WATER ENVIRONMENTAL IMPACTS

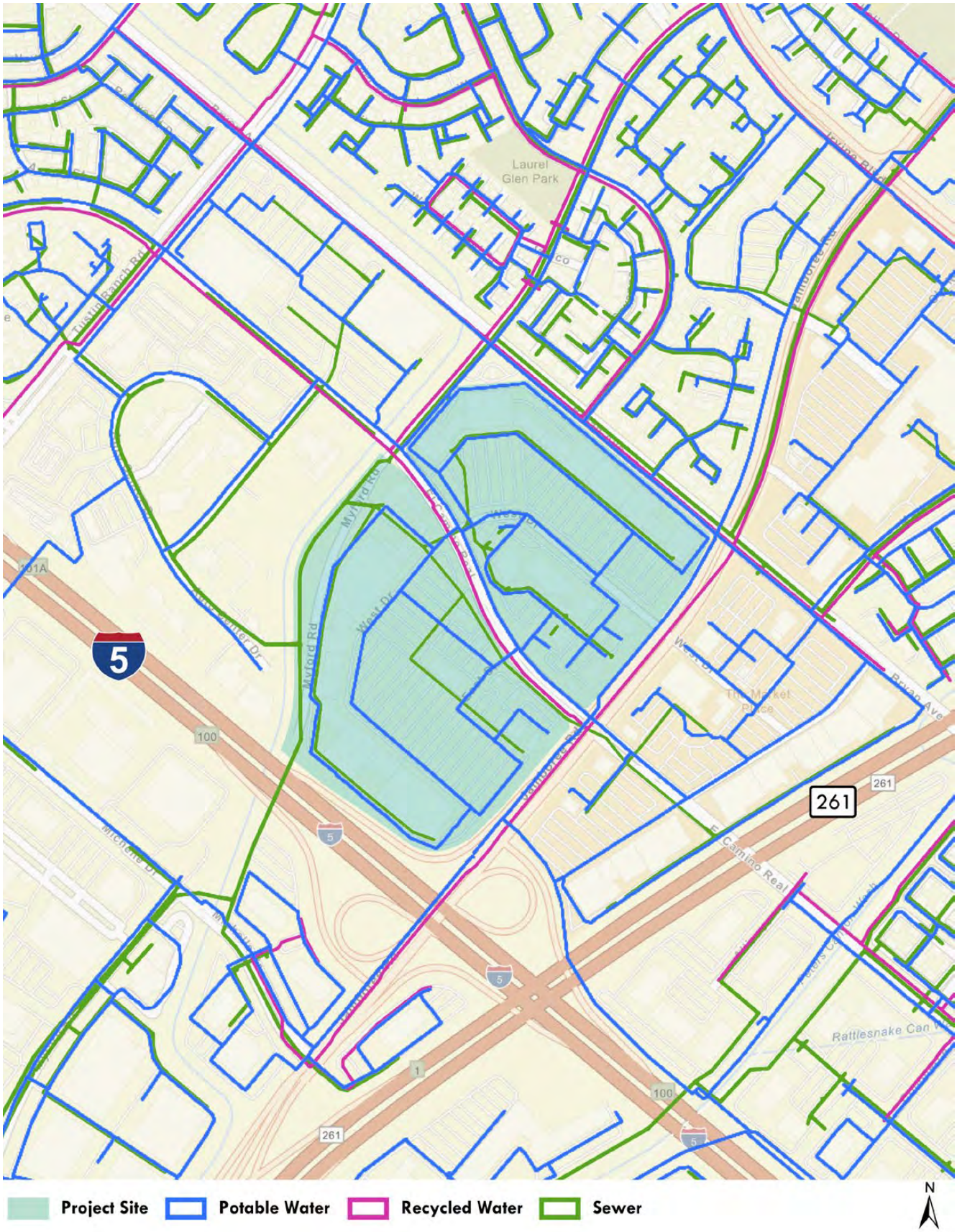
IMPACT UT-1: THE PROJECT WOULD NOT REQUIRE OR RESULT IN THE RELOCATION OR CONSTRUCTION OF NEW WATER FACILITIES, OR EXPANSION OF EXISTING FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS.

Less than Significant Impact with Mitigation. The Project site is currently developed as a commercial site and is surrounded by other commercial developments. The Project would include a GPA and SPA to allow for future development of the Project site with up to 900 housing units within 18 acres on seven parcels, consistent with the City's certified 2021-2029 Housing Element. Additionally, the Project anticipates the future nonresidential capacity buildout of 13,032 SF within the remaining nonresidential-designated area of the Project site. A specific development project is not proposed as part of this Project.

The water facilities currently serving the Project site would likely be sufficient to accommodate the anticipated 13,032 SF of additional nonresidential development proposed by the Project, as the additional nonresidential square footage is already entitled for the Project site and has been previously evaluated. However, future residential projects proposed under the Project could necessitate further water infrastructure, including new water connections, water pumps, and other improvements to water utilities within the existing Project site footprint and within adjacent utility right-of-way beneath Bryan Avenue, Jamboree Road, Tustin Ranch Road, Myford Road, and El Camino Real, as shown in Figure 5.11-1, *Existing Utilities*. Local improvements are anticipated, and extensive offsite utility improvements are not assumed for the Project.

Future implementation of development projects pursuant to the proposed Project would include installation of onsite water infrastructure and new connections to the water distribution system that would be sized to accommodate the increased water demand of new project-specific development on a project-by-project basis. Water supply design specifications for each future site-specific development project would be required to comply with the City of Tustin standards (per the California Building Code) regarding requirements for design and operation of water distribution facilities and would be verified during plan check (PPP UT-1). Additionally, Mitigation Measure UT-1 is incorporated into the Project to require future projects to coordinate with IRWD and prepare a capacity analysis of existing water utilities in the area to ensure conveyance and pressure is adequate. The capacity analysis is required to be reviewed and approved by IRWD and the City prior to the approval of construction permits.

Under the City's normal development review procedure for individual projects, the City determines the actual water system design requirements of each site-specific development project, and the needs for any improvements to the existing water supply infrastructure would be identified and required by the City construction permit. The temporary construction of needed water system improvements would occur along existing pipeline alignments and within existing street rights-of-way, and would be required to comply with all City standards regarding construction noise, air quality and dust suppression mitigation requirements, erosion control (through the required SWPPP) and temporary construction traffic controls. Implementation of PPP HYD-1 would ensure that potential construction impacts related to any needed water line improvements remain less than significant. Further, PPP T-2 is incorporated into the Project to require all utility work occurring as part of future proposed projects to adhere to the traffic control standards specified by the City's latest Standard Plans and Design Standards, which includes the requirement for a Traffic Control Plan during construction, the process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design. As a result, potential impacts related to build out of the proposed Project would not result in construction of new or expanded water facilities that would result in a significant environmental effect. Therefore, impacts would be less than significant.



The Market Place Rezone Project
City of Tustin

Figure 5.11-1

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IMPACT UT-2: IRWD WOULD HAVE SUFFICIENT WATER SUPPLIES AVAILABLE TO SERVE THE PROJECT AND REASONABLY FORESEEABLE DEVELOPMENT DURING NORMAL, DRY, AND MULTIPLE DRY YEARS.

IMPACT HYD-1: THE PROJECT WOULD NOT SUBSTANTIALLY DECREASE GROUNDWATER SUPPLIES OR INTERFERE SUBSTANTIALLY WITH GROUNDWATER RECHARGE SUCH THAT THE PROJECT MAY IMPEDE SUSTAINABLE GROUNDWATER MANAGEMENT OF THE BASIN.

IMPACT HYD-2: THE PROJECT WOULD NOT CONFLICT WITH OR OBSTRUCT IMPLEMENTATION OF A WATER QUALITY CONTROL PLAN OR SUSTAINABLE GROUNDWATER MANAGEMENT PLAN.

Less than Significant Impact. The proposed Project would allow up to 900 residential units and 13,032 SF of non-residential uses, which would result in increased generation of water demand. As described in Section 5.06, *Population and Housing*, the 900 additional residential units would generate 2,592 residents at build out and full occupancy; and the 13,032 SF of non-residential uses is estimated to generate 40 new employees.

Water Supply and Demand

A site-specific WSA was prepared for the proposed Project to identify the water demand of existing buildout of the site without the proposed Project, buildout of the site with the proposed Project, and future cumulative buildout during normal, dry and multiple dry years. As shown in Table 5.15-2, the WSA determined that the proposed Project would result in an increase of one AFY during normal, dry, and multiple dry year scenarios. Additionally, as shown in Table 5.15-2, the WSA determined that with buildout of the Project, IRWD would have sufficient water supplies to serve the Project and cumulative development during normal, dry, and multiple dry year scenarios through 2044. Therefore, implementation of the proposed Project would result in a less than significant impact related to water supplies.

Groundwater

The Project site is fully developed and is nearly 100 percent impervious aside from some landscaped areas. Therefore, implementation of the proposed Project would not change the amount of impervious surface or interfere with the rate of groundwater recharge at the Project site compared to existing conditions. Further, the Project site is not in or near a groundwater recharge area/facility, nor does it represent a source of groundwater recharge. Therefore, the Project would not substantially interfere with groundwater supplies or recharge. Impacts would be less than significant.

OCWD serves as the groundwater manager over the OC Basin and sub-basins. OCWD adopted its first Groundwater Management Plan in 1989. In July 2015, OCWD updated the Groundwater Management Plan; however, this plan has been superseded by the Basin 8-1 Alternative Plan, which was adopted in 2022. As described previously, the Project would not decrease groundwater supplies or interfere substantially with groundwater recharge. Therefore, the Project would not conflict or obstruct the implementation of the Basin 8-1 Alternative Plan. Additionally, groundwater supply and demand is evaluated through the UWMP and reevaluated through the Project-specific WSA which determined groundwater supplies are sufficient to meet the demands of the Project. Therefore, the proposed Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Impacts would be less than significant.

5.11.2.6 WATER CUMULATIVE IMPACTS

The geographic scope of cumulative analysis for water service is the service area of IRWD. Cumulative water supply impacts are associated with the adequacy of the IRWD's primary sources of water which include

groundwater pumped from the Orange County groundwater basin (including the Irvine Subbasin); captured local (native) surface water; recycled sewage; and supplemental imported water supplied by MWD through the MWDOC. As described above, water supplies have been planned through IRWD's 2020 UWMP, which identifies the ability to meet a majority of future water demands through groundwater and imported supplies. IRWD's UWMP and the Project-specific WSA provides projections for water supply and demand through 2044, and shows that in normal, dry, and multiple dry year conditions with anticipated growth in IRWD's service area, IRWD would be able to meet water demand. As a result, cumulative impacts would be less than significant.

5.11.2.7 EXISTING STANDARD CONDITIONS AND PLANS, PROGRAMS, OR POLICIES

Existing Regulations

The following standard regulations would reduce potential impacts related to water:

- California Code of Regulations Title 24, Part 11; the California Green Building Code
- Tustin City Code Article 9, Chapter 7; Water Efficient Landscapes
- Tustin City Code Article 4, Chapter 10; Water Management Plan

Plans, Programs, or Policies

PPP UT-1: California Building Code. All future development constructed under the Project shall be subject to the latest version of the California Building Code (CBC) which outlines regulations for building planning and construction in the state, including occupancy classification, structural design, building materials, infrastructure needs and fire-resistance requirements.

PPP HYD-1 SWPPP. Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB). The permit requirement applies to grading and construction sites of one acre or larger. The Project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site.

PPP T-2: Traffic Control/Utilities. All future development constructed under the Project shall be subject to the traffic control standards specified by the City's latest *Standard Plans and Design Standards*, which includes the requirement for Traffic Control Plan during construction, the process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design.

5.11.2.8 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

With implementation of Mitigation Measure UT-1 and existing regulatory requirements that would be ensured through the City's development permitting process, Impact UT-1 would be less than significant. With implementation of existing regulatory requirements that would be ensured through the City's development permitting process, Impacts UT-2, HYD-1 and HYD-2 would be less than significant.

5.11.2.9 WATER MITIGATION MEASURES

MM UT-1 Future proposed Projects shall prepare capacity analyses of existing sewer and water utilities in the area to ensure conveyance and pressure is adequate for future projects

proposed. The developer shall then identify infrastructure improvements necessary for the proposed development. The developer will be responsible for preparing a capacity analysis and submitting it to IRWD in coordination with the City. The capacity analysis and infrastructure improvements shall be reviewed and approved by IRWD and the City prior to approval of the construction permit.

5.11.2.10 WATER LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant unavoidable adverse impacts related to water supplies or water infrastructure would occur.

5.11.3 WASTEWATER

5.11.3.1 WASTEWATER REGULATORY SETTING

National Pollution Discharge Elimination System Permit

The NPDES permit system was established in the Federal Clean Water Act to regulate both point source discharges (a municipal or industrial discharge at a specific location or pipe) and nonpoint source discharges (diffuse runoff of water from adjacent land uses) to surface waters of the U.S. For point source discharges, such as sewer outfalls, each NPDES permit contains limits on allowable concentrations and mass emissions of pollutants contained in the discharge.

State Water Resources Control Board Statewide General Waste Discharge Requirements for Sewer Systems

The Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (SWRCB Order No 2006-0003-DWQ) applies to sanitary sewer systems that are greater than one mile long and collect or convey untreated or partially treated wastewater to a publicly owned treatment facility. The goal of Order No. 2006-0003 is to provide a consistent statewide approach for reducing Sanitary Sewer Overflows (SSOs), which are accidental releases of untreated or partially treated wastewater from sanitary sewer systems, by requiring that:

1. In the event of an SSO, all feasible steps be taken to control the released volume and prevent untreated wastewater from entering storm drains, creeks, etc.
2. If an SSO occurs, it must be reported to the SWRCB using an online reporting system developed by the SWRCB.
3. All publicly owned collection system agencies with more than one mile of sewer pipe in the state must develop a Sewer System Management Plan (SSMP), which must be updated every five years.

The IRWD updated its SSMP in 2018 in compliance with these requirements.

City of Tustin General Plan

The Tustin General Plan does not contain goals and policies related to wastewater.

East Tustin Specific Plan

Section 2.5 – Sewer Concept Plan: The ETSP area is located within the boundaries of the IRWD. At the time the ETSP was adopted, the area was undeveloped and used for agricultural purposes, therefore there were no sewers located in the ETSP area at the time of adoption. The ETSP was studied as part of the December 1979 IRWD Master Plan Sewer System. The ETSP planned for sewers to be extended into the ETSP area

from existing IRWD sewers located immediately downstream of the ETSP area. At the time the ETSP was adopted, the major facility planned for the area was the Harvard Trunk Sewer which was planned to sewer the entire ETSP service area and convey raw wastewater to the County Sanitation District of Orange County. The ETSP considered alignment of the Harvard Trunk Sewer northerly along Myford Rood to Portola Parkway and then along the planned residential estate area. In addition, the ETSP considered sewer mains would require extension westerly from the Harvard Trunk Sewer along the Santa Ana Freeway, Bryan Avenue and Irvine Boulevard in order to provide sewer to the west side of the ETSP area. Estimated pipe sizes ranged from 12 inches to 27 inches.

5.11.3.2 WASTEWATER ENVIRONMENTAL SETTING

IRWD collects and treats nearly all the sewage generated within the IRWD service area. Sewage collected through IRWD's system is sent to one of the two IRWD water recycling plants, the Michelson Water Recycling Plant (MWRP) or the Los Alisos Water Recycling Plant (LAWRP). The majority of the sewage generated in IRWD's service area is treated to disinfected, tertiary recycled water standards. It is used within the service area for non-potable purposes thus offsetting potable water demands.

The permitted tertiary treatment capacity of MWRP is currently 28.0 million gallons per day (mgd). The permitted tertiary treatment capacity of LAWRP is currently 5.5 mgd. In 2020, IRWD treated approximately 26,335 AF of wastewater (Irvine Ranch Water District, 2021).

Wastewater from the Project site is treated at the MWRP. In 2020, MWRP collected 22,575 AF (20.2 mgd) for treatment (Irvine Ranch Water District, 2021). Therefore, the MWRP has a residual capacity of 7.8 mgd.

5.11.3.3 WASTEWATER THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to:

UT-3 Require or result in the construction of new wastewater facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects; or

UT-4 Result in a determination by the wastewater treatment provider that would serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

5.11.3.4 WASTEWATER SERVICE METHODOLOGY

The evaluation of wastewater infrastructure quantifies the amount of wastewater that would be generated from operation of the proposed Project and compares the demand to the existing and planned sewer infrastructure in the Project area and wastewater treatment plant that treats flows from the Project site. The evaluation identifies if expansions would be required to serve the proposed development, and if those expansions have the potential to result in an environmental impact.

5.11.3.5 WASTEWATER ENVIRONMENTAL IMPACTS

IMPACT UT-3: THE PROJECT WOULD NOT REQUIRE OR RESULT IN THE RELOCATION OR CONSTRUCTION OF NEW WASTEWATER FACILITIES, OR EXPANSION OF EXISTING FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS.

Less than Significant Impact with Mitigation. The Project site is currently developed as a commercial site and is surrounded by other commercial developments. The Project would include a GPA and SPA to allow

for future development of the Project site with up to 900 housing units within 18 acres on seven parcels, consistent with the City's certified 2021-2029 Housing Element. Additionally, the Project anticipates the future nonresidential capacity buildout of 13,032 SF within the remaining nonresidential-designated area of the Project site. No development is proposed as part of this Project.

The wastewater facilities currently serving the Project site would likely be sufficient to accommodate the anticipated 13,032 SF of additional nonresidential development propose by the Project, as the additional nonresidential square footage is already entitled for the Project site and has been previously evaluated. However, future residential projects proposed under the Project could necessitate further wastewater infrastructure, including new wastewater connections, sewer pumps, and other improvements to wastewater utilities within the existing Project site footprint and within adjacent utility right-of-way beneath Bryan Avenue, Jamboree Road, Tustin Ranch Road, Myford Road, and El Camino Real, as shown in Figure 5.11-1, *Existing Utilities*. Local improvements are anticipated, and extensive offsite utility improvements are not assumed for the Project.

Future implementation of development projects pursuant to the proposed Project would include installation of onsite wastewater infrastructure and new connections to the wastewater distribution system that would be sized to accommodate the increased wastewater demand of new project-specific development on a project-by-project basis. Wastewater supply design specifications for each future site-specific development project would be required to comply with the City of Tustin standards (per the California Building Code) regarding requirements for design and operation of wastewater distribution facilities and would be verified during plan check (PPP UT-1). Additionally, Mitigation Measure UT-1 is incorporated into the Project to require future projects to coordinate with IRWD and prepare a capacity analysis of existing wastewater utilities in the area to ensure conveyance and pressure is adequate. The capacity analysis is required to be reviewed and approved by IRWD and the City prior to the approval of construction permits.

Under the City's normal development review procedure for individual projects, the City determines the actual wastewater system design requirements of each site-specific development project, and the needs for any improvements to the existing wastewater supply infrastructure would be identified and required by the City construction permit. The temporary construction of needed wastewater system improvements would occur along existing pipeline alignments and within existing street rights-of-way, and construction sites and would be required to comply with all City standards regarding construction noise, air quality and dust suppression mitigation requirements, erosion control (through the required SWPPP) and temporary construction traffic controls. Implementation of PPP HYD-1 would ensure that potential construction impacts related to any needed water line improvements remain less than significant. Further, PPP T-2 is incorporated into the Project to require all utility work occurring as part of future proposed projects to adhere to the traffic control standards specified by the City's latest Standard Plans and Design Standards, which includes the requirement for Traffic Control Plan during construction, the process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design. As a result, potential impacts related to buildout of the proposed Project would not result in construction of new or expanded wastewater facilities that would result in a significant environmental effect. Therefore, impacts would be less than significant.

IMPACT UT-4: THE PROJECT WOULD RESULT IN A DETERMINATION BY THE WASTEWATER TREATMENT PROVIDER THAT WOULD SERVE THE PROJECT THAT IT HAS ADEQUATE CAPACITY TO SERVE THE PROJECTS PROJECTED DEMAND IN ADDITION TO EXISTING COMMITMENTS.

Less than Significant Impact with Mitigation. Future buildout of the proposed Project would result in increased wastewater generation from the site. Using IRWD's land use and water use factors, residential uses use approximately 100 gallons per dwelling unit per day (gal/DU/day) and non-residential uses use approximately 142 gallons per 1,000 SF per day (gal/ksf/day) (M. Lindsay, personal communication, March 20, 2024). Therefore, the estimated 900 residential dwelling units and 13,032 SF of nonresidential

employees would generate an additional wastewater demand of 91,851 gallons per day or 102.95 acre-feet per year (AFY).

Wastewater from the Project Site is treated at the Michelson Water Reclamation Plant (MWRP), which has a treatment capacity of 28 million gallons per day (mgd) (Irvine Ranch Water District, 2021). In 2020, MWRP collected 22,575 AF (20.2 mgd) for treatment (Irvine Ranch Water District, 2021). Therefore, the MWRP has a residual capacity of 7.8 mgd.

Thus, the amount of wastewater that would be generated by the proposed Project is less than 1 percent of MWRP's total remaining daily treatment capacity. As a result, the wastewater treatment plant serving the Project would have adequate capacity to serve the proposed Project's demand in addition to existing service commitments, and impacts would be less than significant.

Additionally, Mitigation Measure UT-1 is incorporated into the Project to require future projects to coordinate with IRWD and prepare a capacity analysis of existing wastewater utilities in the area to ensure conveyance and pressure is adequate. The capacity analysis is required to be reviewed and approved by IRWD and the City prior to the approval of construction permits. With implementation of Mitigation Measure UT-1, impacts would be less than significant.

5.11.3.6 WASTEWATER CUMULATIVE IMPACTS

Cumulative wastewater infrastructure impacts are considered on a systemwide basis and are associated with the overall capacity of existing and planned infrastructure. The cumulative system evaluated includes the sewer system and the conveyance system through wastewater disposal at the IRWD Reclamation Plants. As described previously, with the proposed Project, the sewer system would have sufficient capacity to handle the increased flows resulting from implementation of the proposed Project. The continued regular assessment, maintenance, and upgrades of the sewer system by IRWD would reduce the potential of cumulative development projects to result in a cumulatively substantial increase in wastewater such that new or expanded facilities would be required. Thus, increases in wastewater in the sewer system would result in a less than significant cumulative impact.

5.11.3.7 EXISTING STANDARD CONDITIONS AND PLANS, PROGRAMS, OR POLICIES

Existing Regulations

- California Code of Regulations Title 24, Part 11; the California Green Building Code

Plans, Programs, or Policies

PPP UT-1: California Building Code. All future development constructed under the Project shall be subject to the latest version of the California Building Code (CBC) which outlines regulations for building planning and construction in the state, including occupancy classification, structural design, building materials, infrastructure needs and fire-resistance requirements.

PPP HYD-1 SWPPP. Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB). The permit requirement applies to grading and construction sites of one acre or larger. The Project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site.

PPP T-2: Traffic Control/Utilities. All future development constructed under the Project shall be subject to the traffic control standards specified by the City's latest *Standard Plans and Design Standards*, which includes the requirement for Traffic Control Plan during construction, the process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design.

5.11.3.8 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impacts UT-3 would be potentially significant and UT-4 would be less than significant.

5.11.3.9 WASTEWATER MITIGATION MEASURES

MM UT-1 See above.

5.11.3.10 WASTEWATER LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant unavoidable adverse impacts related to wastewater infrastructure would occur.

5.11.4 DRAINAGE

5.11.4.1 DRAINAGE REGULATORY SETTING

Santa Ana Regional Municipal Separate Storm Sewer System Permit

The Municipal Separate Storm Sewer System (MS4) Permit (Order No. R8-2009-0030) for the Santa Ana Region regulates urban runoff from areas under jurisdiction of the Permit's various permittees, which include Orange County, Orange County Flood Control District, and the incorporated cities within Orange County including the City of Tustin. When discharged, urban runoff (or stormwater) has the potential to mix with and carry various pollutants into receiving waters. The Permit lists allowable and unallowable discharges and requires implementation of low impact development (LID) infrastructure, which are engineered facilities that are designed to retain and/or biotreat runoff on the project site. Developments that qualify as New Development or Significant Redevelopment projects are considered priority projects and are required to develop a site-specific water quality management plan (WQMP), which includes site design, source control, and treatment control elements to reduce the discharge of pollutants in runoff. The WQMP is required to be approved prior to the issuance of a building or grading permit, and post-construction best management practices (BMPs) are required to be implemented. The MS4 Permit requires priority projects to infiltrate, harvest and use, evapotranspire, or biotreat/biofilter, the 85th percentile of a 24-hour storm event (Design Capture Volume). The MS4 Permit also requires the evaluation and use of LID features using the following hierarchy of treatment: infiltration, evapotranspiration, harvest/reuse, and biotreatment.

Biotreatment BMPs are a broad class of LID BMPs that reduce stormwater volume to the maximum extent practicable, treat stormwater using a suite of treatment mechanisms characteristic of biologically active systems, and discharge water to the downstream storm drain system or directly to receiving waters. Treatment mechanisms include media filtration (through biologically-active media), vegetative filtration (straining, sedimentation, interception, and stabilization of particles resulting from shallow flow through vegetation), general sorption processes (i.e., absorption, adsorption, ion exchange, precipitation, surface complexation), biologically-mediated transformations, and other processes to address both suspended and dissolved constituents. Examples of biotreatment BMPs include bioretention with underdrains, vegetated swales, constructed wetlands, and proprietary biotreatment systems.

County of Orange Drainage Area Management Plan

The Drainage Area Management Plan (DAMP) is the County's primary policy, planning and implementation document for NPDES Permit compliance. The DAMP describes the agreements, structures and programs that:

- Provide the framework for the program management activities and plan development;
- Provide the legal authority for prohibiting unpermitted discharges into the storm drain system and for requiring BMPs in new development and significant redevelopment;
- Ensure that all new development and significant redevelopment incorporates appropriate Site Design, Source Control, and Treatment Control BMPs to address specific water quality issues;
- Ensure that construction sites implement control practices that address construction related pollutants including erosion and sediment control and onsite hazardous materials and waste management.

The DAMP requires that new development and significant redevelopment projects (or priority projects) develop and implement a Preliminary WQMP that includes BMPs and LID design features that would provide onsite treatment of stormwater to prevent pollutants from onsite uses from leaving the site. The WQMP is required to be prepared in accordance with the North Orange County Technical Guidance Document (TGD), which is provided as exhibit 7.III to the DAMP.

City of Tustin General Plan

The City's General Plan Land Use Element and Conservation, Open Space, and Recreation Element include the following policy related to drainage facilities:

Land Use Element

Goal 8: **Ensure that necessary public facilities and services should be available to accommodate development proposed on the Land Use Policy Map.**

Policy 8.5: Continue to make incremental improvements to the flood control and drainage system.

Conservation, Open Space, and Recreation Element

Goal 8: **Conserve and protect significant topographical features, important watershed areas, resources, and soils.**

Policy 8.2 Control erosion during and following construction through proper grading techniques, vegetation replanting, and the installation of proper drainage improvements.

Tustin City Code

Article 4, Chapter 8 – Floodplain Management.

Article 4, Chapter 9, Section 4902 - Control of Urban Runoff. This code section states that all new development and significant redevelopment within the City shall be undertaken in accordance with the County Drainage Area Management Plan (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 storm water runoff from the project site. Prior to the issuance by the City of a grading permit, building permit or nonresidential plumbing permit for any new development or significant redevelopment, the City Community Development Department shall review the project plans and impose terms, conditions, and requirements on the project.

East Tustin Specific Plan

Section 2.4 – Drainage/Flood Control Concept Plan:

Peters Canyon Wash and Tributaries

At the time the ETSP was adopted, stormwater runoff from a 100-year storm event was conveyed to the existing Peters Canyon Channel. The ETSP also discussed that Flood Insurance Rate Maps (FIRM) indicate that stormwater flows in excess of the 100-year storm event could breach the existing Peters Canyon Channel within the ETSP. However, the excess stormwater runoff would flow to the south towards the El Modena-Irvine Channel.

The ETSP considered that development of the ETSP area would require improvement to portions of Peters Canyon Wash and tributaries within the ETSP area in order to adequately convey the flood waters, limit the meandering and erosion presently occurring along the channel and protect roadways adjacent to the channels. Today, Peters Canyon Wash exists as a trapezoidal rock riprap lined channel with a soft bottom. The City cooperates with the Orange County Flood Control District to plan and make needed improvements or modifications to Peters Canyon Channel to enable it to carry runoff from a 100-year storm.

El Modena-Irvine Channel

At the time the ETSP was adopted, the El Modena-Irvine Channel existed as an earthen trapezoidal channel along the northerly side of Bryan Avenue easterly of Browning Avenue and required improvements to confine stormwater overflows. Today the Channel exists as a concrete lined channel.

5.11.4.2 DRAINAGE ENVIRONMENTAL SETTING

Storm Drainage Facilities

The Project site currently drains into the City's stormwater sewer system via a series of culverts and drains and catch basins. Stormwater drains confluence at the southwest corner of the site and discharges into the existing Orange County Flood Control District (OCFCD) facility, El Modena-Tustin Channel, a concrete lined channel that runs along the west side of the Project site. Because the site is currently almost entirely paved, future development would increase intensity of development, but would not result in additional impervious surfaces that could increase the volume and velocity of stormwater runoff.

5.11.4.3 DRAINAGE THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to:

UT-5 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.

5.11.4.4 DRAINAGE METHODOLOGY

The evaluation of stormwater drainage infrastructure quantifies the amount of impervious surfaces and stormwater runoff that would be generated from the proposed Project and identifies if runoff from the proposed Project would be accommodated by the existing stormwater drainage infrastructure. The evaluation identifies if expansions would be required to serve the proposed development, and if those expansions have the potential to result in an environmental impact.

5.11.4.5 DRAINAGE ENVIRONMENTAL IMPACTS

IMPACT UT-5: THE PROJECT WOULD NOT REQUIRE OR RESULT IN THE RELOCATION OR CONSTRUCTION OF NEW DRAINAGE FACILITIES, OR EXPANSION OF EXISTING FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS.

Less than Significant Impact. The Project site is currently developed as a commercial site and is surrounded by other commercial developments. The Project would include a GPA and SPA to allow for future development of the Project site with up to 900 housing units within 18 acres on seven parcels, consistent with the City's certified 2021-2029 Housing Element. Additionally, the Project anticipates the future nonresidential capacity buildout of 13,032 SF within the remaining nonresidential-designated area of the Project site. No development is proposed as part of this Project.

The Project site is fully developed and is nearly 100 percent impervious aside from some landscaped areas. Therefore, implementation of the proposed Project would not change the amount of impervious surface and would not substantially change the amount of storm water runoff and is not anticipated to exceed capacity of the existing stormwater drainage system.

Future implementation of development projects pursuant to the proposed Project would include installation of onsite storm drain infrastructure and new connections to the existing storm drain system that would be sized to accommodate the storm drain water demand of new project-specific development on a project-by-project basis. Local improvements are anticipated, and extensive offsite utility improvements are not assumed for the Project.

Additionally, the City's MS4 permit and County Drainage Area Management Plan (DAMP) require new development projects to prepare a WQMP (PPP HYD-3) that is required to include BMPs to reduce the potential of stormwater pollutants through site design and structural treatment control BMPs. As part of the permitting approval process, the proposed drainage and water quality design and engineering plans would be reviewed by the City's Engineering Division to ensure that the site-specific design limits the potential for sources of polluted runoff. Overall, adherence to the existing regulations would ensure that impacts as a result of future development related to stormwater runoff would be less than significant.

Under the City's normal development review procedure for individual projects, the City determines the actual storm drain system design requirements of each site-specific development project, and the needs for any improvements to the existing water supply infrastructure would be identified and required by the City construction permit. The temporary construction of needed storm drain system improvements would occur along existing pipeline alignments and within existing street rights-of-way, and would be required to comply with all City standards regarding construction noise, air quality and dust suppression mitigation requirements, erosion control (through the required SWPPP) and temporary construction traffic controls. Implementation of PPP HYD-1 would ensure that potential construction impacts related to any needed water line improvements remain less than significant. Further, PPP T-2 is incorporated into the Project to require all utility work occurring as part of future proposed projects to adhere to the traffic control standards specified by the City's latest Standard Plans and Design Standards, which includes the requirement for Traffic Control Plan during construction, the process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design. As a result, potential impacts related to buildout of the proposed Project would not result in construction of new or expanded stormwater drainage facilities that would result in a significant environmental effect.

Further, the Project site is included in the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Map Number 06059C0161J (Federal Emergency Management Agency, 2009). The southern portion of the Project site is within an area designated as Zone AH, a Special Flood Hazard Area

subject to inundation by the one percent annual chance flood with a flood depth of one to three feet. Therefore, the Project would facilitate the development of housing within a flood zone.

The City of Tustin Municipal Code, Chapter 8, *Floodplain Management*, includes requirements for residential and nonresidential development within a flood hazard zone (PPP HYD-4). Requirements include measures to avoid potential hazards from flooding, such as ensuring the bottom floor of the structure is raised above the flood elevation and anchoring structures to prevent shifting. Future development would be required to comply with all local and state requirements for the construction of residential and nonresidential development within a flood hazard zone. Implementation of the City's floodplain management design requirements would ensure future development does not impede or redirect existing flood flows. As described above, the Project site is currently completely developed and completely paved, with the exception of some ornamental landscaped areas. Therefore, future development would not result in additional impervious surfaces that could increase the volume and velocity of stormwater runoff that would exacerbate flood conditions. Therefore, impacts would be less than significant.

5.11.4.6 DRAINAGE CUMULATIVE IMPACTS

The geographic scope for cumulative impacts related to stormwater drainage includes the geographic area served by the existing stormwater infrastructure for the Project area, from capture of runoff through final discharge points. As described above, the proposed Project would not cause a substantial change in the amount of stormwater runoff from the Project site. As a result, the proposed Project would not generate additional runoff that could combine with runoff from cumulative projects that could cumulatively combine to impact drainage. Thus, cumulative impacts related to drainage would be less than significant.

5.11.4.7 EXISTING REGULATIONS AND PLANS, PROGRAMS OR POLICIES

Plans, Programs or Policies

PPP HYD-1 SWPPP. Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB). The permit requirement applies to grading and construction sites of one acre or larger. The Project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site.

PPP HYD-3 WQMP. Prior to the approval of the Grading Plan and issuance of Grading Permits a completed Water Quality Management Plan (WQMP) shall be prepared by the Project applicant and submitted to and approved by the City Public Works Department. The WQMP shall identify all Post-Construction, Site Design. Source Control, and Treatment Control Best Management Practices (BMPs) that will be incorporated into the development Project in order to minimize the adverse effects on receiving waters.

PPP HYD-4 Flood Hazard. Prior to the approval of the Grading Plan and issuance of Grading Permits the City engineer shall ensure that the project complies with the requirements within Chapter 8, Floodplain Management, of Tustin City Code Chapter 8, and any additional applicable requirements related to the applicable flood zone.

PPP T-2: Traffic Control/Utilities. All future development constructed under the Project shall be subject to the traffic control standards specified by the City's latest *Standard Plans and Design Standards*, which includes the requirement for Traffic Control Plan during construction, the process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design.

5.11.4.8 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impact UT-5 would be less than significant.

5.11.4.9 DRAINAGE MITIGATION MEASURES

No new mitigation measures are required for the proposed Project.

5.11.4.10 DRAINAGE LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant unavoidable adverse impacts related to drainage would occur.

5.11.5 SOLID WASTE

5.11.5.1 SOLID WASTE REGULATORY SETTING

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act of 1976 (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.

California Assembly Bill 939

The California Integrated Waste Management Act (AB 939) made all California cities, counties, and approved regional solid waste management agencies responsible for enacting plans and implementing programs to divert 25 percent of their solid waste by 1995 and 50 percent by year 2000. Later legislation mandates the 50 percent diversion requirement be achieved every year.

California Assembly Bill 341

On October 6, 2011, Governor Brown signed AB 341 establishing a state policy goal that no less than 75 percent of solid waste generated be source reduced, recycled, or composted by 2020, and requiring CalRecycle to provide a report to the Legislature that recommends strategies to achieve the policy goal. AB 341 also requires businesses and multi-family residential dwellings of five units or more, that generate four or more cubic yards of commercial solid waste per week to implement recycling programs.

California Assembly Bill 1826

On September 28, 2014, Governor Brown signed AB 1826 requiring businesses to recycle their organic waste on and after April 1, 2016, dependent on the amount of waste generated per week. This law requires that local jurisdictions implement an organic waste recycling program to divert organic waste generated by businesses and multifamily residential dwellings that consist of five or more units.

California Assembly Bill 827

Signed into law by Governor Newsom in 2019, AB 827 requires businesses subject to AB 1826 and AB 341 starting July 1, 2020, to provide customers with easily accessible recycling and organics collection bins or containers to collect these materials generated from products purchased on the premises.

California Senate Bill 1383

On September 19, 2016, Governor Brown signed SB 1383 establishing regulations aimed to reduce organic waste disposal 75 percent and reduce least 20 percent of currently disposed surplus edible food by 2025. The intent of the law is to reduce methane, increase landfill usage, and provide additional food sources for Californians.

California Green Building Standards

Section 5.408.1 Construction waste diversion. Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste.

Section 5.410.1 Recycling by occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals, or meet a lawfully enacted local recycling ordinance, if more restrictive.

City of Tustin General Plan

The City's General Plan Conservation/Open Space/Recreation Element contains the following goals and policies related to solid waste services.

Goal 10: **Reduce solid waste produced within City.**

Policy 10.1: Implement policies of the adopted Tustin Source Reduction and Recycling Element and Household Hazardous Waste Management Element.

Policy 10.2: Ensure that the City diverts from landfills a maximum of 50% of the solid waste generated in the City as required by the California Integrated Waste Management Board.

Policy 10.3: Maximize public awareness of all source reduction programs, including opportunities for community feedback and school education.

Policy 10.4: Maximize integration of all source reduction programs.

Policy 10.5: Assist in the development of local, regional, and statewide markets for materials collected and processed through the source reduction programs.

Tustin City Code

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). It also covers the provisions of the Mandatory Commercial Recycling requirements detailed in AB 341, the Mandatory Commercial Organics Recycling requirements detailed in AB 1826, the Mandatory Organics Collection requirements detailed in SB 1383 and Customer Access to Recycling requirements detailed in AB 827.

5.11.5.2 SOLID WASTE ENVIRONMENTAL SETTING

The two closest landfills to the Project site are the Frank R. Bowerman Landfill in Irvine and the Olinda Alpha Sanitary Landfill in Brea. The Frank Bowerman Landfill is permitted to accept 11,500 tons per day of solid waste and is permitted to operate through 2053. In January 2024, the maximum tonnage received was 8,710.78 tons. Thus, the facility had additional capacity of 2,789.22 tons per day (CalRecycle, 2024). Per a Solid Waste Facility Permit (SWFP) issued on July 8, 2021, the Olinda Alpha Sanitary Landfill is permitted

to receive 10,000 tons per day for 36 days of the year and is permitted to receive 8,000 tons per day for the other 271 days of the year. The Olinda Alpha Sanitary Landfill is permitted to operate through 2036. In January 2024, the maximum tonnage received was 8,404 tons, which is below the 10,000 tons per day that the facility is allowed to receive for 36 days of the year (CalRecycle, 2024). Thus, the Olinda Alpha Sanitary Landfill has additional capacity to accept solid waste that may be generated by the Project.

5.11.5.3 SOLID WASTE THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to:

UT-6 Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

UT-7 Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

5.11.5.4 SOLID WASTE METHODOLOGY

Solid waste generation from construction and operation of the proposed Project was estimated using USEPA and CalRecycle solid waste generation factors derived for multi-family residential and commercial uses. Solid waste volumes were then compared with recent estimates of remaining disposal capacity of the landfill serving the City. In addition, potential impacts related to compliance with solid waste regulations were evaluated by identifying how the proposed Project would implement the relevant requirements.

5.11.5.5 SOLID WASTE ENVIRONMENTAL IMPACTS

IMPACT UT-6: THE PROJECT WOULD NOT GENERATE SOLID WASTE IN EXCESS OF STATE OR LOCAL STANDARDS, OR IN EXCESS OF THE CAPACITY OF LOCAL INFRASTRUCTURE, OR OTHERWISE IMPAIR THE ATTAINMENT OF SOLID WASTE REDUCTION GOALS.

IMPACT UT-7: THE PROJECT WOULD COMPLY WITH FEDERAL, STATE, AND LOCAL STATUTES AND REGULATIONS RELATED TO SOLID WASTE.

Less than Significant Impact.

The Project does not propose a specific development project; however, the Project would facilitate future residential development within the Project site where it is not currently permitted. As such, future development within the Project site would generate an incremental increase in solid waste volumes requiring off-site disposal during short-term construction and long-term operational activities. Users of solid waste collection and disposal services would be required to pay service fees to the City's waste collection provider. As discussed above, solid waste generated by future development within the Project site could be disposed of at the Frank R. Bowerman Landfill and Olinda Alpha Sanitary Landfill.

No specific development is proposed at this time; however, implementation of the proposed Project could result in the construction of 900 residential units and 13,032 SF of nonresidential development.

Construction

Future implementing project construction would generate solid waste for landfill disposal in the form of packaging and discarded materials that would be removed from the site. Construction waste would be properly characterized as required by law and recycled or disposed of at an appropriate type of landfill for such materials. Section 5.408.1 of the 2022 California Green Building Standards Code requires

demolition and construction activities to recycle or reuse a minimum of 65 percent of the nonhazardous construction and demolition waste. Thus, the construction solid waste that would be disposed of at the landfill would be approximately 35 percent of the waste generated. As described above, Frank Bowerman Landfill is permitted to accept 11,500 tons per day of solid waste and the Olinda Alpha Sanitary Landfill is permitted to receive 10,000 tons per day for 36 days of the year and is permitted to receive 8,000 tons per day for the other 271 days of the year. Both of these landfills would be able to accommodate the construction solid waste from the proposed Project. Therefore, impacts related to landfill facilities from construction activities would be less than significant.

Operation

Using solid waste generation rates provided by CalEEMod, operation of the proposed Project at buildout would generate approximately 238.7 tons of solid waste per year, at least 75 percent of which is required by California law to be recycled, which would reduce the volume of landfilled solid waste to approximately 59.7 tons per year, or 1.1 tons per week, as shown on Table 5.15-3.

Table 5.11-3: Solid Waste Demand from Operation of the Proposed Project

Land Use	Quantity	Generation Rate	Solid Waste Demand
Residential	900 units	0.25 tons/unit/year	225 tons per year
Nonresidential	13,032 SF	1.05 tons/1,000 SF/year	13.7 tons per year
Total Solid Waste			**238.7 tons per year**
Annual Landfill Disposal with AB 341 (75% Reduction)			**59.7 tons per year**
Weekly Landfill Disposal with AB 341 (75% Reduction)			**1.1 tons per week**

Source: 2022.1 CalEEMod Solid Waste Generation Rates

As described above, Frank Bowerman Landfill is permitted to accept 11,500 tons per day of solid waste and the Olinda Alpha Sanitary Landfill is permitted to receive 10,000 tons per day for 36 days of the year and is permitted to receive 8,000 tons per day for the other 271 days of the year. Both of these landfills would be able to accommodate the operational solid waste from future development under the proposed Project. Thus, future development under the proposed Project would be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs and the proposed Project would not impair the attainment of solid waste reduction goals. Thus, impacts related to landfill capacity would be less than significant.

Future implementing projects would also be subject to Section 5.408.1 of the 2022 California Green Building Standards Code that requires demolition and construction activities to recycle or reuse a minimum of 65 percent of the nonhazardous construction and demolition waste. Furthermore, future implementing projects would be required to comply with all applicable State and local waste diversion requirements, including AB 939, AB 341, AB 1836, AB 827 and SB 1383. Therefore, the proposed Project would comply with all solid waste statute and regulations; and impacts would be less than significant.

5.11.5.6 SOLID WASTE CUMULATIVE IMPACTS

Cumulative projects in the area would increase solid waste generation and decrease the available capacity of the nearby landfills. However, as with the proposed Project, cumulative projects have been or would be required to conduct an environmental review and would be required to adhere to solid waste regulations, which are aimed at reducing overall solid waste levels. Furthermore, both the Frank R. Bowerman landfill and the Olinda Alpha Landfill are forecasted to have sufficient capacity to serve current and future needs

until their scheduled closures in December 2053 and December 2036, respectively. Therefore, the increase in solid waste from future buildout of the proposed Project would be less than cumulatively considerable and would be less than significant.

5.11.5.7 EXISTING STANDARD CONDITIONS AND PLANS, PROGRAMS, OR POLICIES

The following standard regulations would reduce potential impacts related to solid waste:

- California Green Building Standards Code
- Assembly Bill 939 (Chapter 1095, Statutes of 1989)
- Assembly Bill 341 (Chapter 476, Statutes of 2011)
- Assembly Bill 1826 (Chapter 727, Statutes of 2014)
- Assembly Bill 827
- Senate Bill 1383 (Chapter 395, Statutes of 2016)
- Tustin City Code Article 4, Chapter 3, Part 1

5.11.5.8 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impacts UT-6 and UT-7 would be less than significant.

5.11.5.9 SOLID WASTE MITIGATION MEASURES

No new mitigation measures are required for the proposed Project.

5.11.5.10 SOLID WASTE LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant unavoidable adverse impacts related to solid waste would occur.

5.11.6 DRY UTILITIES

5.11.6.1 DRY UTILITIES REGULATORY SETTING

Title 24 Energy Efficiency Standards and California Green Building Standards

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code (CalGreen) is updated every three years. The most recent update is the 2022 California Green Building Code Standards that became effective January 1, 2023. The 2022 CALGreen standards that are applicable to the proposed Project include, but are not limited to, the following:

- Electric vehicle charging stations. Facilitate the future installation of electric vehicle supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load.
- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Title 24 Part 6 Table 5.106.8.
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads).
- Outdoor portable water use in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient (MWELO), whichever is more stringent.

City of Tustin General Plan

The City's General Plan Land Use Element contains the following policy related to dry utilities.

Goal 8: **Ensure that necessary public facilities and services should be available to accommodate development proposed on the Land Use Policy Map.**

Policy 8.6: Encourage planned improvements to electricity, natural gas, and communication service systems.

East Tustin Specific Plan

Section 2.7 – Utilities

Electricity
Southern California Edison (SCE) provides electrical service to the ETSP area. Existing facilities consist of a substation located at the intersection of Browning Avenue and Bryan Avenue, with a 66 Kilovolt (KV) line extending through the ETSP area along Bryan Avenue. There are also two 12 KV lines extending into the central portion of the ETSP area; and one along Irvine Boulevard to a point approximately 1,300 feet westerly of the easterly project boundary. A third 12 KV line extends northerly from Irvine Boulevard for approximately 4,400 feet.

The ETSP discussed plans of a new substation north of the ETSP in the vicinity of Chapman Avenue and Santiago Canyon Road. This substation was planned to serve the ETSP jointly with the substation on Bryan Avenue. A 66 KV service was planned to be extended into the ETSP area from this new facility, entering the ETSP through Myford Road.

Natural Gas
The Southern California Gas Company (SoCalGas) serves the ETSP through an eight-inch high-pressure line extending along Irvine Boulevard, north of the ETSP. Various other two-, three- and six-inch gas lines are located westerly of the ETSP boundary; however, these are not high-pressure lines and would not be useful in providing service beyond their existing connections.

The ETSP discussed extension of service from the existing eight-inch high-pressure line in Irvine Boulevard northerly in Jamboree Road to Lower Lake drive, and then westerly and northerly to a connection with Myford Road; and southerly from Irvine Boulevard in the proposed Jamboree Road to Laguna Road.

Telephone
The ETSP discusses that Pacific Telephone Company will serve the project sites by extension of the existing facilities located within the City of Tustin on Browning Avenue and easterly on Irvine Boulevard. At the time the ETSP was adopted, limited service existed in the area adjacent to the northerly portion of the ETSP, but no major feeders existed there at the time. The ETSP discussed that service would be extended in a joint trench corridor with electrical and gas services in the proposed extension of the Future Road (Tustin Ranch Road), and within Myford Road. In 2006, Pacific Telephone Company was acquired by AT&T.

5.11.6.2 DRY UTILITIES ENVIRONMENTAL SETTING

Electricity

Electricity is provided to the Project by Southern California Edison (SCE). SCE provides electric power to more than 15 million persons within its 50,000 square mile service area. According to SCE's 2022 Power Content Label Mix, SCE derives electricity from varied energy resources including: biomass and biowaste,

geothermal, hydroelectric, solar, wind, nuclear, and natural gas. SCE also purchases power from independent power producers and utilities, which includes out-of-state providers (California Energy Commission, 2022).

Natural Gas

Natural gas would be provided to the Project by the Southern California Gas Company (SoCal Gas). SoCalGas provides natural gas to more than 21 million persons within its 24,000 square mile service area (SoCalGas, 2024).

Telecommunications

Telecommunications would be provided to the Project by AT&T and Cox Communications.

5.11.6.3 DRY UTILITIES THRESHOLDS OF SIGNIFICANCE

Appendix G of State CEQA Guidelines indicates that a project could have a significant effect if it were to:

UT-8 Require or result in the relocation or construction of a new or expanded electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects.

5.11.6.4 DRY UTILITIES METHODOLOGY

The evaluation of dry utilities identifies if dry utility demand from the Project would be accommodated via existing dry utility infrastructure available to the Project. The evaluation identifies if expansions would be required to serve the proposed development, and if those expansions have the potential to result in an environmental impact.

5.11.6.5 DRY UTILITIES ENVIRONMENTAL IMPACTS

IMPACT UT-8: THE PROJECT WOULD NOT REQUIRE OR RESULT IN THE RELOCATION OR CONSTRUCTION OF A NEW OR EXPANDED ELECTRIC POWER, NATURAL GAS, OR TELECOMMUNICATIONS FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS.

Less than Significant Impact. No specific development is proposed at this time; however, implementation of the proposed Project could result in the future construction of 900 residential units and 13,032 SF of nonresidential development. Implementation of the future buildout would generate demand for electricity, natural gas, communication systems, street lighting, and maintenance of public facilities.

Electricity would be provided to the Project by SCE. Adequate commercial electricity supplies are presently available to meet the incremental increase in demand attributed to the Project. Provision of electricity to the Project site is not anticipated to require or result in the construction of new facilities or the expansion of existing facilities, the construction or relocation of which would cause significant environmental impacts to electricity. Impacts would be less than significant.

Natural gas service would be provided by SoCal Gas. Adequate commercial gas supplies are presently available to meet the incremental increase in demand attributed to the Project. The proposed Project would not require or result in the construction, expansion, or relocation of natural gas facilities that could result in a significant environmental impact. Impacts related to natural gas would be less than significant.

Communication systems for the Project would be provided by AT&T and Cox Communications. AT&T and Cox Communications are private companies that provide connection to the communication system on an as

needed basis. As such, the proposed Project is not anticipated to require or result in the construction of new communications facilities or the expansion of existing facilities. Impacts would be less than significant.

Future Project Applicants would be responsible for coordinating with each utility company to ensure utility improvements occur according to standard construction and operation procedures administered by the California Public Utilities Commission. Any development in the City would be required to comply with energy efficiency standards in Title 24 of the California Administrative Code, and appliance efficiency regulations in Title 20 of the California Administrative Code, CALGreen. Therefore, potential impacts associated with utilities, including electricity, natural gas and communication systems would be less than significant and no mitigation is required.

5.11.6.6 DRY UTILITIES CUMULATIVE IMPACTS

The geographic scope of cumulative analysis for dry utilities is the service area for the SCE, SoCalGas, AT&T and Cox Communications, which serve the Project area. Cumulative impacts related to the provision of facilities for electricity, natural gas and communications systems, have been evaluated throughout this EIR. Mitigation measures have been recommended in cases where cumulatively-considerable impacts associated with utilities infrastructure were identified. Therefore, cumulatively-considerable impacts associated with the provision of utility facilities to serve the Project would be less than significant.

5.11.6.7 EXISTING STANDARD CONDITIONS AND PLANS, PROGRAMS, OR POLICIES

The following standard regulations would reduce potential impacts related to dry utilities:

- California Code of Regulations Title 24, Part 11; the California Green Building Code

5.11.6.8 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impacts UT-8 would be less than significant.

5.11.6.9 DRY UTILITIES MITIGATION MEASURES

No new mitigation measures are required for the proposed Project.

5.11.6.10 DRY UTILITIES LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant unavoidable adverse impacts related to dry utilities would occur.

5.11.7 REFERENCES

California Energy Commission. (2022). *2022 Power Content Label Southern California Edison*. Retrieved from California Energy Commission: https://www.energy.ca.gov/programs-and-topics/programs/power-source-disclosure-program/power-content-label

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6. Other CEQA Considerations

6.1 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL EFFECTS

State CEQA Guidelines Section 15126.2(c) requires an EIR to describe "any significant impacts, including those which can be mitigated but not reduced to a level of insignificance." As described in detail in Section 5.0 of this Draft EIR, implementation of the Project would result in environmental impacts that cannot be reduced to a level below significance after implementation of Project design features; regulatory requirements; plans, programs, policies; and feasible mitigation measures. The significant impacts that cannot be mitigated to a level below significance are summarized below.

6.1.1 Greenhouse Gas Emissions

Impact GHG-1, Greenhouse Gas Emissions (Project-level and Cumulative). Construction and operation of the Project would generate a net total of approximately 8,166.9 $MTCO_2e$ per year, thereby exceeding the screening threshold of 3,000 $MTCO_2e$ per year. The proposed Project would implement Mitigation Measure GHG-1 to minimize impacts to the greatest extent feasible. However, there is no way to quantify the reductions from implementation of Mitigation Measure GHG-1 in CalEEMod. The likely scale and extent of build out associated with future projects is unknown; however, the analysis assumes the most conservative estimate would likely exceed the SCAQMD thresholds. While Mitigation Measure GHG-1 would serve to reduce GHG emissions associated with buildout of the Project, GHG emission impacts would remain significant and unavoidable because compliance with future efficiency targets cannot be assured and not enough information is known regarding future projects to recommend further mitigation. As identified above, before development can occur, once a specific development project is proposed it would be required to be analyzed for conformance with the General Plan, zoning requirements, and other applicable local and State requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits. Notwithstanding, GHG emissions are conservatively assumed to be significant and unavoidable on a project-level and cumulative basis.

Impact GHG-2, Conflict with Plan, Policy, or Regulation for Reducing Greenhouse Gas Emissions (Project-level and Cumulative). Although the proposed Project would be consistent with the identified measures and goals from the 2022 Scoping Plan and 2020–2045 RTP/SCS, the proposed Project would result in a significant and unavoidable impact for GHG emissions based on SCAQMD thresholds. As such, the proposed Project would not comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in the 2022 Scoping Plan, EO B-30-15, and AB 197 and would not be consistent with applicable State plans and programs designed to reduce GHG emissions. Therefore, the proposed Project would conflict with applicable plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs and impacts would be significant and unavoidable.

6.2 GROWTH INDUCEMENT

State CEQA Guidelines Section 15126.2(e), Growth Inducing Impact of the Proposed Project, requires that an EIR "discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment." The CEQA Guidelines also indicate that it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment. In general terms, a project may foster spatial, economic, or population growth in a geographic area, if it meets any one of the following criteria:

1. Directly or indirectly foster economic or population growth, or the construction of additional housing, in the surrounding environment;
2. Remove obstacles to population growth;
3. Require the construction of new or expanded facilities that could cause significant environmental effects; or
4. Encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively.

1. Does the Project directly or indirectly foster economic or population growth or the construction of additional housing?

Growth-inducing potential of a project would be considered significant if it fosters growth or a concentration of population in excess of what is assumed in master plans, land use plans, or in projections made by regional planning agencies, such as SCAG. The Project would contribute to the population growth in the City of Tustin and the economic growth in the City and the surrounding areas. However, the growth that would result from the Project would not be unexpected or constitute substantial unplanned growth. According to the regional population projections included in SCAG's 2024-2050 RTP/SCS, the City of Tustin is projected to increase its population by 16.1 percent (from 80,400 persons in 2019 to 93,317 persons in 2050) and its housing stock by 25.9 percent (from 27,000 dwelling units in 2019 to 34,000 dwelling units in 2050. Over this same time period, employment in the City is expected to increase by 37.0 percent (from 51,700 jobs in 2019 to 71,300 jobs in 2050).

The Project site is approximately 76.9 acres and is currently developed with 747,165 SF of commercial business, including restaurants, retail, and service commercial uses. The proposed Project includes a GPA and SPA to allow residential only development within an 18-acre portion of the Project site. The Project site does not currently support residential uses. No development is proposed as part of this Project. However, the development that could occur from future buildout of the proposed housing zone is 900 dwelling units and 13,032 SF of nonresidential buildout. As detailed in Section 5.6, *Population and Housing*, buildout of the proposed Project would contribute to approximately 20.1 percent of the projected population growth, approximately 12.9 percent of the projected housing stock growth, and approximately 0.2 percent of the projected employment growth in the City. Thus, while the Project would result in an increase in population and housing units in an area not previously planned for housing, the increase in population and number of housing units that would result from the proposed Project would not exceed projections for the City. Additionally, the projected employment growth that would occur from buildout of the Project would not exceed employment growth projections for the City.

Further, SCAG determined the City needs to provide a total of 6,782 housing units to meet their RHNA. Thus, the Project would contribute to the City's fair share of housing and, in part, satisfy the State requirements to provide new housing opportunities to increase housing supply. Additionally, the proposed Project implements goals and policies of the Tustin Housing Element that support a variety of housing types and densities.

As described in Section 5.6, *Population and Housing*, the City of Tustin is jobs-rich, meaning the addition of residential units in the area would not require additional jobs that could result in growth. Conversely, the new residents would fill the need for employees that are anticipated by SCAG projections. Thus, the additional residential units would not indirectly result in the need for additional employment opportunities, which could result in growth. Therefore, this indirect impact related to growth would be less than significant. Thus, impacts related to increased growth through the provision of employment opportunities would be less than significant.

Overall, the Project site has historically provided employment opportunities and economic activity. The proposed Project would provide for a different variety of employment opportunities and economic activities that are consistent with development occurring and planned for in the Project vicinity. As detailed in Section 5.6, *Population and Housing*, the proposed Project would reduce (improve) the jobs-housing ratio slightly by

adding 900 residential units. The proposed Project would provide a regional beneficial effect of providing the opportunity for housing on the Project site in a jobs-rich area, where employees can easily travel to nearby employment opportunities. In addition, the future 900 residential units would not exceed the SCAG population, housing, and employment growth projections for the City and would represent a nominal percentage of SCAG's overall projections for the City of Tustin. Thus, the proposed Project provides housing and would not result in the need for additional housing. Therefore, the economic effects of the proposed Project would not result in the need for additional development to support the proposed Project and would not result in a substantial impact on the environment.

2. Does the Project remove obstacles to population growth?

The elimination of a physical obstacle to growth is considered to be a growth inducing impact. A physical obstacle to growth typically involves the lack of public service infrastructure. The Project would induce growth if it would provide public services or infrastructure with excess capacity to serve lands that would otherwise not be developable.

Remove obstacles to growth through changes in utility infrastructure. As described in Section 3.0, *Project Description*, roadways and utilities may be required to support development of future residential construction within the Project site. Future onsite infrastructure improvements that may be necessary for residential development within the Project site include storm drains, wastewater, water (potable and reclaimed), and dry utilities that would connect to existing facilities within the Project site or adjacent to the Project area. Specific infrastructure improvements required to support residential development within The Market Place are not known at this time and will not be known until a development project is proposed. However, The Market Place is surrounded by urban built-up land that is currently connected to the City's existing infrastructure system and that is serving the Project site. Future development allowed under the proposed Project would connect to existing infrastructure and would be sized appropriately to accommodate only the future development of The Market Place, as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits. Additionally, future developers would need to conduct capacity analyses of sewer and water utilities in the area to ensure conveyance and pressure is adequate for future projects proposed on a project-by-project basis. The developer will be responsible for preparing a capacity analysis and submitting it to Irvine Ranch Water District (IRWD) in coordination with the City. The capacity analysis and infrastructure improvements shall be reviewed and approved by IRWD and the City prior to approval of the construction permit, consistent with Mitigation Measure UT-1 in Section 5.11, *Utilities*.

Overall, future development allowed under the proposed Project could redevelop the existing onsite infrastructure systems and replace multiple utility lines. However, the new infrastructure would not provide additional capacity beyond what is needed to serve future development or what was previously planned for by the City. In addition, because the anticipated infrastructure improvements would only enhance services to proposed developments and not provide an extension of service to areas that are currently not served, or provide excess capacity, infrastructure improvements would not result in significant growth inducing impacts. Therefore, infrastructure improvements would not result in significant growth inducing impacts.

Furthermore, future development allowed under the proposed Project could also implement circulation improvements, which are unknown at this time, such as pedestrian and bicycle facilities, which would enhance local circulation and use of transit. However, future circulation improvements would not extend circulation into a new area or provide excess circulation capacity that could induce growth. As a result, the circulation improvements would result in less than significant growth inducing impacts.

Remove obstacles to growth through changes in existing regulations pertaining to land development. The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of East Tustin Specific Plan – SP-8 (ETSP). A project could directly induce growth if it would remove barriers to population growth such as changes to a jurisdiction's general plan and zoning

code, which allows new development to occur in underutilized areas. The proposed Project includes a General Plan Amendment (GPA) to establish that higher density residential uses are allowed in the Planned Community Commercial Business/ Designation when prescribed by a Housing Overlay (HO) district or a Specific Plan (SP). It also requires a Specific Plan Amendment (SPA) to identify "High Density Residential" as a new residential density category available within the plan. Additionally, the SPA would identify "High Density Residential" as an allowable use on 18 acres within the MU land use of the ETSP.

The proposed Project is a redevelopment of an already developed area that is surrounded by urban development. The proposed Project is a housing zone within the Market Place site, which would allow residential development of 900 dwelling units over a maximum area of 18 acres, allowing for future onsite residents and additional onsite employees. However, the zoning and land use changes are parcel-specific and would not result in growth outside of the Project site, because the areas are either completely developed or within development land use plans. The rezoning of seven parcels (whole or partial) exclusively for residential use (non-residential uses are prohibited) would not result in removing an obstacle to growth within the Project vicinity.

In addition, SCAG policies concerning regional growth-inducement are included as part of Section 5.4, *Land Use and Planning*, and Section 5.6, *Population and Housing*. As described in those sections, the growth anticipated by SCAG's projections are consistent with the estimated future buildout of the proposed 900 units (2,592 residents) and estimated future buildout of the 13,032 SF of nonresidential space (40 employees). Therefore, impacts related to growth from changes in existing regulations pertaining to land development would be less than significant.

3. Does the proposed Project require the construction of new or expanded facilities that could cause significant environmental effects?

Growth induced by a project is considered a significant impact if it directly or indirectly affects the ability of agencies to provide needed public services that requires the construction of new public service facilities, or if it can be demonstrated that the potential growth significantly affects the environment in some other way.

The proposed Project is expected to incrementally increase the demand for fire protection and emergency response, police protection, school services, and recreational facilities and would not increase demand beyond that assumed for buildout of the City of Tustin. As described in Section 5.11, *Public Services*, the proposed Project would not require development of additional facilities or expansion of existing facilities to maintain existing levels of service. Based on service ratios and build out projections, the proposed Project would not create a demand for services beyond the capacity of existing facilities. Therefore, an indirect growth inducing impact as a result of expanded or new public facilities that could support other development in addition to the proposed Project would not occur. The proposed Project would not have significant growth inducing consequences that would require the need to expand public services to maintain desired levels of service.

4. Does the Project encourage or facilitate other activities that could significantly affect the environment, either individually or cumulatively?

The proposed Project includes a GPA to establish that a higher density of residential uses are allowed in the PCCB designation, subject to density limits established by an HO district, or as established by a specific plan. It also requires a SPA to identify "High Density Residential" as a new residential density category available within the plan, and would identify "High Density Residential" as an allowable use on 18 acres within the MU land use of the ETSP, and that this 18 acres would be rezoned exclusively for residential use (non-residential uses are prohibited).

The ETSP would also be amended to implement development regulations and objective design standards (ODS) related to architecture, parking, height, site design, and other design criteria applicable to residential development. The ODS would be used during design review to ensure future project consistency with City design standards and would guide overall compatibility of future development with the surrounding area. The proposed Project would comply with all applicable City plans, policies, and ordinances. In addition, Project features and mitigation measures have been identified within this EIR to ensure that the proposed Project minimizes environmental impacts. The proposed Project would not involve any precedent-setting action that could encourage and facilitate other activities that significantly affect the environment.

6.3 SIGNIFICANT IRREVERSIBLE EFFECTS

State CEQA Guidelines require the EIR to consider whether "uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely…. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified." (CEQA Guidelines Section 15126.2(d)). "Nonrenewable resource" refers to the physical features of the natural environment, such as land, waterways, mineral resources, etc. These irreversible environmental changes may include current or future uses of non-renewable resources, and secondary or growth-inducing impacts that commit future generations to similar uses.

Generally, a project would result in significant irreversible environmental changes if:

- The primary and secondary impacts would generally commit future generations to similar uses;
- The project would involve a large commitment of nonrenewable resources;
- The project would involve uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The proposed irretrievable commitments of nonrenewable resources is not justified (e.g., the project involves the wasteful use of energy).

The Project would result in or contribute to the following irreversible environmental changes:

- The 18-acre rezone portion of the Project site would be committed exclusively for residential use (non-residential uses are prohibited) once the new High density Residential designation is implemented. Secondary effects associated with this irreversible commitment of land resources include:
    - Increased vehicle trips on surrounding roadways during operation of future projects under the proposed Project (see Section 5.9, *Transportation*).
    - Emissions of air pollutants associated with construction and operation of future projects under the proposed Project (see Section 5.1, *Air Quality*).
    - Consumption of non-renewable energy associated with construction and operation of future projects under the proposed Project due to the use of automobiles, lighting, heating and cooling systems, appliances, and the like (see Section 5.2, *Energy*).
    - Increased ambient noise associated with an increase in activities and traffic from future projects under the proposed Project (see Section 5.5, *Noise*).

- Construction of future projects under the proposed Project as described in Section 3.0, *Project Description*, would require the use of energy produced from non-renewable resources and construction materials.

In regard to energy usage from development of future projects under the proposed Project, as demonstrated in the analyses contained in Section 5.2, *Energy*, the proposed Project would not involve wasteful or unjustifiable use of non-renewable resources, and conservation efforts would be enforced during construction

and operation of future proposed development, as ensured and verified by the City during the plan check and permitting process, prior to obtaining building permits. Development of future projects under the proposed rezone would incorporate energy-generating and conserving project design features, including those required by the California Building Code, California Energy Code Title 24, which specify green building standards for new developments. Project-specific information related to energy consumption is provided in Section 5.3, *Energy*, of this EIR.

6.4 REFERENCES

California Department of Finance. (2023, May). E-5 Population and Housing Estimates for Cities, Counties, and the State — January 1, 2021-2023. Retrieved from State of California Department of Finance.

City of Tustin. (2022). Housing Element Update 2021-2019.

The Natelson Company, Inc. (2001). Employment Density Study Summary Report.

7. Effects Found Not Significant

CEQA Guidelines Section 15126.2(a) states that "[a]n EIR shall identify and focus on the significant effects on the environment." During the preparation of this EIR, the Project was determined to have no potential to result in significant impacts under four environmental issue areas: agriculture and forestry resources, mineral resources, recreation, and wildfire. Therefore, these issue areas were not required to be analyzed in detail in EIR Section 5, *Environmental Impact Analysis*.

CEQA Guidelines Section 15128 requires that an EIR contain a statement briefly indicating the reasons that various possible effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR. As allowed by CEQA Guidelines Section 15128, statements related to the above listed topic areas are presented below.

7.1 AESTHETICS

Scenic Vista

Future development would be constructed within the boundaries of the existing Project site, which is not a designated scenic vista or nor provides views of designated scenic resources. Therefore, the Project would result in no impact related to scenic vistas.

Scenic Highway

According to the California Department of Transportation (Caltrans) Scenic Highway Map, the City of Tustin does not contain any scenic highways within or surrounding the city (California Department of Transportation, 2018). The nearest State scenic highway is Route 91 in the City of Orange, approximately 8.5 miles to the north. According to the County of Orange General Plan, there are no designated scenic roadways or scenic vistas in the Project vicinity (County of Orange, 2005). Therefore, the Project would have no impact on scenic resources within a State scenic highway.

Conflict with Regulations Governing Scenic Quality

The Project site is currently developed as a commercial site and is surrounded by other commercial developments. The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB). The City's Zoning Map designates the property as Planned Community Commercial (PC COM), with an overlay of SP 8 - East Tustin (East Tustin Specific Plan). The East Tustin Specific Plan currently designates the site as Mixed Use (MU), which allows a range of retail and non-residential uses. The Project would include a GPA and SPA for seven parcels of the Project site to allow for future development of up to 900 housing units, consistent with the City's certified 2021-2029 Housing Element, and 13,032 square feet (SF) of nonresidential development. No development is proposed as part of this Project.

Per Housing Element Program 1.2a, the City will adopt Objective Design Standards (ODS) to ensure high quality residential development for future residential proposed within the Project site while simultaneously meeting the City's goal of streamlining residential development within the City to meet its RHNA goals. Development is not proposed as part of the Project; however, all future development proposed within the Project site would be subject to the requirement and provisions of the applicable ODS.

Design requirements established through ODS for the site would be compatible with the existing development standards for the site established through the East Tustin Specific Plan (ETSP). All future development would

be required to comply with the City's ODS for the site, which would ensure high visual character and quality of future development within the Project site. Therefore, the Project would not conflict with applicable zoning and other regulations governing scenic quality and would have a less-than-significant impact on visual character and quality.

Light and Glare

The Project does not propose development but would allow for the future development of residential land uses within an existing commercial shopping center. Future development could add additional nighttime light sources, such as landscape lighting, security lighting, and the lighting from additional cars. All future projects would be required to comply with the applicable ODS for the site. The ODS would include specific setbacks, lighting standards, and building materials that would ensure the avoidance of potential lighting impacts. Further, all future projects would be required to comply with the City's light and glare ordinance, which would be verified through plan check prior to project approval. Therefore, the Project would result in a less-than-significant impact related to light and glare.

7.2 AGRICULTURE & FORESTRY RESOURCES

Farmland

Per the California Department of Conservation (CDOC) Farmland Mapping and Monitoring Program (FMMP) Map, the Project site is designated as Urban and Built-Up Land (California Department of Conservation, 2018). The City does not currently include any commercial agricultural land uses. Existing zoning categories within the City of Tustin do not allow for commercial agricultural uses. Therefore, the Project would result in no impact on Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

Williamson Act Contract

The Project site is currently developed with commercial land uses and does not include agricultural land uses. The Project site is not currently under a Williamson Act contract. Therefore, the Project would result in no impact on existing zoning for agricultural use or a Williamson Act contract.

Forest Land/Timberland

The Project site does not include forest land or timberland. The Project site is currently designated by the City's zoning map as Planned Community Commercial/Business (PCCB), and Mixed-Use (MU) within the ETSP, which does not provide for forest land or timberland production and management. Therefore, the Project would result in no impact on zoning of forest land or timberland.

7.3 BIOLOGICAL RESOURCES

Special Status Species

The Project site consists of approximately 76.93 acres that are developed with existing commercial uses, including restaurant, retail, and office establishments, a paved parking lot, and landscaping. The area proposed for future implementation of residential uses, as established by the City's certified Housing Element, is limited to the existing parking lot area contained within seven parcels (APNs 500-291-06, -07, -11, -12, and -25 and 500-312-03 and -10) scattered throughout the Project site. Future nonresidential development would occur within the developed nonresidential area. The Project site is surrounded by urban development with structures, paved parking, and ornamental landscaping. There is no evidence of either suitable habitat

for or the presence of any endangered, rare, threatened, or special status plant species (or associated habitats) or wildlife species designated by the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), or California Native Plant Society (CNPS).

The Project does not propose development; however, the Project would provide for future proposed development through implementation of the Project's General Plan Amendment and Specific Plan Amendment, which authorizes housing pursuant to the City's certified 2021-2029 Housing Element. Future landscaping implemented as part of future projects would likely include a variety of ornamental trees, shrubs, and groundcover. As the Project site is currently completely paved, implementation of the Project would not result in an adverse effect, either directly or through habitat modifications, on any sensitive species, and impacts would not occur.

Riparian Habitat and Sensitive Natural Communities

There is no existing riparian habitat or sensitive natural community within the developable area of the site. Therefore, the Project would not have a substantial adverse effect on any riparian habitat or any sensitive natural community.

Wetlands

There are no wetlands or riparian areas within the developable area of the site. Therefore, the Project would not have a substantial adverse effect on State or federally protected wetlands.

Wildlife Movement Corridor and Wildlife Nursery Sites

The Project site does not support conditions for migratory wildlife corridors or linkages. The Project site is completely developed and surrounded by a roadway and developed land uses. The site and surrounding areas do not provide function for wildlife land movement. Additionally, the surrounding area is developed and urban. There are no rivers, creeks, or open drainages near the site that could function as a wildlife corridor. Thus, implementation of the Project would not result in impacts related to wildlife movement or wildlife corridors.

Conflict with Biological Resource Policies

The Project site contains existing ornamental trees that could be used for nesting by common bird species that are protected by the federal Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code Sections 3503.5, 3511, and 3515 during the avian nesting and breeding season that occurs between February 1 and September 15. The provisions of the MBTA prohibit disturbing or destroying active nests. Therefore, Mitigation Measure BIO-1 has been included to require that if commencement of vegetation clearing for any future development project occurs between February 1 and September 15, a qualified biologist shall conduct a nesting bird survey no more than 3 days prior to commencement of activities to confirm the absence of nesting birds. With implementation of Mitigation Measure BIO-1, potential impacts to nesting birds would be less than significant.

The Project would not conflict with any local policies or ordinances protecting biological resources. The Project site is urban and developed and contains no biological resources to be preserved under the resource protection policies of the City's General Plan. Article 7, Chapter 3, of the Municipal Code addresses the protection of "trees, plants or shrubs in or growing upon or over any public parkway street, highway, alley, right-of-way, City-owned property in the City." The Project would not impact any such trees and shrubs. To the extent that future development facilitated by the Project is required to plant new trees on public property pursuant to Section 7308 of Article 7, Chapter 3, the Project would be required to comply with the Municipal

Code requirements as part of the City permitting process (PPP BIO-1). As a result, impacts would be less than significant.

Conflict with Adopted Habitat Conservation Plan

Further, the Project site does not contain any natural lands that are subject to an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. Therefore, the Project would not result in impacts to biological habitat or conservation plans.

PPP BIO-1 **Street Trees.** Installation of street trees shall occur in compliance with the City of Tustin Municipal Code Article 7, Chapter 3, Section 7308.

MM BIO-1 **Migratory Bird Treaty Act.** Prior to commencement of grading activities, the City Building Division shall verify that, in the event that vegetation and tree removal activities occur within the active breeding season for birds (February 1–September 15), the Project applicant (or their Construction Contractor) shall retain a qualified biologist (meaning a professional biologist that is familiar with local birds and their nesting behaviors) to conduct a nesting bird survey no more than 3 days prior to commencement of construction activities.

The nesting survey shall include the Project site and areas immediately adjacent to the site that could potentially be affected by Project-related construction activities, such as noise, human activity, and dust, etc. If active nesting of birds is observed within 100 feet of the designated construction area prior to construction, the qualified biologist shall establish an appropriate buffer around the active nests (e.g., as much as 500 feet for raptors and 300 feet for non-raptors [subject to the recommendations of the qualified biologist]), and the buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests.

7.4 CULTURAL RESOURCES

Historical Resources

A Cultural Records Search (included as Appendix A to the Initial Study, which is included in Appendix A of this Draft EIR) was prepared by Brian F. Smith and Associates Environmental Services (BFSA) for the Project to determine the potential for historic and architectural resources to occur within the Project site. According to results of the cultural record search, the Project site does not contain any previously identified eligible or listed historic resources. Existing structures within the Project site date back to the 1980s and therefore would become of historic age (50 years or older) in the near future. However, the area proposed for future implementation of residential and nonresidential development is within the existing parking lot and open space areas, which do not contain any structures that could become historic. Therefore, the Project would result in no impact on a historical resource.

Archaeological Resources

According to results of the cultural record search prepared for the Project, the Project site does not contain any archaeological resources. The Project site is currently developed as a commercial site and is surrounded by other commercial developments. Therefore, the Project site and soils are heavily disturbed. However, the Project could facilitate future construction at depths greater than previous excavation activities, which could result in the disturbance of undisturbed native soils. Therefore, there is a low potential that future construction could result in inadvertent discovery of a buried archeological resource. Mitigation Measure CUL-1 has been

incorporated to mitigate any potential impact to an archeological resource. In the event of an inadvertent discovery of a buried archeological resource, work shall cease within 50 feet of the find until a qualified archaeologist from the City or County List of Qualified Archaeologists has evaluated the find to determine whether the find constitutes a "unique archaeological resource," and if the discovered resource(s) appears Native American in origin, a Native American Monitor shall be contacted to evaluate any potential tribal cultural resource(s) and shall have the opportunity to consult on appropriate treatment and curation of these resources. Prior to the issuance of any permits for ground-disturbing activities that include the excavation of soils (including as grading, excavation, and trenching), the City of Tustin shall ensure that all Project grading and construction plans and specifications include requirement to halt construction activity and contact an archaeologist.

The City has very detailed standards and requirements for grading that are designed to protect sensitive topographic, soil, palaeontologic, and archaeologic resources. The Tustin Grading Manual prescribes appropriate measures to protect the earth by controlling erosion, sedimentation, and storm drainage (PPP HYD-2). Proper grading, soil management, and open space standards would work to preserve any potential archaeological resources in the very unlikely event that a resource is encountered. Therefore, the Project would result in a less than significant impact with mitigation on archeological resources.

Human Remains

The Project site has been previously disturbed, as described above, and has not been previously used as a cemetery. Thus, human remains are not anticipated to be uncovered during Project construction. In addition, California Health and Safety Code Section 7050.5, CEQA Section 15064.5, and Public Resources Code Section 5097.98 (included as PPP CUL-1) mandate the process to be followed in the event of an accidental discovery of any human remains. Specifically, California Health and Safety Code Section 7050.5 requires that if human remains are discovered, disturbance of the site shall remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of death, and made recommendations concerning the treatment and disposition of the human remains 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 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 be less than significant through the implementation of future construction facilitated by the Project.

PPP CUL-1 **Human Remains.** In the event that human remains are encountered on the Project site, work within 50 feet of the discovery shall cease and the County Coroner shall be notified immediately consistent with the requirements of California Code of Regulations (CCR) Section 15064.5(e). State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code (PRC) Section 5097.98. Prior to the issuance of grading permits, the City Community and Planning, Building, and Code Enforcement Department Director, or designee, shall verify that all grading plans specify the requirements of CCR Section 15064.5(e), State Health and Safety Code Section 7050.5, and PRC Section 5097.98, as stated above.

PPP HYD-2 **City of Tustin Grading Manual.** All future projects are required to comply with the City of Tustin Grading Manual (1990). Implementation of grading manual standards would be verified by the City during the plan check and permitting process.

MM CUL-1 **Inadvertent Discovery.** In the event that potential archaeological resources are discovered during excavation, grading, or construction activities, work shall cease within 50 feet of the

find until a qualified archaeologist from the City or County List of Qualified Archaeologists has evaluated the find to determine whether the find constitutes a "unique archaeological resource," as defined in Section 21083.2(g) of the California Public Resources Code. Any resources identified shall be treated in accordance with California Public Resources Code Section 21083.2(g).

If the discovered resource(s) appears Native American in origin, a Native American Monitor shall be contacted to evaluate any potential tribal cultural resource(s) and shall have the opportunity to consult on appropriate treatment and curation of these resources. The discovery would also be reported to the City and the South Central Coastal Information Center (SCCIC).

Prior to the issuance of any permits for ground-disturbing activities that include the excavation of soils (including as grading, excavation, and trenching), the City of Tustin shall ensure that all Project grading and construction plans and specifications include requirement to halt construction activity and contact an archaeologist as specified above.

7.5 GEOLOGY & SOILS

Fault Rupture

According to the California Geological Survey available fault maps, the Project is approximately 13 miles to the south of the nearest Alquist-Priolo Earthquake Fault Zoning Act fault, Whittier Fault; the Project is also approximately 11 miles to the northeast of the North Branch Fault (Parrish, Earthquake Zones of Required Investigation, Seal Beach Quadrangle, 1999). Due to the location of these faults, the general region is subject to the potential for earthquakes; however, the Project site is outside of a 500-foot radius from an active fault and is not subject to a special development permit. The Project site contains existing development, and the provision for additional development would not exacerbate existing risk of earthquake. Further, all future development permitted would be required to comply with the requirement of the California Building Code (CBC; California Code of Regulations, Title 24, Part 2) (PPP GEO-1), which is a minimum requirement intended to protect life safety and prevent collapse of structures. Therefore, the Project would result in a less-than-significant impact related to the rupture of a known earthquake fault.

Ground Shaking

Due to the Project's location within a seismically active region of Southern California, moderate to strong ground shaking can be expected at the Project site. However, as described above, structures built in the City are required to be built in compliance with the CBC (California Code of Regulations, Title 24, Part 2) which provides provisions for earthquake safety based on factors including building occupancy type, the types of soils onsite, and the probable strength of ground motion. Compliance with the CBC would require the incorporation of 1) seismic safety features to minimize the potential for significant effects as a result of earthquakes; 2) proper building footings and foundations; and 3) construction of the building structure so that it would withstand the effects of strong ground shaking. Implementation of CBC standards would be verified by the City during the plan check and permitting process (PPP GEO-1). Therefore, because the proposed Project would be constructed in compliance with the CBC, the proposed Project would result in a less-than-significant impact related to strong seismic ground shaking.

Liquefaction

According to the California Geological Survey available fault maps, the Project is within a liquefaction zone in the City of Tustin (Parrish, Earthquake Zones of Required Investigation, Tustin Quadrangle, 2001). The

Project site would require additional geotechnical investigation prior to development of potential future projects. Mitigation Measure GEO-1 has been included to require all future projects implemented within the Project site to conduct a project-specific geotechnical investigation to ensure that the site's soils are adequate for the construction and operation of the proposed project. Future projects would be required to implement measures identified within the project-specific geotechnical investigation. All mitigation measures identified through the geotechnical investigation shall be implemented to avoid potential geotechnical hazards through construction or operation of the project. The City would ensure completion of the geotechnical investigation and identification of necessary measures prior to plan approval of future proposed projects. Through investigation and implementation of necessary measures to mitigate potential liquefaction hazards, future development would result in a less than significant impact. Therefore, the Project would result in a less-than-significant impact with mitigation related to liquefaction.

Landslides

The Project site is flat and is not adjacent to or within the vicinity of steep slopes or other landforms susceptible to landslides. No development is proposed as part of this Project. The provision of future development would not result in new risk of loss, injury, or death involving a landslide. Therefore, the Project would result in no impact related to landslides.

Soil Erosion

All proposed future development would be required to comply with the California Regional Water Quality Control Board (RWQCB) Order No. R8-2010-0033, National Pollutant Discharge Elimination System (NPDES) Permit No. CAS618033 – Construction General Permit requirements (PPP HYD-1). Requirements include installation of best management practices (BMPs), which establish minimum stormwater management requirements and controls. To reduce the potential for soil erosion and the loss of topsoil, a Stormwater Pollution Prevention Plan (SWPPP) is required by RWQCB regulations, to be developed by a Qualified SWPPP Developer (QSD). The SWPPP is required to address site-specific conditions related to specific grading and construction activities. The SWPPP would identify potential sources of erosion and sedimentation to prevent loss of topsoil during construction, and to identify erosion control BMPs to reduce or eliminate the erosion and loss of topsoil, such as use of silt fencing, fiber rolls, or gravel bags; stabilized construction entrances/exits; hydroseeding, and similar measures. In addition to RWQCB requirements, proposed development would need to comply with the City of Tustin Grading Manual procedures (PPP HYD-2). The City of Tustin Grading Manual is a compilation of rules, procedures, and interpretations necessary to carry out the provisions of the Tustin City Code relating to grading and excavation.

Following construction, future development would be required to prepare and implement a Water Quality Management Plan (WQMP) per City standards. Future projects would be required to comply with the requirements of the Orange County Drainage Area Management Plan (DAMP) and the intent of the non-point source NPDES Permit for Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the incorporated Cities of Orange County within the Santa Ana Region (included as PPP HYD-3).

The DAMP regulations are included in the City's Municipal Code in Section 4902 and are the implementation method for NPDES Stormwater Permit compliance. The DAMP requires that new development and significant redevelopment projects develop and implement a WQMP that includes BMPs and low impact development (LID) design features that would provide onsite treatment of stormwater to prevent pollutants from onsite uses from leaving the site. These requirements would ensure that future projects would not result in substantial soil erosion or the loss of topsoil. With implementation of uniformly applicable requirements (SWPPP, City of Tustin Grading Manual, and the DAMP), the Project would result in a less-than-significant impact related to soil erosion.

Result in on- or Offsite Landslide, Lateral Spreading, Subsidence, Liquefaction or Collapse

As described above, the Project site is located in a relatively flat developed urban area that does not contain or adjacent to large slopes, and the Project would not generate large slopes. Therefore, impacts related to landslides would not occur.

As discussed above, the Project site is within a zone identified as susceptible to liquefaction. Further, the Project site then has a potential for lateral spreading. However, all future projects implemented would be required to conduct a project-specific geotechnical investigation to ensure that the site's soils are adequate for the construction and operation of the proposed project, per MM GEO-1. Through identification and implementation of measures identified in the geotechnical investigation, lateral spreading hazards would be mitigated to a less-than-significant impact, and future projects would be required to implement measures identified within the project-specific geotechnical investigation.

According to the United States Geological Survey (USGS) Areas of Subsidence in California Map, the Project site is within an area of subsidence as a result of excessive groundwater pumping (United States Geological Survey, 2023). As described above, all future projects implemented through the proposed housing overlay would be required to conduct a project-specific geotechnical investigation to ensure that the site's soils are adequate for the construction and operation of the proposed project. Future projects would be required to implement measures identified within the project-specific geotechnical investigation (MM GEO-1).

Therefore, the Project would result in a less-than-significant impact with mitigation related to the risk of landslide, lateral spreading, subsidence, liquefaction or collapse.

Expansive Soils

No development is proposed as part of this Project. All future projects would be required to comply with applicable federal, State, and local policies and regulations established to prevent or reduce impacts due to expansive soil, including Policy 8.5 of the Conservation/Open Space/Recreation Element of the City's General Plan, which requires City review of threats from expansive soils during the development review process (PPP GEO-2). Further, if necessary, geological investigations would be prepared and implemented for each future project to reduce significant impacts (MM GEO-1). Therefore, the Project would result in a less-than-significant impact with mitigation.

Alternative Waste Disposal Systems

All future development would be served by the City sewer utilities and would not include the use of septic tanks or alternative wastewater disposal systems. Therefore, the Project would result in no impact related to alternative waste disposal systems.

Paleontological Resources

The Project site is currently developed as a commercial site and is surrounded by other commercial developments. Therefore, the Project site is heavily disturbed and does not contain any native undisturbed soils. However, the Project could facilitate future construction at depths greater than previous excavation activities, which could result in the disturbance of undisturbed native soils. Figure COSR-2 of the City's Conservation/Open Space/Recreation Element of the General Plan identifies areas sensitive to paleontological resources (City of Tustin, 2018). The Project site is not located in an area identified by the General Plan as "High Paleontological Sensitivity." The City has very detailed standards and requirements for grading that are designed to protect sensitive topographic, soil, palaeontologic, and archaeologic resources. The Tustin Grading Manual prescribes appropriate measures to protect the earth by controlling erosion, sedimentation, and storm drainage (PPP HYD-2). Proper grading, soil management, and open space

standards would work to preserve any potential paleontological resources in the very unlikely event that a resource is encountered. Therefore, the Project would result in a less-than-significant impact related to a paleontological resource, site, or geologic feature.

Plans, Policies, and Programs

PPP GEO-1 **CBC Title 24, Part 2.** Structures built in the City are required to be built in compliance with the CBC (California Code of Regulations, Title 24, Part 2) that provides provisions for earthquake safety based on factors including building occupancy type, the types of soils onsite, and the probable strength of ground motion. Compliance with the CBC would require the incorporation of 1) seismic safety features to minimize the potential for significant effects as a result of earthquakes; 2) proper building footings and foundations; and 3) construction of the building structure so that it would withstand the effects of strong ground shaking. Implementation of CBC standards would be verified by the City during the plan check and permitting process.

PPP GEO-2 **Policy 8.5 of the Conservation/Open Space/Recreation Element.** Project applicants would be required to submit 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, which would be reviewed by the City during plan check.

PPP HYD-1 **SWPPP.** Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB). The permit requirement applies to grading and construction sites of one acre or larger. The Project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site.

PPP HYD-2 **City of Tustin Grading Manual.** All future projects are required to comply with the City of Tustin Grading Manual (1990). Implementation of grading manual standards would be verified by the City during the plan check and permitting process.

PPP HYD-3 **WQMP**. Prior to the approval of the Grading Plan and issuance of Grading Permits a completed Water Quality Management Plan (WQMP) shall be prepared by the Project applicant and submitted to and approved by the City Public Works Department. The WQMP shall identify all Post-Construction, Site Design. Source Control, and Treatment Control Best Management Practices (BMPs) that will be incorporated into the development Project in order to minimize the adverse effects on receiving waters.

Mitigation Measures

MM GEO-1 All future projects implemented within the Project site shall be required to conduct a project-specific geotechnical investigation to ensure that the site's soils are adequate for the construction and operation of the proposed project. Future projects would be required to implement measures identified within the project-specific geotechnical investigation. All mitigation measures identified through the geotechnical investigation shall be implemented to avoid potential geotechnical hazards through construction or operation of the Project. The City will ensure completion of the geotechnical investigation and identification of necessary measures prior to plan approval of future proposed projects.

7.6 HAZARDS & HAZARDOUS MATERIALS

Routine Transport, Use, or Disposal of Hazardous Materials

Construction: Future construction activities could involve the transport, use, and disposal of hazardous materials such as paints, solvents, oils, grease, and caulking. In addition, hazardous materials could be needed for fueling and servicing construction equipment on the site. These types of materials are not acutely hazardous, and all storage, handling, use, and disposal of these materials are regulated by federal and State requirements that are implemented by the City during building permitting for construction activities. These regulations include the federal Occupational Safety and Health Act, Hazardous Materials Transportation Act, Title 8 of the California Code of Regulations (CalOSHA), and the State Unified Hazardous Waste and Hazardous Materials Management Regulatory Program. As a result, routine transport and use of hazardous materials during construction would be consistent with applicable regulations and would be less than significant.

Operation: The Project involves the provision for future development of up to 900 housing units and 13,032 SF of commercial use, which involve routinely using household hazardous materials including solvents, cleaning agents, paints, pesticides, batteries, fertilizers, and aerosol cans. These types of materials are not acutely hazardous and would only be used and stored in limited quantities. The normal routine use of these products pursuant to existing regulations would not result in a significant hazard to people or the environment in the vicinity of the Project. Additionally, the Project would create a mixed-use environment in which residential land uses would be introduced into existing commercial land use. Existing commercial uses include a mix of office, restaurant, and retail establishments. Existing commercial uses require the routine use of similar hazardous materials as residential land uses (solvents, cleaning agents, paints, pesticides, batteries, fertilizers, and aerosol cans) and would not impose additional hazards to potential future residential uses. Therefore, operation of the Project would not result in a significant hazard to the public or to the environment through the routine transport, use, or disposal of hazardous waste, and impacts would be less than significant.

Release of Hazardous Materials into the Environment

Construction: To avoid an impact related to an accidental release, the use of BMPs during construction are implemented as part of a SWPPP as required by the NPDES General Construction Permit (and included as PPP HYD-1). Implementation of a SWPPP would minimize potential adverse effects to workers, the public, and the environment. All future development through implementation of the housing overlay and the City's certified 2021-2029 Housing Element would be required to develop and implement a SWPPP with BMPs as required through NPDES. Therefore, construction of future development would result in a less-than-significant impact.

Operation: As described previously, future operation of up to 900 residential units and 13,032 SF of commercial use would include use of limited hazardous materials, such as solvents, cleaning agents, paints, pesticides, batteries, fertilizers, and aerosol cans. Normal routine use of typical residential products pursuant to existing regulations would not result in a significant hazard to the environment, residents, or workers in the vicinity of the Project. As a result, operation of the proposed Project would not create a reasonably foreseeable upset and accident condition involving the release of hazardous materials into the environment, and impacts would be less than significant.

Hazardous Substances Within One-Quarter Mile of a School

The Project site contains an existing learning center, Fibo Kids Art Academy. The next nearest school is Pacific Coast High School/CHEP, located approximately 2,000 feet (0.38 mile) to the southeast of the Project site across I-15. As described previously, construction and operation of the Project could involve the use, storage,

and disposal of small amounts of hazardous materials on the Project site. Prior to construction, a SWPPP would need to be prepared and implemented, which would ensure hazardous materials are properly handled during construction and BMPs would be in place to avoid potential contaminated runoff from leaving the Project site (PPP HYD-1). During operation, these hazardous materials would be limited and used and disposed of in compliance with federal, State, and local regulations, which would reduce the potential for accidental release into the environment near a school. Therefore, the Project would not emit or handle acutely hazardous materials, substances, or waste near a school, and impacts would be less than significant.

Hazardous Materials Sites

The Project site is not located on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Department of Toxic Substances Control, 2023). Therefore, the Project would result in no impact.

Airport Hazards

The nearest airport to the Project site is John Wayne Airport, located over 4 miles to the southwest of the Project site. The Project site is not located within any land use compatibility zone for John Wayne Airport, nor is it within an airport safety zone within the AELUP (Orange County Airport Land Use Commission, 2008). The Project's proximity to the airport would not result in potential safety hazards or excessive noise for people that would reside or work within the Project site in the future. Therefore, the Project would result in no impact.

Emergency Response Plan

The Project does not include proposed development and would not impair the implementation of evacuation protocol in the event of an emergency within the City or Project site. Additionally, each future residential project implemented as part of the housing overlay and Housing Element would require a project-level plan check with the City and would be reviewed by the City's fire department (Orange County Fire Authority) to ensure proper emergency access to and from the site. Therefore, the Project would result in a less-than-significant impact.

Wildfire Hazards

According to the CalFire Fire Hazard Severity Zone Map, the Project site is not located within or near State responsibility areas or lands classified as very high fire hazard severity (California Department of Forestry and Fire Protection, 2023). Therefore, the Project would result in no impact regarding the exposure of people or structures to risk of loss, injury, or death involving a wildland fire.

PPP HYD-1 **SWPPP.** Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB). The permit requirement applies to grading and construction sites of one acre or larger. The Project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site.

7.7 HYDROLOGY & WATER QUALITY

The Project site is within the Tustin/Irvine/Modeno Channel Subwatershed, which is a tributary of the San Diego Creek: Reach 1. As of the 2018 303(d) impaired waters list, San Diego Creek: Reach 1 was listed as impaired for nutrients, sedimentation/siltation, selenium, toxaphene, toxicity, indicator bacteria, benthic community effects, DDT (dichlorodiphenyltrichloroethane), and malathion (California Waterboards, 2023).

The Project site is currently developed with commercial uses. The Project site currently drains into the City's stormwater system via a series of culverts and drains. Stormwater drains to several catch basins along El Camino Real and around the perimeter of the Project site. The storm drains run beneath the existing roadways and to the southwest corner of the Project site, where drains discharge to the existing Orange County Flood Control District (OCFCD) facility, El Modena-Tustin Channel, a concrete lined channel that runs along the west side of the Project site.

Water Quality Standards

Construction: Potential water quality impacts during construction would be prevented through implementation of a SWPPP (PPP HYD-1). Construction of the Project would disturb more than one acre of soil; therefore, the proposed Project would be required to obtain coverage under the NPDES General Permit for Discharges of Storm Water Associated with Construction Activity. Adherence to the existing requirements and implementation of the appropriate BMPs, as ensured through the City's plan check and permitting process, would ensure that the Project would not violate any water quality standards or waste discharge requirements, potential water quality degradation associated with construction activities would be minimized, and construction impacts would be less than significant.

Operation: Future development facilitated by the Project would include operation of residential and nonresidential uses. Potential pollutants associated with the proposed uses include various chemicals from cleaners, pathogens from pet wastes, nutrients from fertilizer, pesticides and sediment from landscaping, trash and debris, and oil and grease from vehicles. If these pollutants discharge into existing stormwater systems, it could result in further degradation of water quality.

However, operation of the proposed Project would be required to comply with the requirements of the Orange County DAMP and the intent of the non-point source NPDES Permit for Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the incorporated Cities of Orange County within the Santa Ana Region (included as PPP HYD-3). The DAMP regulations are included in the City's Municipal Code in Section 4902 and are the implementation method for NPDES Stormwater Permit compliance. The DAMP requires that new development and significant redevelopment projects develop and implement a WQMP that includes BMPs and LID design features that would provide onsite treatment of stormwater to prevent pollutants from onsite uses from leaving the site. A WQMP is required to be approved prior to the issuance of a building or grading permit. WQMPs prepared for future development would be reviewed and approved by the City to ensure it complies with the MS4 Permit regulations. In addition, the City's permitting process would ensure that all BMPs in the WQMP would be implemented with the project. Overall, implementation of the WQMP pursuant to the existing regulations (included as PPP HYD-3) would ensure that operation of the proposed Project would not violate any water quality standards, waste discharge requirements, or otherwise degrade water quality, and impacts would be less than significant.

Erosion or Siltation On- and Offsite

Construction: Construction of future development facilitated by the Project would require the removal of asphalt within the existing parking lot areas of the Project site and excavation of underlying soils.

Construction could result in a temporary disturbance of soils that could cause erosion or siltation on- and off-site. All proposed development construction would be required to comply with the California Regional Water Quality Control Board (RWQCB) Order No. R8-2010-0033, National Pollutant Discharge Elimination System (NPDES) Permit No. CAS618033 – Construction General Permit requirements (PPP HYD-1). Requirements include installation of Best Management Practices (BMPs), which establish minimum stormwater management requirements and controls. To reduce the potential for soil erosion and the loss of topsoil, a Stormwater Pollution Prevention Plan (SWPPP) is required by the RWQCB regulations to be developed by a QSD (Qualified SWPPP Developer). The SWPPP is required to address site-specific conditions related to specific grading and construction activities. The SWPPP would identify potential sources of erosion and sedimentation to prevent loss of topsoil during construction, and to identify erosion control BMPs to reduce or eliminate the erosion and loss of topsoil, such as use of silt fencing, fiber rolls, or gravel bags; stabilized construction entrances/exits; hydroseeding, and similar measures. In addition to RWQCB requirements, proposed development would need to comply with the City of Tustin Grading Manual procedures (PPP HYD-2). The City of Tustin Grading Manual is a compilation of rules, procedures, and interpretations necessary to carry out the provisions of the Tustin City Code relating to grading and excavation.

Following construction, future development would be required to prepare and implement a WQMP per City standards. Future projects would be required to comply with the requirements of the Orange County DAMP and the intent of the non-point source NPDES Permit for Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the incorporated Cities of Orange County within the Santa Ana Region (included as PPP HYD-3).

The DAMP regulations are included in the City's Municipal Code in Section 4902 and are the implementation method for NPDES Stormwater Permit compliance. The DAMP requires that new development and significant redevelopment projects develop and implement a WQMP that includes BMPs and LID design features that would provide onsite treatment of stormwater to prevent pollutants from onsite uses from leaving the site. These requirements would ensure that future projects would not result in substantial soil erosion or the loss of topsoil. With implementation of uniformly applicable requirements (SWPPP, City of Tustin Grading Manual, and the DAMP), the Project would result in a less-than-significant impact.

Operation: Changes to development of the Project site could result in potential changes in the drainage pattern due to siltation and erosion. However, the City's MS4 permit and County DAMP require new development projects to prepare a WQMP (included as PPP HYD-3) that is required to include BMPs to reduce the potential of erosion and/or sedimentation through site design and structural treatment control BMPs. As part of the permitting approval process, the proposed drainage and water quality design and engineering plans would be reviewed by the City's Engineering Division to ensure that the site-specific design limits the potential for erosion and siltation. Overall, adherence to the existing regulations would ensure that impacts as a result of future development related to alteration of a drainage pattern and erosion/siltation from operational activities would be less than significant.

Surface Runoff

Future construction facilitated by the Project would require the construction of building structures, including foundations, floor slabs, and utilities systems, and crushing existing pavement. These activities could temporarily alter the existing drainage pattern of the site and change runoff flow rates. However, as described previously, implementation of the Project requires a SWPPP (included as PPP HYD-1) that would address site specific drainage issues related to construction of the Project and include BMPs to eliminate the potential of flooding or alteration of a drainage pattern during construction activities. Compliance with the Construction General Permit and a SWPPP prepared by a QSD and implemented by a Qualified SWPPP Practitioner (QSP) (per PPP HYD-1) as verified by the City through the construction permitting process would

prevent construction-related impacts related to potential alteration of a drainage pattern or flooding on- or offsite from development activities. Therefore, construction impacts would be less than significant.

Stormwater Drainage System

Construction: Construction of future development could result in a temporary disturbance of soils and the use of construction equipment and materials that could increase pollutant loads discharged into stormwater runoff. However, implementation of the Project requires a SWPPP (included as PPP HYD-1) that would address site-specific pollutant and drainage issues related to construction of the Project and include BMPs to eliminate the potential of polluted runoff and increased runoff during construction activities. This includes regular monitoring and visual inspections during construction activities. Compliance with the Construction General Permit and a SWPPP prepared by a QSD and implemented by a QSP (per PPP HYD-1) as verified by the City through the construction permitting process would prevent construction-related impacts related to increases in run-off and pollution from development activities. Therefore, impacts would be less than significant.

Operation: The Project site currently drains into the City's stormwater sewer system via a series of culverts and drains and catch basins. Stormwater drains confluence at the southwest corner of the site and discharge into the existing Orange County Flood Control District (OCFCD) facility, El Modena-Tustin Channel, a concrete lined channel that runs along the west side of the Project site. Because the site is currently almost entirely paved, future development would increase intensity of development, but would not result in additional impervious surfaces that could increase the volume and velocity of stormwater runoff. Therefore, future development would not be anticipated to exceed capacity of the existing stormwater drainage system.

Additionally, as discussed previously, the City's MS4 permit and County DAMP require new development projects to prepare a WQMP (included as PPP HYD-3) that is required to include BMPs to reduce the potential of stormwater pollutants through site design and structural treatment control BMPs. As part of the permitting approval process, the proposed drainage and water quality design and engineering plans would be reviewed by the City's Engineering Division to ensure that the site-specific design limits the potential for sources of polluted runoff. Overall, adherence to the existing regulations would ensure that impacts as a result of future development related to stormwater runoff would be less than significant.

Flood Flows

The Project site is currently completely developed and completely paved, with the exception of some ornamental landscaped areas. Future development would not result in additional impervious surfaces that could increase the volume and velocity of stormwater runoff that would exacerbate flood conditions.

Flood Hazard, Tsunami, or Seich Zones

The southern portion of the Project site is within an area designated as Zone AH, a Special Flood Hazard Area subject to inundation by the one percent annual chance flood with a flood depth of one to three feet (Federal Emergency Management Agency, 2009). Therefore, the Project would facilitate the development of housing within a flood zone. However, the City of Tustin Municipal Code, Chapter 8, *Floodplain Management*, includes requirements for residential and nonresidential development within a flood hazard zone (PPP HYD-4). Implementation of the City's floodplain management design requirements would ensure future development does not risk release of pollutants due to Project inundation.

The Project site is not located near an inland body of water that could result in impacts due to seiche. Additionally, the Pacific Ocean is located over 12 miles southwest of the Project site; consequently, there is no potential for the Project site to be inundated by a tsunami that could release pollutants. Thus, implementation of the proposed Project would not expose people or structures to a significant risk of loss,

injury, or death involving inundation by seiche, tsunami, or mudflow that could release pollutants due to inundation of the Project site.

PPP HYD-1 **SWPPP.** Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB). The permit requirement applies to grading and construction sites of one acre or larger. The Project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site.

PPP HYD-2 **City of Tustin Grading Manual.** All future projects are required to comply with the City of Tustin Grading Manual (1990). Implementation of grading manual standards would be verified by the City during the plan check and permitting process.

PPP HYD-3 **WQMP**. Prior to the approval of the Grading Plan and issuance of Grading Permits a completed Water Quality Management Plan (WQMP) shall be prepared by the Project applicant and submitted to and approved by the City Public Works Department. The WQMP shall identify all Post-Construction, Site Design. Source Control, and Treatment Control Best Management Practices (BMPs) that will be incorporated into the development Project in order to minimize the adverse effects on receiving waters.

PPP HYD-4 **Flood Hazard**. Prior to the approval of the Grading Plan and issuance of Grading Permits the City engineer shall ensure that the project complies with the requirements within Chapter 8, Floodplain Management, of the City Municipal Code Chapter 8, and any additional applicable requirements related to the applicable flood zone.

7.8 MINERAL RESOURCES

The Project site is not identified for mineral resource extraction per the City's General Plan Conservation Element (City of Tustin, 2018). Therefore, the Project would result in no impact on the loss of availability of a known mineral resource or a locally important mineral resource recovery site.

7.9 WILDFIRE

According to the CalFire Fire Hazard Severity Zone Map, the Project site is not located within or near State responsibility areas or lands classified as very high fire hazard severity zones (California Department of Forestry and Fire Protection, 2023). Therefore, the Project would result in no impact due to wildfire hazard.

7.10 REFERENCES

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8. Alternatives

8.1 INTRODUCTION

The identification and analysis of alternatives to a project is a fundamental part of the environmental review process pursuant to CEQA. Public Resources Code (PRC) Section 21002.1(a) establishes the need to address alternatives in an EIR by stating that in addition to determining a project's significant environmental impacts and indicating potential means of mitigating or avoiding those impacts, "the purpose of an environmental impact report is to identify alternatives to the project."

Pursuant to CEQA Guidelines Section 15126.6(a), an EIR must describe a reasonable range of alternatives to the proposed project or to the project's location that would feasibly avoid or lessen its significant environmental impacts while attaining most of the proposed project's objectives. CEQA Guidelines Section 15126.6(b) emphasizes that the selection of project alternatives be based primarily on the ability to reduce impacts relative to the proposed project. In addition, CEQA Guidelines Section 15126.6(e)(2) requires the identification and evaluation of an "Environmentally Superior Alternative".

Pursuant to CEQA Guidelines Section 15126.6(d), discussion of each alternative presented in this EIR Section is intended "to allow meaningful evaluation, analysis, and comparison with the proposed project." As permitted by CEQA, the significant effects of each alternative are discussed in less detail than those of the proposed Project, but in enough detail to provide perspective and allow for a reasoned choice among alternatives to the proposed Project.

In addition, the "range of alternatives" to be evaluated is governed by the "rule of reason" and feasibility, which requires the EIR to set forth only those alternatives that are feasible and necessary to permit an informed and reasoned choice by the lead agency and to foster meaningful public participation (CEQA Guidelines Section 15126.6(f)). CEQA generally defines "feasible" to mean an alternative that is capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, technological, and legal factors and other considerations (CEQA Guidelines Sections 15091(a)(3), 15364).

Based on the CEQA requirements described above, the alternatives addressed in this EIR were selected in consideration of one or more of the following factors:

- The extent to which the alternative could avoid or substantially lessen any of the identified significant environmental effects of the proposed Project;
- The extent to which the alternative could accomplish the objectives of the proposed Project;
- The potential feasibility of the alternative;
- The appropriateness of the alternative in contributing to a "reasonable range" of alternatives that would allow an informed comparison of relative advantages and disadvantages of the proposed Project and potential alternatives to it; and
- The requirement of the *CEQA* Guidelines to consider a "no project" alternative; and to identify an "environmentally superior" alternative in addition to the no project alternative (CEQA Guidelines Section 15126.6(e)).

Neither the CEQA statute, the CEQA Guidelines, nor recent court cases specify a specific number of alternatives to be evaluated in an EIR. Rather, "the range of alternatives required in an EIR is governed by the rule of reason that sets forth only those alternatives necessary to permit a reasoned choice" (CEQA Guidelines 15126(f)).

8.2 SIGNIFICANT ENVIRONMENTAL EFFECTS

CEQA requires the alternatives selected for comparison in an EIR to avoid or substantially lessen one or more significant effects of the Project being evaluated. This analysis evaluates both the potential to avoid or reduce a significant and unavoidable impact, and to avoid the need for mitigation to obtain less than significance levels.

The analysis in Chapter 5 of this Draft EIR determined that no significant and unavoidable Project impacts would occur, and that potentially significant impacts of the Project related to biological resources, cultural resources, geology and soils, noise, tribal cultural resources, and utilities and service systems can be mitigated to a less than significant level.

8.2.1 Significant and Unavoidable Impact

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

The Project assumes potential future development of 900 residential units and additional 13,032 SF of nonresidential uses. The proposed Project would be anticipated to result in 8,166.9 MTCO2e of GHG at full buildout, which exceeds the South Coast Air Quality Management District (SCAQMD) threshold of 3,000 MTCO2e that has been applied to the Project. Therefore, the Project would result in a significant and unavoidable impact on Project-level and cumulative GHG emissions.

8.2.2 Impacts Mitigated to Less than Significant

The following impacts were determined to be mitigated to less than significant in the Initial Study prepared for the Project (Appendix A):

Biological Resources, Impact b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

The Project site contains existing ornamental trees that could be used for nesting by common bird species that are protected by the federal Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code Sections 3503.5, 3511, and 3515 during the avian nesting and breeding season that occurs between February 1 and September 15. The provisions of the MBTA prohibit disturbing or destroying active nests. Therefore, Mitigation Measure BIO-1 has been included to require that if commencement of vegetation clearing for any future development project occurs between February 1 and September 15, a qualified biologist shall conduct a nesting bird survey no more than 3 days prior to commencement of activities to confirm the absence of nesting birds. With implementation of Mitigation Measure BIO-1, potential impacts to nesting birds would be less than significant.

Cultural Resources, Impact b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.

The Project could facilitate future construction at depths greater than previous excavation activities, which could result in the disturbance of undisturbed native soils. Therefore, there is potential that future construction could result in inadvertent discovery of a buried archeological resource. Mitigation Measure CUL-1 has been incorporated to mitigate any potential impact to an archeological resource. In the event of an inadvertent discovery of a buried archeological resource, work shall cease within 50 feet of the find until a qualified archaeologist from the City or County List of Qualified Archaeologists has evaluated the find to determine whether the find constitutes a "unique archaeological resource", and if the discovered resource(s) appears

Native American in origin, a Native American Monitor shall be contacted to evaluate any potential tribal cultural resource(s) and shall have the opportunity to consult on appropriate treatment and curation of these resources. Prior to the issuance of any permits for ground-disturbing activities that include the excavation of soils (including as grading, excavation, and trenching), the City of Tustin shall ensure that all Project grading and construction plans and specifications include requirement to halt construction activity and contact an archaeologist. Therefore, the Project would result in a less than significant impact with mitigation on archeological resources.

Geology and Soils, Impact a) iii. Directly or indirectly cause potential substantial adverse effects involving seismic-related ground failure, including liquefaction.

According to the California Geological Survey available fault maps, the Project is within a liquefaction zone in the City of Tustin (Parrish, Earthquake Zones of Required Investigation, Tustin Quadrangle, 2001). The California Geological Survey defines a liquefaction zone as, "Areas where historical occurrence of liquefaction, or local geological, geotechnical and ground water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required." Therefore, the Project site would require additional geotechnical investigation prior to development of potential future projects. Mitigation Measure GEO-1 has been included to require all future projects implemented within the Project site to conduct a project-specific geotechnical investigation and implement identified geotechnical measures to ensure that the site's soils are adequate for the construction and operation of the proposed Project. Future projects would be required to implement measures identified within the project-specific geotechnical investigation. All mitigation measures identified through the geotechnical investigation shall be implemented to avoid potential geotechnical hazards through construction or operation of the Project. The City will ensure completion of the geotechnical investigation and identification of necessary measures prior to plan approval of future proposed projects through the existing development review and permitting process. Through investigation and implementation of necessary measures to mitigate potential liquefaction hazards, future development would result in a less than significant impact. Therefore, the Project would result in a less-than-significant impact with mitigation.

Geology and Soils, Impact d) Be located on expansive soil, as defined in in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.

The Project site contains potentially expansive soils. However, all future projects would be required to comply with applicable federal, state, and local policies and regulations established to prevent or reduce impacts due to expansive soil, including Policy 8.5 of the Conservation/Open Space/Recreation Element of the City's General Plan, which requires City review of threats from expansive soils during the development review process (PPP GEO-2). Further, if necessary, geological investigations would be prepared and implemented for each future project to reduce significant impacts (MM GEO-1). Therefore, the project would result in a less-than-significant impact with mitigation.

Noise, Impact NOI-1, Generation of a Substantial Temporary or Permanent Increase in Ambient Noise Levels (Project-level and Cumulative): Adjacent off-site land uses could be potentially exposed to stationary-source noise impacts from sources which include on-site heating, ventilation, and air conditioning (HVAC) equipment, and truck deliveries and loading and unloading activities as a result of operation of Project buildout. It is expected that on-site stationary noise sources would meet the City of Tustin maximum noise level standards. Once proposed uses are determined and final site plans are available, a site-specific noise study would be required through Mitigation Measure NOI-1 to confirm the noise level exposure from stationary sources to off-site land uses and to identify any specific mitigation measures necessary to achieve an exterior noise level below the City's noise standards. Additionally, a project-specific acoustical report would ensure noise levels of the proposed development would not exceed land use compatibility standards and design measures would be included into the proposed development as necessary to meet interior and

exterior noise standards. Therefore, the Project would result in a less than significant impact with implementation of mitigation.

Tribal Cultural Resources, Impact TRC-1, Adverse Change in Significance of Tribal Cultural Resource (Project-level and Cumulative): Potential future Project construction could include demolition, site preparation, grading, building construction, architectural coating, and paving activities. Project buildout would include the potential future development of 900 residential units and the buildout of an additional 13,032 SF of nonresidential development within the undeveloped (paved parking lot and landscape) space of the existing site. Project construction would include excavation at depths that could reach native, undisturbed soils that may contain unknown tribal cultural resources. Project excavation and construction could result in impacts to inadvertent tribal cultural resource finds that could cause substantial adverse change to the significance of such resources. Mitigation Measure TCR-1 is included which requires retainment of a Native American monitor prior to the commencement of ground-disturbing activities. In addition, Mitigation Measure TCR-2 is incorporated and provides procedures to follow in case of an inadvertent TCR discovery. Mitigation Measure TCR-3 is incorporated which complies with State Health and Safety Code Section 7050.5, which states that no further disturbance may occur in the vicinity of the body until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. Implementation of Mitigation Measures TCR-1, TCR-2, and TCR-3 would ensure that potential impacts, a result of the inadvertent discovery of TCRs during future development would be less than significant.

Utilities and Service Systems, Impact UT-1, Relocation or Construction of New Water Facilities, or Expansion of Existing Facilities (Project-level): Future implementation of development projects pursuant to the proposed Project could include installation of onsite water infrastructure and new connections to the water distribution system that would be sized to accommodate the increased water demand of new project-specific development on a project-by-project basis. Water supply design specifications for each future site-specific development project would be required to comply with the City of Tustin standards (per the California Building Code) regarding requirements for design and operation of water distribution facilities and would be verified during plan check (PPP UT-1). Additionally, Mitigation Measure UT-1 is incorporated into the Project to require future projects to coordinate with IRWD and prepare a capacity analysis of existing water utilities in the area to ensure conveyance and pressure is adequate. The capacity analysis is required to be reviewed and approved by IRWD and the City prior to the approval of construction permits. Further, PPP HYD-1 is implemented to require compliance with all City standards regarding construction noise, air quality and dust suppression mitigation requirements, erosion control (through the required SWPPP) and temporary construction traffic controls is implemented to ensure that potential construction impacts related to any needed water line improvements remain less than significant. Additionally, PPP T-2 is incorporated into the Project to require all utility work occurring as part of future proposed projects to adhere to the traffic control standards specified by the City's latest Standard Plans and Design Standards, which includes the requirement for a Traffic Control Plan during construction, the process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design. Implementation of UT-1, PPP UT-1, PPP HYD-1 and PPP T-2 would ensure potential impacts related to build out of the proposed Project would not result in construction of new or expanded water facilities that would result in a significant environmental effect.

Utilities and Service Systems, Impact UT-3, Relocation or Construction of New Wastewater Facilities, or Expansion of Existing Facilities (Project-level): Future residential projects proposed under the Project could necessitate further wastewater infrastructure, including new wastewater connections, sewer pumps, and other improvements to wastewater utilities within the existing Project site footprint and within adjacent utility right-of-way. Wastewater supply design specifications for each future site-specific development project would be required to comply with the City of Tustin standards (per the California Building Code) regarding requirements for design and operation of wastewater distribution facilities and would be verified during plan check (PPP UT-1). Additionally, Mitigation Measure UT-1 is incorporated into the Project to require future projects to coordinate with IRWD and prepare a capacity analysis of existing wastewater utilities in the area to ensure conveyance and pressure is adequate. The capacity analysis is required to be reviewed

and approved by IRWD and the City prior to the approval of construction permits. Further, PPP HYD-1 is implemented to require compliance with all City standards regarding construction noise, air quality and dust suppression mitigation requirements, erosion control (through the required SWPPP) and temporary construction traffic controls is implemented to ensure that potential construction impacts related to any needed wastewater line improvements remain less than significant. Additionally, PPP T-2 is incorporated into the Project to require all utility work occurring as part of future proposed projects to adhere to the traffic control standards specified by the City's latest Standard Plans and Design Standards, which includes the requirement for a Traffic Control Plan during construction, the process prior to commencing construction within the City public right-of-way (including utility work), and specifications for operational roadway and traffic control design. Implementation of UT-1, PPP UT-1, PPP HYD-1 and PPP T-2 would ensure potential impacts related to build out of the proposed Project would not result in construction of new or expanded wastewater facilities that would result in a significant environmental effect.

8.3 PROJECT OBJECTIVES

CEQA Guidelines §15124(b) (Title 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 primary purpose and goal of the Project is to accommodate the City's 6th Cycle RHNA identified within the City of Tustin 2021-2029 Housing Element. The Project would achieve this goal through the following objectives:

- Rezoning to allow residential development at densities to achieve the estimated capacities determined in the Housing Element, and without inhibitors to residential development, such as overly stringent standards.
- Increase the number of housing opportunities available in Tustin to ensure the City provides its fair share of housing units within a variety of income categories.
- Increase flexibility in allowed uses and development potential in the City of Tustin.
- Promote a diverse housing stock with products that are offered at a wide range of sizes and affordability.

8.4 ALTERNATIVES CONSIDERED BUT REJECTED

Pursuant to State CEQA Guidelines Section 15126.6(c), an EIR must briefly describe the rationale for selection and rejection of alternatives. The lead agency may make an initial determination as to which alternatives are potentially feasible and, therefore, merit in-depth consideration, and which are infeasible and need not be considered further. Alternatives that are remote or speculative, or the effects of which cannot be reasonably predicted, need not be considered (State CEQA Guidelines Section 15126.6(f), (f)(3)). This section identifies alternatives considered by the lead agency but rejected as infeasible and provides a brief explanation of the reasons for their exclusion. Alternatives may be eliminated from detailed consideration in the Draft EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid any significant environmental effects.

Alternate Site Alternative. An alternate site for the Project was eliminated from further consideration. Any alternate site would need to occur within the City of Tustin. The City is required by state law to rezone housing shortfall sites according to what has been approved under the certified Housing Element (Government Code § 65583.2, Senate Bill 197). The site identified within the City's 2021-2029 Housing Element is The Market Place (Project site), and an alternate site would fail to meet most of the project objectives, is infeasible, and would not be compliant with state law of the City's Housing Element. Additionally, if the Project were to occur on an alternate site and rezoning were conducted within a different

commercial center in the city, similar impacts would result and comparable mitigation would be required; therefore, impacts would not be reduced under this alternative. Therefore, this alternative has been determined infeasible.

No Project/Buildout of Existing Land Use Alternative. Similarly, the No Project/Buildout of Existing Land Use Alternative was eliminated from further consideration. The City is required by state law to rezone housing shortfall sites according to what has been approved under the certified Housing Element (Government Code § 65583.2, Senate Bill 197). The site identified within the City's 2021-2029 Housing Element is The Market Place (Project site) and failing to rezone the site for future housing would fail to meet all of the project objectives, which would therefore render the alternative as infeasible, and further, would not be compliant with state law of the City's Housing Element.

Reduced Project Development. The Reduced Project Development alternative would redesignate the Project site to allow for development of future residential and additional square footage of nonresidential development, similar to the proposed Project. However, Project buildout would be reduced by 63 percent, limiting the overall future buildout to a maximum of 330 residential units and 4,787 SF of new nonresidential development. This alternative would still require Specific Plan Amendment (SPA) to the East Tustin Specific Plan (ETSP), a General Plan Amendment (GPA), and development of Objective Design Standards (ODS). This alternative would eliminate the Project's significant and unavoidable GHG impact by reducing GHG emissions 63 percent from 8,166.9 MT CO2e/yr to 2,999 MT CO2e/yr, proportional to the proposed reduction in development. However, under this alternative, only 330 dwelling units would be allowed to be constructed and the City would have a 570 dwelling unit deficit in meeting their state mandated RHNA fair share. Because this alternative would not meet the City's legal obligation to rezone the site to meet the necessary residential capacity consistent with the City's certified Housing Element Update, this alternative has been rendered infeasible and is rejected from further consideration.

8.5 ALTERNATIVES SELECTED FOR FURTHER ANALYSIS

Two alternatives to the Project have been identified for further analysis as representing a reasonable range of alternatives that attain most of the objectives of the Project, may avoid or substantially lessen any of the significant effects of the Project, and are feasible from a development perspective. These alternatives have been developed based on the criteria identified in Section 8.1. The following alternatives are further described and analyzed in Section 8.6.

Alternative 1: No Project/No Development Alternative. This alternative consists of the Project not being approved, and the Project site would remain in the conditions that existed at the time the Notice of Preparation was published (February 26, 2024).

Alternative 2: Reduced Project Site. The Reduced Project Site alternative would allow for the same potential future development to occur as proposed by the Project, but the allowed area where the future rezone and potential development would be allowed to occur would be limited to only a portion (south of El Camino Real) of the existing Project site. The Reduced Project Site Alternative would allow for the potential future development of 900 residential units and additional 13,032 SF of nonresidential development, but limit the potential future development to just 18 acres within the southern 41.5-acre portion of the Project site. This alternative would still require Specific Plan Amendment (SPA) to the East Tustin Specific Plan (ETSP), a General Plan Amendment (GPA), and development of Objective Design Standards (ODS).

8.6 ALTERNATIVE 1: NO PROJECT

Pursuant to State CEQA Guidelines Section 15126.6(e), this Draft EIR is required to "discuss the existing conditions at the time the Notice of Preparation is published, or if no notice of preparation is published, at

the time the 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 […] In certain instances, the no project alternative means 'no build' wherein the existing environmental setting is maintained."

The No Project/No Development Alternative allows decision-makers to compare the environmental impacts of approving the proposed Project to the environmental impacts that would occur if the Project site were to be left in its existing conditions for the foreseeable future. Under the existing conditions, the Project site is currently developed with 747,165 square feet (SF) of commercial business, including restaurants, retail, and service commercial uses. The Project site would continue to be used as commercial land use under this alternative. See Section 4, *Environmental Setting*, for additional details and figures regarding the existing conditions at the Project site.

8.6.1 Environmental Impacts

Air Quality

Under this alternative no new development would occur in the Project site, and as such, no new stationary sources of air pollution would be introduced. Although the Project would be inconsistent with the SCAQMD AQMP, this alternative would avoid the Project's less than significant impacts related to conflict with the 2022 AQMP as emissions would be greatly reduced with no construction or additional trips introduced to the Project site. In addition, although the Project's construction and operational air quality emissions would be below applicable SCAQMD regional, local, and health risk thresholds, the alternative would result in no increase in emissions of criteria pollutants or diesel particulate matter (DPM) over existing conditions. Therefore, this alternative would avoid the Project's less than significant impacts to regional air quality. Therefore, the No Project/No Development Alternative would result in less impacts than the proposed Project.

Biological Resources

The Project site contains ornamental trees and shrubs within landscaped areas that can support nesting birds and raptors protected under the Federal Migratory Bird Treaty Act and Sections 3503, 3503.5, and 3513 of the California Fish and Game Code during the nesting season. Under this alternative, these trees and shrubs would remain onsite, and removal would not be required. As such, this alternative would not result in potential impacts to nesting birds due to tree or shrub removal during the nesting bird season (February 1st to September 15th). Although Mitigation Measure BIO-1 required of the Project would reduce biological resource impacts to less than significant levels, this alternative would generate less impacts to biological resources as compared with the Project and would not require mitigation. Therefore, the No Project/No Development Alternative would result in less impacts than the proposed Project.

Cultural Resources

Under this alternative, no disturbances would occur to the site. No grading for construction would occur and there would be no potential impacts to archaeological resources that may be buried below ground, as the current environment would remain. Although mitigation measures required of the Project would reduce cultural resource impacts to less than significant levels, this alternative would avoid impacts to cultural resources associated with the Project and would not require mitigation. Therefore, the No Project/No Development Alternative would result in less impacts than the proposed Project.

Energy

No construction activities would occur at the Project site or operation of new structures that would increase consumption of energy sources under this alternative. Existing commercial uses onsite would continue standard operation and vehicles would continue to be used for traveling to and from the site. Electricity, gasoline, and diesel fuel usage would all be lower for the existing commercial uses than for the Project. While this Draft EIR determined the Project's impacts to energy would be less than significant, increased energy use associated with this alternative would not occur. Therefore, the No Project/No Development Alternative would result in less impacts than the proposed Project.

Geology and Soils

No new construction activities, including grading, would occur under this alternative. Thus, there would be no potential for additional residents, workers, building, and structures to experience seismic ground shaking, liquefaction, lateral spreading, subsidence, or collapse within the Project site. Additionally, as no grading activities would occur under this alternative, potential impacts from erosion, or loss of topsoil would not occur. Although mitigation measures required of the Project would reduce potential liquefaction and expansive soil impacts to less than significant levels, this alternative would avoid potential impacts associated with new development on the Project site and would not require mitigation. While the Project impacts would be less than significant with mitigation incorporated, this alternative would avoid impacts and no mitigation measures are required. Therefore, the No Project/No Development Alternative would result in less impacts than the proposed Project.

Greenhouse Gas Emissions

No new construction activities would occur at the Project site or operation of new structures that would generate GHGs under this alternative. Under this alternative, no additional vehicle trips would be introduced to the Project site, which is the source of most of the greenhouse gas emissions of the proposed Project as discussed in Section 5.8, *Greenhouse Gas Emissions*. This alternative would be consistent with all applicable air quality plans and would avoid the significant and unavoidable impact of greenhouse gas emissions that would occur from the proposed Project. Therefore, the No Project/No Development Alternative would result in less impacts than the proposed Project.

Land Use

This alternative would not result in new development, and as such, there would be no potential for land uses to be introduced that would indirectly result in environmental impacts due to a conflict with an existing land use plan. While the proposed residential use is not currently allowed by the ETSP land use designation of the site, the existing use would continue to be allowed to operate, and no new land uses would be introduced to the site. Under this alternative no General Plan Amendment or Specific Plan Amendment would be required. Overall, this alternative would result in no impacts to land use and planning, and therefore, would be less than the Project's impacts.

Noise

Under this alternative, no development would occur onsite, and no new sources of noise would be introduced at the Project site. Since no new development would occur and no additional traffic trips would be generated, this alternative would not contribute to additional traffic noise. Mitigation necessary to ensure the Project does not result in noise impacts on surrounding land uses would not be required under the No Project/No Development alternative because no additional development would be proposed. In addition, this alternative would not result in construction onsite and no construction noise or vibration would occur.

Therefore, this alternative would avoid the Project's less than significant impact and required mitigation related to potential noise impacts of future development on surrounding land uses. Therefore, the No Project/No Development Alternative would result in less impacts than the proposed Project.

Population and Housing

This alternative would not result in new development, and as such, would not result in induced growth or displacement affecting population and housing. However, this alternative would also not result in the benefit of adding new housing to the city, which would help result in a more balanced jobs-housing ratio. Additionally, the No Build Alternative would not be consistent with Housing Element or meet the SCAG and state-mandated fair share Regional Housing Needs Allocation (RHNA). The City would be faced with severe penalties from the state. Therefore, the No Build Alternative could result in a significant and unavoidable impact. Overall, this alternative would result in greater impacts than the Project.

Public Services

This alternative would not result in new development, and as such, would not result in increased demand for public services such as fire and police services, school services, or library services that requires the new construction of public facilities. Therefore, while the Project's impacts would be less than significant through compliance with regulatory programs, this alternative would result in less impacts.

Recreation

This alternative would not result in new development, and as such would not result in any new residences that would potentially impact nearby parks or require the development of additional park facilities. However, this alternative would also not result in the payment of the City's development impact fees. Therefore, while the Project's impacts would be less than significant through compliance with regulatory programs, this alternative would result in less impacts.

Transportation

This alternative would not result in new development, and as such, would not result in any trips or traffic related to operation of the Project site beyond vehicle trips associated with existing commercial operations. This alternative would not impact existing transit service and alternative transportation facilities within the Project site. The proposed Project would result in less than significant impacts on impacts related to VMT, geometric hazards, and emergency access. The Project would facilitate future housing in a commercial area, which would be anticipated to reduce home-based trip distances due to the mixed-use nature of the Project, and therefore, the Project would reduce overall VMT as a net benefit to the area. As the Project site would not be developed and trips would not be generated, the No Project/No Development Alternative would result in no impact on transportation. However, the No Project alternative would result in no changes to existing VMT conditions and therefore, would result in worsened VMT under the No Build Alternative compared to the Project. As such, this alternative would result in greater impacts than the proposed Project.

Tribal Cultural Resources

Under this alternative, existing conditions would remain, and no new development would occur. No grading would occur and there would be no potential impacts to tribal cultural resources that may be buried below ground. Although mitigation would ensure that the Project would result in less than significant impacts on tribal cultural resources, this alternative would avoid all potential impacts to tribal cultural resources, and no mitigation measures would be required. Therefore, the No Project/No Development Alternative would result in less impacts than the proposed Project.

Utilities and Service Systems

Under this alternative, existing conditions would remain, and no new development would occur. No additional configurations or connections to existing domestic water, wastewater, stormwater drainage, electric power, natural gas, or telecommunication facilities would be needed under this alternative, and there would be no change in the demand for domestic water or wastewater treatment services. This alternative would also not result in increased demand for solid waste collection and disposal. Selection of this alternative would result in no impact to utilities and service system providers. While mitigation would ensure that the Project would result in less than significant impacts, this alternative would avoid the need for mitigation, and no impacts related to utilities and service systems would occur. Therefore, the No Project/No Development Alternative would result in less impacts than the proposed Project.

8.6.2 Conclusion

Ability to Reduce Impacts

The No Project/No Development Alternative would result in continuation of the existing uses within the Project site, and the proposed development would not occur. As a result, this alternative would avoid the need for mitigation measures that are identified in Chapter 5.0 of this Draft EIR, which include measures related to air quality, biological resources, cultural resources, greenhouse gas emissions, paleontological resources, transportation, and tribal cultural resources. This alternative would also avoid the potentially significant impacts to biological resources, cultural resources, geology and soils, noise, tribal cultural resources, and utilities to a less than significant level with mitigation. However, this alternative could result in a significant and unavoidable impact on population and housing due to noncompliance with the City Housing Element and the City's inability to meet their state mandated RHNA. Additionally, by preventing the allowance of future residential development, the No Build Alternative would result in greater VMT impacts than the Project. This alternative would result in lessened impacts to 12 of the 14 environmental topics analyzed in this Draft EIR (see Table 8-3). The remaining two environmental topics analyzed in this Draft EIR would result in greater impacts than the Project.

However, the environmental benefits of the proposed Project would also not be realized, including providing housing onsite that would result in a better jobs-housing balance in Tustin, which is currently considered jobs rich.

Ability to Achieve Project Objectives

As shown in Table 8-4, below, the No Project/No Development Alternative would not meet any of the Project objectives. The purpose of the Project is to rezone the Project site to be consistent with the City Housing Element Updated recently adopted by the City. The No Build Alternative would not result in rezoning to allow residential development at densities to achieve the estimated capacities determined in the Housing Element, and without inhibitors to residential development, such as overly stringent standards. It would also not increase the number of housing opportunities available in Tustin, increase flexibility in allowed uses and development potential in the City of Tustin or promote a diverse housing stock with a wide range of sizes and affordability.

8.7 ALTERNATIVE 2: REDUCED PROJECT SITE

Alternative 2: Reduced Project Site. This Reduced Project Site alternative would allow for the potential future buildout of 900 residential units and additional 13,032 SF of nonresidential use over a maximum of 18 acres, which is the same as the development assumption under the proposed Project. However, under this alternative, future development would be limited to the southern 41.5 acres of the Project site (south of El

Camino Real), as opposed to the entire 76.9-acre Project site. Parcels that make up the southern portion of the Project site that would be available for development under this alternative include Accessor Parcel Numbers (APNs): 500-291-06 through -08, -11, -12, and -25 (see Figure 8-1).

Under the Reduced Project Site alternative, APN 500-291-25 (19.2 acres) would be rezoned for residential use through an East Tustin Specific Plan (ETSP) Specific Plan Amendment (SPA). Similar to the proposed Project, a maximum of 900 residential units would be allowed to be developed over a maximum of 18 acres; however, under this alternative, future residential development would be confined to APN 500-291-25. Future nonresidential development would be allowed to occur anywhere within the remaining 22.3 acres south of El Camino Real outside of existing building footprints and proposed residential land use. Similar to the proposed Project, no demolition would be assumed under this alternative, and future potential development would occur on the open parking and landscaped areas of the Project site.

8.7.1 Environmental Impacts

Air Quality

Under this alternative, the southern portion of the Project site would be developed with 900 multifamily residential units and additional 13,032 SF of nonresidential (assumed restaurant) development. Under this alternative, the intensity of construction would remain the same as the proposed Project, and overall emissions would be consistent with those identified for the Project. However, under this alternative, construction would be limited to the southern portion of the Project site, which would increase distance from sensitive receptors (residences directly northeast of the Project site) from 110 feet under Project conditions, to 880 feet under this alternative. The alternative's operational impact on air quality emissions would remain consistent with the Project conditions. Therefore, the Reduced Project Site Alternative would also result in a less than significant impact, but overall emissions generated from this alternative would be less than those generated by the proposed Project.

Biological Resources

The Project site contains ornamental trees and shrubs within landscaped areas that can support nesting birds and raptors protected under the Federal Migratory Bird Treaty Act and Sections 3503, 3503.5, and 3513 of the California Fish and Game Code during the nesting season. Under this alternative, these trees and shrubs would remain onsite, and removal would not be required. As such, this alternative would result in potential impacts to nesting birds due to tree or shrub removal during the nesting bird season (February 1st to September 15th). Mitigation Measure BIO-1 required of the Project would also reduce biological resource impacts to less than significant levels for this alternative. Therefore, the Reduced Project Site alternative would result in similar less than significant impacts with incorporation of mitigation as the proposed Project.

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Alternative 2 Reduced Project Site



The Market Place Rezone Project
City of Tustin

Figure 8-1

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Cultural Resources

Under this alternative, disturbances would occur to the site. Project construction would require grading and excavation, which could result in potential impacts to archaeological resources that may be buried below ground. Mitigation Measure CUL-1 would be required to reduce cultural resource impacts to less than significant levels, similar to the Project. Therefore, the Reduced Project Site Alternative would result in similar impacts as the proposed Project.

Energy

Under this alternative, the southern portion of the Project site would be developed with 900 multifamily residential units and additional 13,032 SF of nonresidential (assumed restaurant) development. Under this alternative, the intensity of construction would remain the same as the proposed Project, and overall energy demand would be consistent with those identified for the Project. The alternative's operational energy demand would remain consistent with the Project conditions as well. Therefore, the Reduced Project Site alternative would continue to result in a less than significant impact but would be less than Project impacts.

Geology and Soils

Under the Reduced Project Site alternative, development of residential and nonresidential uses would occur on the Project site. The Project site has been identified as susceptible to liquefaction and expansive soils. Thus, there could be potential for additional residents, workers, building, and structures to experience impacts due to liquefaction and/or expansive soils within the Project site. Mitigation Measure GEO-1 would reduce impacts to less than significant through requirement of a project-specific geotechnical study to ensure that the site's soils are adequate for the construction and operation of new uses on the site. Grading activities would occur within a similar size footprint under this alternative, and potential impacts from erosion, or loss of topsoil would be less than significant, consistent with the Project. Therefore, the Reduced Project Site alternative would result in similar impacts as the proposed Project.

Greenhouse Gas Emissions

Under this alternative, the southern portion of the Project site would be developed with 900 multifamily residential units and additional 13,032 SF of nonresidential (assumed restaurant) development. Under this alternative, the intensity of construction would remain the same as the proposed Project, and overall emissions would be consistent with those identified for the Project. The alternative's operational impact on GHG emissions would remain consistent with the Project conditions. Therefore, the Reduced Project Site Alternative would result in similar impacts as the proposed Project and would result in a significant and unavoidable impact.

Land Use

Under the Reduced Project Site Alternative, a GPA and SPA would still be required to accommodate residential uses within the Project site and increase allowed density within the General Plan. This alternative would be similar in that it would be consistent with all applicable plans and policies and would result in similar development as the Project and meet all applicable Project initiatives. The Reduced Project Site Alternative would be subject to the same goals, policies, programs, and regulations as the Project. Therefore, the Reduced Project Site Alternative would result in similar less than significant impacts as the proposed Project.

Noise

Under this alternative, the southern portion of the Project site would be developed with 900 multifamily residential units and additional 13,032 SF of nonresidential (assumed restaurant) development. The construction of this alternative would require site clearing, grading, and construction activities similar to the Proposed project at similar intensity. However, under this alternative, construction activities would occur 880 feet south of the nearest sensitive residential receptors, as opposed to 110 feet under the Project, and construction noise impacts would remain less than significant, but would be lessened compared to the Project.

Further, off-site land uses could be potentially exposed to stationary-source noise impacts from sources which include on-site heating, ventilation, and air conditioning (HVAC) equipment, and truck deliveries and loading and unloading activities as a result of operation of Project buildout. However, operational noise would occur 880 feet south of the nearest sensitive residential receptors, as opposed to 110 feet under the Project. Due to proximity away from nearby sensitive receptors, Mitigation Measure NOI-1 would no longer be required to ensure that operation of new stationary noise sources would result in a less than significant impact on nearby sensitive noise receptors outside of the Project site. Mitigation Measure NOI-1 would be implemented for City land use compatibility requirement purposes; however, CEQA generally does not require that public agencies analyze the impact existing environmental conditions might have on a project's future users or residents, according to the California Supreme Court's decision in *California Building Industry Association v Bay Area Air Quality Management District* (S213478, December 17, 2015). Therefore, this alternative would result in a less than significant impact and mitigation would not be required pursuant to CEQA.

Under the Reduced Project Site Alternative, construction and development would generate the same number of trips and impacts due to traffic noise would remain less than significant. Therefore, the Reduced Project Site Alternative would result in a less than significant impact and would be less than Project impacts.

Population and Housing

Under this alternative, the southern portion of the Project site would be developed with 900 multifamily residential units and additional 13,032 SF of nonresidential (assumed restaurant) development, equivalent to what is proposed by the Project. Using employment generation rates from the 2001 SCAG Employment Density Report, buildout of the additional 13,032 SF of nonresidential space would result in approximately 40 employees (1 employee per 325 SF) (The Natelson Company, Inc., 2001). The Reduced Project Site Alternative would result in the same number of homes, residents, employees, and jobs as the Project. Similar to the Project, this alternative would not exceed projections for the City. In addition, because the area is jobs-rich, the addition of residential units in the area would not require additional jobs that could result in growth. Conversely, the new residents would fill the need for employees that are anticipated by SCAG projections. Additionally, the Project is in fulfillment of the City's RHNA, which is allocated by SCAG, and therefore, this alternative would support the City in meeting the planned population growth for the larger region. The Reduced Project Site Alternative would result in a less than significant impact on population. Therefore, this alternative would result in similar less than significant impacts as the Project. Overall, the Reduced Project Site Alternative would result in similar impacts as the Project.

Public Services

Under this alternative, the southern portion of the Project site would be developed with 900 multifamily residential units and additional 13,032 SF of nonresidential (assumed restaurant) development. Similarly to the proposed Project, development under this alternative would result in increased demand for public services such as fire and police services, school services and library services, which could require the construction of new facilities or the expansion of existing public facilities. Additionally, similarly to the proposed Project, increased service demand from this alternative would be satisfied through the City's

General Fund which would offset the additional demand as a result of development. Development under this alternative would also be required to pay school impact fees pursuant to Senate Bill 50. Therefore, while the Project's impacts would be less than significant through compliance with regulatory programs, this alternative would result in less impacts.

Recreation

As described in Section 5.6, *Population and Housing*, the Project is anticipated to result in 2,592 residents at full occupancy. The Reduced Project Site Alternative would result in the same number of residents and would result in a demand for approximately 7.8 acres of parkland to support the additional residents. PPP R-1 requires new residential dwelling units within the Project site to comply with Tustin City Code Article 9, Chapter 3, Part 3, Section 9331(d) (Parkland Dedication) which requires developers pay the parkland dedication and development fee provisions set forth in the Tustin City Code. The Reduced Project Site alternative could include future development of housing types (e.g. for rent units as opposed to for sale units) that would require compliance with Tustin City Code Section 9331. Therefore, this alternative would result in a less than significant impact. Overall, the Reduced Project Site Alternative would result in similar impacts as the Project.

Transportation

Under this alternative, the southern portion of the Project site would be developed with 900 multifamily residential units and additional 13,032 SF of nonresidential (assumed restaurant) development. Therefore, the Reduced Project Site alternative would result in the same number of trips as the Project. The Reduced Project Site alternative would remain in a low VMT area "per employee" and would be screened from further VMT analysis for nonresidential development per the City VMT standards. The Project would propose the same number of housing units within Traffic Analysis Zone (TAZ) 1126, and therefore this alternative's home-based VMT per capita would be 40.3 percent below the City's threshold under base conditions and 44.3 percent below the City's threshold under future conditions; therefore, the residential portion of the Reduced Project Site alternative would result in a less than significant VMT impact. Similar to the Project, this alternative would not impact existing or planned transportation facilities, including pedestrian facilities, bicycle facilities, and public transportation infrastructure or operation. Therefore, the Reduced Project Site Alternative would result in a less than significant impact. Overall, the Reduced Project Site Alternative would result in similar impacts as the Project.

Tribal Cultural Resources

Under this alternative, disturbances would occur to the site. Project construction would require grading and excavation and could result in potential impacts to tribal cultural resources that may be buried below ground. Mitigation Measure TCR-1 would reduce tribal cultural resource impacts to less than significant levels, similar to the Project. Therefore, the Reduced Project Site Alternative would result in similar impacts as the proposed Project.

Utilities and Service Systems

Under this alternative, the southern portion of the Project site would be developed with 900 multifamily residential units and additional 13,032 SF of nonresidential (assumed restaurant) development. Similar to the proposed Project, under this alternative, additional configurations or connections to existing domestic water, wastewater, stormwater drainage, electric power, natural gas, and telecommunication facilities could be needed. Mitigation Measure UT-1 would reduce potential impacts related to construction of new or expanded water and wastewater facilities. Additionally, since the southern portion of the Project site is within a flood area designated as Zone AH, future development would be required to comply with Tustin City

Code, Chapter 8, Floodplain Management, which includes measures to avoid potential hazards from flooding. Additionally, this alternative would result in increased demand for solid waste collection and disposal and electricity, natural gas and telecommunication services. Therefore, the Reduced Project Site Alternative would result in similar impacts as the proposed Project.

8.7.2 Conclusion

Ability to Reduce Impacts

The Reduced Project Site would allow for the potential future buildout of 900 residential units and additional 13,032 SF of nonresidential use but limit the 18-acre residential rezone through the ETSP SPA and potential future nonresidential buildout to just the southern portion of the Project site (south of El Camino Real). All Project mitigation measures would still be applicable to this alternative, with the exception of Mitigation Measure NOI-1. Further, this alternative would result in lessened impacts to 1 of the environmental topics analyzed (see Table 8-1).

Ability to Achieve Project Objectives

As shown in Table 8-4, below, the Reduced Project Site Alternative would meet all of the Project objectives. The purpose of the Project is to rezone the Project site to be consistent with the City Housing Element Updated recently adopted by the City. The Reduced Project Site Alternative would result in rezoning to allow for future residential development at densities necessary to achieve the City's RHNA. This alternative would be consistent with what was planned for in the City's Housing Element Update, and without inhibitors to residential development, such as overly stringent standards. It would also increase the number of housing opportunities available in Tustin, increase flexibility in allowed uses and development potential in the City of Tustin, and promote a diverse housing stock with a wide range of sizes and affordability.

8.8 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires a lead agency to identify the "environmentally superior alternative" when significant environmental impacts result from a proposed Project…

Additionally, State CEQA Guidelines Section 15126.6(3)(1) states:

> *The "no project" analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation 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. If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.*

Therefore, pursuant to CEQA, because the No Project/No Development Alternative has been identified as the Environmentally Superior Alternative, the Environmentally Superior Alternative among the other alternatives. The alternative that would be environmentally superior to the Project would be Alternative 2: Reduced Project Site, which would involve rezoning the southern portion of the Project site to allow for potential future development of 900 residential units and additional 13,032 SF of nonresidential development. This alternative would result in lessened impacts to one of the environmental topics (noise). However, this alternative would be required to implement applicable mitigation measures regarding biological resources, cultural resources, geology and soils, and tribal cultural resources, similar to the Project. This alternative would not require implementation of Mitigation Measure NOI-1 since impacts on nearby

sensitive noise receptors would be less than significant, pursuant to CEQA. Moreover, the Reduced Project Site Alternative would meet the Project objectives to the same extent as the Project.

Table 8-1: Impact Comparison of the Proposed Project and Alternatives

	Proposed Project	Alternative 1 No Project	Alternative 2 Reduced Project Site
Air Quality	Less than significant	Less than Project, No Impact	Less than Project, but remains Less than Significant
Biological Resources	Less than significant with mitigation	Less than Project, No Impact	Same as Project
Cultural Resources	Less than significant with mitigation	Less than Project, No Impact	Same as Project
Energy	Less than significant	Less than Project, No Impact	Same as Project
Geology and Soils	Less than significant with mitigation	Less than Project, No Impact	Same as Project
Greenhouse Gases	Significant and Unavoidable	Less than Project, No Impact	Same as Project
Land Use and Planning	Less than significant	Less than Project, No Impact	Same as Project
Noise	Less than significant with mitigation	Less than Project, No Impact	Less than Project, Less than Significant Impact
Population and Housing	Less than significant	Greater than Project, Significant and Unavoidable	Same as Project
Public Services	Less than significant	Less than Project, No Impact	Same as Project
Recreation	Less than significant	Less than Project, No Impact	Same as Project
Transportation	Less than significant	Greater than Project, Less than Significant Impact	Same as Project
Tribal Cultural Resources	Less than significant with mitigation	Less than Project, No Impact	Same as Project
Utilities and Service Systems	Less than significant with mitigation	Less than Project, No Impact	Same as Project
Reduce Impacts of the Project?		Yes	Yes
Areas of Reduced Impacts Compared to the Project		12	1

Table 8-2: Comparison of the Proposed Project and Alternatives' Ability to Meet Objectives

	Project	Alternative 1 No Project	Alternative 2 Reduced Project Site
1. Rezoning to allow residential development at densities to achieve the estimated capacities determined in the Housing Element, and without inhibitors to residential development, such as overly stringent standards.	Yes	No	Yes
2. Increase the number of housing opportunities available in Tustin to ensure the City provides its fair share of housing units within a variety of income categories.	Yes	No	Yes
3. Increase flexibility in allowed uses and development potential in the City of Tustin.	Yes	No	Yes
4. Promote a diverse housing stock with products that are offered at a wide range of sizes and affordability.	Yes	No	Yes

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EPD Solutions, Inc.

Meghan Macias, Director of Technical Services

Abby Pal, Senior Transportation Planner

Simon Lin, Assistant Transportation Planner

LSA Associates, Inc.

Cara Cunningham, Associate

J.T. Stephens, Executive Vice President

PERSONS CONTACTED

City of Tustin Parks and Recreation Department

Chad Clanton, Director of Parks & Recreation

Irvine Ranch Water District

Eric Akiyoshi, Engineering Manager

Marina Lindsay, Water Resources Planner

Orange County Fire Authority

Brian Fennessy, Fire Chief

Tamera Rivers, Management Analyst

Tustin Unified School District

Rina Lucchese, Director of Communications and Community Engagement

Tom Rizzuti, Director of Facilities and Planning

Appendix A
Notice of Preparation, Scoping Comments, and Initial Study

Tustin Market Place Draft EIR

NOTICE OF PREPARATION AND SCOPING MEETING

DATE: February 22, 2024

TO: Agencies, Organizations, and Interested Parties

SUBJECT: Notice of Preparation of a Draft Environmental Impact Report, for The Market Place Rezone Project, in Compliance with Title 14, Section 15082(a) of the California Code of Regulations

PUBLIC REVIEW: **February 26, 2024, to March 27, 2024**

The City of Tustin is proposing a General Plan Amendment (GPA) to the City of Tustin General Plan, a Specific Plan Amendment (SPA) to the East Tustin Specific Plan (ETSP), and adoption of Objective Development Standards (ODS), to allow residential land uses on a site that currently only allows commercial development (The Market Place). The proposal implements the City's certified 2021-2029 Housing Element Update. Pursuant to the requirements of the California Environmental Quality Act (CEQA), the City is preparing an Environmental Impact Report (EIR) for the proposed GPA, SPA, and ODS described below. We request your review and comments as to the scope and content of the proposed EIR, as summarized in the Initial Study, available on the City's website at: www.tustinca.org/HousingElementRezone, or available at City offices, 300 Centennial Way, Tustin, California, 92780.

AGENCIES: The City requests your review on the scope and content of the environmental information relevant to your agency's statutory responsibilities in connection with the proposed project, in accordance with California Code of Regulations, Title 14, Section 15082(b). Your agency will need to use the EIR prepared by the City when considering any permits that your agency must issue, or other approval for the project.

ORGANIZATIONS AND INTERESTED PARTIES: The City requests your comments and concerns regarding the environmental issues associated with implementing the proposed project.

PROJECT TITLE: The Market Place Rezone Project (GPA-2024-0001 and SPA-2024-0001)

PROJECT LOCATION: The City is in the central portion of Orange County and is surrounded by the cities of Irvine to the south and east, Santa Ana to the west, and Orange and unincorporated Orange County to the north. As shown in Figure 1, *Vicinity Map,* the Project site, a commercial development known as The Market Place, encompasses 76.9 acres and is generally bounded by Myford Road to the northwest, Bryan Avenue to the northeast, Jamboree Road to the southeast and I-5 (Santa Ana Freeway) to the southwest. The Market Place is developed with 747,165 square feet (SF) of commercial business, including restaurants, retail, and service commercial uses, as well as large surface parking lots.

The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of Planned Community Commercial (PC COM). Additionally, the Project site is within the East Tustin Specific Plan (SP-8) which designates the site as Mixed Use (MU).

DESCRIPTION: The City is proposing to designate an 18-acre portion of the overall 76.9-acre Project site exclusively for residential development. The 18-acre site consists of seven parcels (full or partial APNs 500-291-06, -07, -11, -12, and -25 and 500-312-03 and -10), which are primarily used as surface parking lots. The City is proposing a GPA to establish that higher density residential uses are allowed in the PCCB land use designation, when prescribed by either a Housing Overlay (HO) district or by a Specific Plan. The SPA would modify the ETSP to identify "High Density Residential" as a new residential density category available within the specific plan area and identify "High Density Residential" as an allowable use within the MU land

NOTICE OF PREPARATION AND SCOPING MEETING

use of the ETSP. This new High Density Residential designation would allow for the future development of up to 900 dwelling units on the Project site, consistent with the certified 2021-2029 Housing Element Update.

In addition to analyzing 900 future residential units on the 18-acres housing zone site, the EIR analysis will take into consideration the remaining development potential of The Market Place, consisting of 13,032 SF of nonresidential land uses (i.e. retail, restaurant, office, etc.). This 13,032 of additional nonresidential development is the residual development capacity already assumed by the ETSP. Future residential and nonresidential development considered as part of the EIR is anticipated to occur within existing undeveloped areas, and this Project does not assume demolition of existing structures. A specific development project is not proposed as part of this Project. The Initial Study and the forthcoming EIR will analyze anticipated impacts associated with the construction and operation of the potential future residential and nonresidential development.

POTENTIAL ENVIRONMENTAL EFFECTS: An EIR will be prepared to evaluate the Project's potential environmental impacts. As determined by the Initial Study, the topic areas to be discussed in the EIR are Air Quality, Energy, Greenhouse Gas Emissions, Groundwater Recharge and Supply, Land Use and Planning, Noise, Population and Housing, Public Services, Recreation, Transportation/Traffic, and Utilities and Service Systems impacts.

PUBLIC REVIEW PERIOD: This Notice of Preparation (NOP) and Initial Study will be available for public review and comment pursuant to California Code of Regulations, Title 14, Section 15082(b). Please provide any comments by **March 27, 2024 at 5:00 p.m.** to the contact person listed below.

RESPONSES AND COMMENTS: Please indicate a contact person for your agency or organization and send your questions and comments to: Samatha Beier, Senior Planner; Phone: (714) 573-3354; E-mail: SBeier@tustinca.org; Mailing Address: City of Tustin, Community Development Department, 300 Centennial Way, Tustin, CA 92780; Website: http://www.tustinca.org.

SCOPING MEETING: One scoping meeting will be held to receive comments on the proposed scope and content of The Market Place Rezone Project Draft EIR. You are invited to attend and present environmental information that you believe should be addressed in the Draft EIR. The meeting is scheduled for:

Date: Wednesday, March 13th, 2024
Time: 5:00 p.m.
Place: Community Center at the Market Place
2961 El Camino Real
Tustin, CA 92782

DOCUMENT AVAILABILITY: The Initial Study is available for public review during regular business hours at the City of Tustin Community Development Department listed above and the Tustin Library, 345 E. Main Street, Tustin. The Initial Study can also be viewed on the City of Tustin website at the following address (URL): www.tustinca.org/ HousingElementRezone.

NOTICE OF PREPARATION AND SCOPING MEETING

Figure 1 - Vicinity Map



NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Reginald Pagaling
Chumash

VICE-CHAIRPERSON
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

SECRETARY
Sara Dutschke
Miwok

PARLIAMENTARIAN
Wayne Nelson
Luiseño

COMMISSIONER
Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
Stanley Rodriguez
Kumeyaay

COMMISSIONER
Laurena Bolden
Serrano

COMMISSIONER
Reid Milanovich
Cahuilla

COMMISSIONER
Vacant

EXECUTIVE SECRETARY
Raymond C. Hitchcock
Miwok, Nisenan

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

February 26, 2024

Samantha Beler
City of Tustin
300 Centennial Way
Tustin CA 92780

Re: 2024020969, The Market Place Rezone Project, Orange County

Dear Ms. Beler:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project 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. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (https://ohp.parks.ca.gov/?page_id=30331) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@NAHC.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

cc: State Clearinghouse

California Department of Transportation

DISTRICT 12
1750 East 4th Street, Suite 100 | SANTA ANA, CA 92705
(657) 328-6000 | FAX (657) 328-6522 TTY 711
https://dot.ca.gov/caltrans-near-me/district-12

March18, 2024

Samantha Beier
City of Tustin
300 Centennial Way
Tustin, CA 92780

File: LDR/CEQA
SCH#2024020969
LDR LOG #202402499
I-5

Dear Ms. Beier,

Thank you for including the California Department of Transportation (Caltrans) in the review of the Notice of Preparation of a Draft Environmental Impact Report for the Market Place project. The City is proposing to designate an 18-acre portion of the overall 76.9-acre Project site exclusively for residential development. The 18-acre site consists of seven parcels (full or partial APNs 500-291-06, -07, -11, -12, and -25 and 500-312-03 and -10), which are primarily used as surface parking lots.) This new High Density Residential designation would allow for the future development of up to 900 dwelling units on the Project site, consistent with the certified 2021-2029 Housing Element Update. The Project site is generally bounded by Myford Road to the northwest, Bryan Avenue to the northeast, Jamboree Road to the southeast and I-5 (Santa Ana Freeway) to the southwest.

The mission of Caltrans is to provide a safe and reliable transportation network that serves all people and respects the environment. Caltrans is a responsible agency on this project and has the following comments:

1. Due to the proximity of the proposed project to I-5 potential impacts are anticipated. Please submit a Traffic Impact Study that includes any potential mitigation measures necessary. If impact analysis leads to findings of significance, please coordinate with Caltrans District 12 Local Development on development of a Traffic Mitigation Agreement or similar efforts.

2. Please refer to OPR's Technical Advisory on Evaluating Transportation Impacts in CEQA and Caltrans' Transportation Impact Study Guide for the VMT assessment. Pursuant to SB 743, VMT is a required metric for transportation impact analysis per CEQA Guidelines Section 15064.3. Potential Significant impacts to traffic safety and operations on the I-5 freeway facility (mainline, on/off ramps, intersections). Please provide a VMT study for the project in the EIR. Caltrans' Transportation Impact Study Guide: https://dot.ca.gov/-/media/dot-

media/programs/transportation-planning/documents/sb-743/2020-05-20-approved-vmt-focused-tisg-a11y.pdf OPR's Technical Advisory on Evaluating Transportation Impacts in CEQA: https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf

3. Caltrans supports the design of Complete Streets that include high-quality pedestrian, bicycle, and transit facilities that are safe and comfortable for users of all ages and abilities and promote improved first-/last-mile connections. Caltrans encourages connecting this housing development with bike lanes on Bryan Avenue and Jamboree Road for the future use of residents to connect to transit hubs. Please see (Metrolink Stations) and other transit services (OCTA). consider Caltrans DIB 89-02 (https://dot.ca.gov/-/media/dot-media/programs/design/documents/dib-89-02-final-a11y.pdf) when designing and implementing Class IV bikeways; consider HDM 1003.1 (CHAPTER 1000 (ca.gov)) when designing Class I bikeways. For additional guidance on proposed bike parking, see "Essentials of Bike Parking" guidance created by the Association of Pedestrian and Bicycle Professionals (link to online PDF: https://www.apbp.org/Publications)

4. Please Provide a discussion of existing bus route services and potential future transit improvement opportunities for all including intercounty and regional connectivity along with connectivity to rail services from the nearest train stations provided by both Metrolink and Amtrak Pacific Surfliner. Encourage the use of transit among future residents, visitors, and workers of the development. Increasing multimodal transportation may lead to a reduction to congestion, Vehicle Miles Traveled, and improve air quality. Provide adequate wayfinding signage and related amenities to the transit stops within the project vicinity roadways.

5. Ensure that truck parking, ingress and egress, and staging will not interfere with vehicle parking, pedestrian paths, or bicycle lanes/bicycle parking.

6. Establish freight pick up & drop off times that do not coincide with peak commute hours to reduce passenger vehicle conflicts and congestion for freight. Consider designating on-street freight-only parking and delivery time windows so trucks will not resort to double parking, thus causing street traffic congestion.

7. For the multifamily residential units proposed, consider how many individual packages will be delivered daily to individual residences. Amazon lockers or an equivalent shared drop-off location can help reduce the amount of driving done by delivery trucks and can increase the efficiency of deliveries.

8. Work with local partners and community representatives to mitigate any truck traffic routing onto residential streets or conflicting with other road users, including and especially bicyclists and pedestrians.

9. In the event of any work performed within Caltrans right-of-way, an encroachment permit will be required prior to construction. Please submit all applications and associated documents/plans via online web portal base Caltrans Encroachment Permit System (CEPS) at https://ceps.dot.ca.gov/

10. Any work performed within Caltrans right of way (R/W) will require discretionary review and approval by Caltrans and an encroachment permit will be required for any work within the Caltrans R/W prior to construction. Prior to submitting to Caltrans Permit's branch, applicant should fill out Applicant's Checklist to Determine Applicable Review Process (QMAP List) Form TR-0416 to determine if project oversight/coordination with Caltrans Project Manager is needed. Applicant must submit a signed Standard Encroachment Permit application form TR-0100 along with a deposit payable to Caltrans. Deposit amount will be dependent on when the application is submitted. Public corporations are legally exempt from encroachment permit fees. Please note that all utility work should be disclosed prior to permit submittal, and utility companies are to apply for separate permits for their corresponding work.

Please continue to coordinate with Caltrans for any future developments that could potentially impact State transportation facilities. If you have any questions, please do not hesitate to contact Maryam Molavi, at Maryam.Molavi@dot.ca.gov.

Sincerely,

Scott Shelley
Branch Chief – Local Development Review/Climate Change/Transit
District 12

IRVINE COMPANY
Since 1864

March 27, 2024

Samantha Beier
Senior Planner
City of Tustin
Community Development Department
300 Centennial Way
Tustin, CA 92780

Subject: Notice of Preparation of an Environmental Impact Report for the Market Place Rezone Project

Dear Ms. Beier,

Irvine Company appreciates the opportunity to provide feedback regarding the City of Tustin's Notice of Preparation (NOP) of an Environmental Impact Report (EIR) for the City's Market Place Rezone Project. The Market Place site is 76.9 acres in size and is generally bounded by Jamboree, Bryan, Myford and the Interstate 5 Freeway in the City of Tustin. Irvine Company is the owner of the property and operates a regional shopping center at this location.

The City adopted its state-certified Housing Element in October 2022 and identified 19 housing opportunity sites to meet its state-mandated Regional Housing Needs Assessment (RHNA) allocation of 6,782 housing units. Site 18 listed in the previously-approved Housing Element is the Market Place site and was anticipated to accommodate 900 units on an 18-acre portion of the shopping center site, currently used for surface parking.

Proposed City actions include a General Plan Amendment, East Tustin Specific Plan Amendment and adoption of Objective Design Standards to accommodate 900 residential units on 18 acres of surface parking at the Market Place site. The remaining portion of the site would remain designated for nonresidential uses in the East Tustin Specific Plan.

Relative to implementing measures designed to accommodate 900 housing units at the Market Place, we would like to note that as specifically outlined in the Rezone Project, a future housing project would not likely be developed within the 18-acre portion of the existing shopping center parking lot.

As might be imagined, both physical and operational constraints will impact precise residential location. For example, many Irvine Company tenant agreements at the Market Place contractually limit parking modifications, thus a housing development relying solely on a location in the parking lot could be problematic.

Accordingly, a housing development would likely involve some combination of area currently used as surface parking and retail building square footage, with options to retain the retail square footage (likely reconfigured and/or replaced elsewhere onsite).

As such and in order to allow for comprehensive master site planning in the future, the proposed East Tustin Specific Plan should include an option that allows the allocated 900 units to be built on an any 18-acre portion of the Market Place site.

This flexibility would achieve the State's housing goals by locating state-mandated housing on sites best suited for housing and streamlining processes for future housing projects by establishing General Plan and zoning policies upfront.

Irvine Company appreciates the opportunity to comment on the NOP and to work with City staff on this important planning effort. We would welcome an opportunity to meet with City staff to discuss our comments in greater detail.

Sincerely,

Jennifer Le

Jennifer Le
Senior Director, Entitlement

The Market Place Rezone Project

Initial Study

Lead Agency:

City of Tustin
300 Centennial Way
Tustin, CA 92780

CEQA Consultant:

ENVIRONMENT | PLANNING | DEVELOPMENT SOLUTIONS, INC.

3333 Michelson Drive, Suite 500
Irvine, CA 92612

February 2024

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List of Appendices

Appendix A Cultural Record Search Results

Acronym List

A-P	Alquist-Priolo Earthquake Fault Zoning Act
AQMP	Air Quality Management Plan
AB	Assembly Bill
APN	Assessor's Parcel Numbers
BMPs	Best Management Practices
CARB	California Air Resources Board
CBC	California Building Code
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dBA	A-weighted decibel
EIR	Environmental Impact Report
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Maps
GHG	Greenhouse Gas
MBTA	Migratory Bird Treaty Act
NAAQS	National Ambient Air Quality Standards
NPDES	National Pollutant Discharge Elimination System
NAHC	Native American Heritage Commission
NOx	Nitrous Oxides
O_3	Ozone
PM	Particulate Matter
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCAG	Southern California Association of Governments
SWPPP	Stormwater Pollution Prevention Plan
TPZ	Timberland Production Zone
USFWS	United States Fish and Wildlife Service
USGS	United States Geologic Survey
WQMP	Water Quality Management Plan

1 INTRODUCTION

1.1 PURPOSE OF THE INITIAL STUDY

This Initial Study has been prepared in accordance with the following:

- California Environmental Quality Act (CEQA) of 1970 (Public Resources Code Sections 21000 et seq.);
- Guidelines for Implementation of the California Environmental Quality Act (State CEQA Guidelines) (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000 et seq.), as amended and approved on December 28, 2018.

Pursuant to CEQA, this Initial Study has been prepared to analyze the potential for significant impacts on the environment resulting from implementation of the proposed Project, described in greater detail in Section 3, *Project Description*. As required by State CEQA Guidelines Section 15063, this Initial Study is a preliminary analysis prepared by the Lead Agency, the City of Tustin, to determine if a Mitigated Negative Declaration (MND) or an Environmental Impact Report (EIR) is required to evaluate the potential environmental impacts associated with the Project.

This Initial Study informs City of Tustin decision-makers, affected agencies, and the public of potentially significant environmental impacts associated with the implementation of the Project. A "significant effect" or "significant impact" on the environment means "*a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project*" (State CEQA Guidelines Section15382).

Given the Project's broad scope and level of detail, combined with previous analyses and current information about the site and environs, the City's intent is to adhere to the following CEQA principles:

- Provide meaningful early evaluation of site planning constraints, service and infrastructure requirements, and other local and regional environmental considerations (Public Resources Code Section 21003.1).
- Encourage the applicant to incorporate environmental considerations into project conceptualization, design, and planning at the earliest feasible time (State CEQA Guidelines Section 15004[b][3]).
- Specify mitigation measures for reasonably foreseeable significant environmental effects and commit the City to future measures containing performance standards to ensure their adequacy when detailed development plans and applications are submitted (State CEQA Guidelines Section 15126.4).

1.2 DOCUMENT ORGANIZATION

This Initial Study includes the following sections:

Section 1. Introduction.

Provides information about CEQA and its requirements for environmental review and explains that an Initial Study was prepared to evaluate the proposed Project's potential impacts to the physical environment, and to determine if an EIR is required.

Section 2. Environmental Setting.

Provides information about the proposed Project's location.

Section 3. Project Description.

Includes a description of the proposed Project's physical features and characteristics.

Section 4. Environmental Checklist.

Includes the Environmental Checklist from Appendix G of the State CEQA Guidelines and identifies what subject areas were determined to be new significant environmental effects or previously identified effects that have a substantial increase in severity, based on the analysis in Section 5.

Section 5. Environmental Analysis.

Evaluates the proposed Project's potential to result in significant adverse effects to the physical environment and identifies if an EIR is required, and what environmental topics need to be analyzed in the EIR if so.

2 ENVIRONMENTAL SETTING

2.1 PROJECT BACKGROUND

The City of Tustin is required by State law to periodically update its Housing Element, a mandatory component of the City's General Plan. The Housing Element is the City's housing policy and planning document that identifies housing needs and constraints, and sets forth goals, policies, and programs that address the future housing needs for all income levels over an eight-year planning period that coincides with a Regional Housing Needs Allocation (RHNA). The City of Tustin prepared the 2021-2029 Housing Element of the General Plan – the most recent update to the Housing Element that covers the Sixth Cycle planning period from October 15, 2021, to October 15, 2029 – in accordance with Government Code Section 65580 et seq. (*Housing Elements*).

On October 5, 2021, the City Council adopted Resolution No. 21-86, certifying the Negative Declaration (ND) for General Plan Amendment (GPA) 2021-0002, which analyzed environmental impacts related to the City's Draft Housing Element Update of the General Plan (Resolution No. 21-87, approving GPA 2021-0002). Following preparation of the Draft Housing Element Update and certification of the ND, the Draft Housing Element went through several rounds of revisions and submittal for review to the State Department of Housing and Community Development (HCD). The City received formal HCD certification of the Housing Element Update on September 12, 2022. On October 4, 2022, the City Council adopted Resolution No. 22-47, approving GPA 2022-0002 for the final Housing Element Update.

The 2021-2029 Housing Element includes several provisions that aim to ensure the City can meet the required "fair share" of affordable housing units, as specified by the State of California. During the Housing Element process, the City assessed a number of sites and areas throughout the community that would be able to accommodate the City's assigned 2021 Regional Housing Needs Allocation (RHNA). The City identified 19 sites and one housing category (accessory dwelling units [ADUs]/junior accessory dwelling units [JADUs]) as qualifying sites to accommodate its RHNA allocation. Of the 19 Housing Element inventory sites, The Market Place (Housing Element Site 18) was identified as necessary for rezoning under Housing Element Program 1.1f in order to allow for high density residential development.

The Market Place (Project site) is an approximately 76.9-acre shopping center. 18 acres of the Project site, currently used as surface parking, have been identified as being suitable for housing development. Per the adopted City General Plan 2021-2029 Housing Element, redevelopment of the 18 acres is expected to accommodate up to 900 housing units.

2.2 PROJECT LOCATION

The Project site is located within the City of Tustin, which is in the central portion of Orange County and is surrounded by the cities of Irvine to the south and east, Santa Ana to the west, and Orange and unincorporated Orange County to the north. Major freeways and highways within or bordering the City of Tustin are the I-5 freeway through the center, State Route (SR) 55 to the west, SR 261 to the east, and the I-405 freeway to the south, as illustrated in Figure 2-1, *Regional Location*.

The Project site includes 76.9 acres and is generally bounded by Myford Road to the northwest, Bryan Avenue to the northeast, Jamboree Road to the southeast and I-5 (Santa Ana Freeway) to the southwest. The local vicinity of the Project site is illustrated in Figure 2-2, *Local Vicinity*. The 18 acres of the Project site that have been identified as suitable for housing development are comprised of Assessor's Parcel Numbers (APNs) 500-291-06, -07, -11, -12, and -25 and 500-312-03 and -10.

2.3 EXISTING PROJECT SITE

The Market Place is currently developed with 747,165 square feet (SF) of commercial business, including restaurants, retail, and service commercial uses, and has approximately 13,032 SF of additional square footage entitled for the commercial uses, though no plans have been submitted to date. The site also includes surface parking and ornamental landscaping along the perimeter and throughout the parking areas. Figure 2-3, *Aerial View*, illustrates the Project site in its current condition. Figure 2-4, *Project Site APNs*, depicts the Project site parcels.

2.4 EXISTING GENERAL PLAN LAND USE AND ZONING DESIGNATIONS

The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of East Tustin Specific Plan – SP-8 (ETSP). The Project site is identified Mixed Use (MU) within the ETSP. Accordingly, the site is intended for development of planned retail commercial, office, and industrial/research and development land uses of an intensity compatible with neighboring residential and the Auto Center land uses; and the Mixed Use zoning is intent of provide an opportunity for development to respond to future changes in economic and market forces. The Project site's existing General Plan land use and zoning designations are shown in Figure 2-5, *Existing General Plan Land Use* and Figure 2-6, *Existing Zoning*.

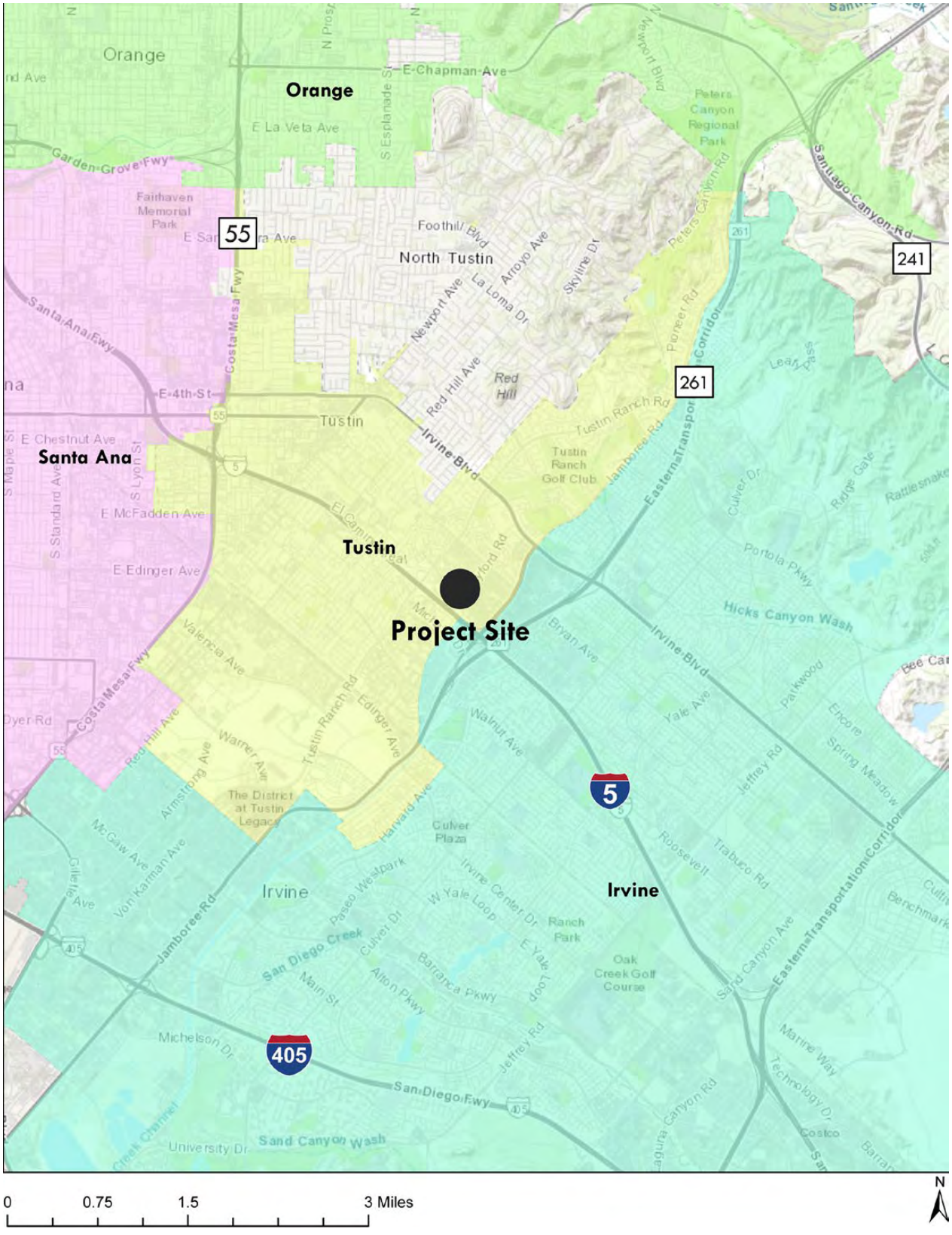
2.5 SURROUNDING LAND USES

The Project site is located within a developed area. The surrounding land uses and their designations are described in Table 2-1.

Table 2-1: Surrounding Existing Land Use and Zoning Designations

	Existing Land Use	General Plan Designation	Zoning Designation
Northeast	Bryan Avenue followed by multi-family and condominium residential uses	Planned Community Residential (PCR)	Planned Community Residential (PC RES), ETSP (SP-8)
Southeast	Jamboree Road followed by Tustin City Limits and continuation of The Market Place	City of Irvine: Regional Commercial (RGC)	City of Irvine: 4.9 – LPC Regional Commercial
Southwest	Interstate 5 followed by Tustin City Limits	City of Irvine: Community Commercial (COC) and Research/Industrial (REI)	City of Irvine: 4.2E – Community Commercial
Northwest	Myford Road followed by El Modena-Tustin Channel and commercial uses	Planned Community Commercial/Business (PCCB)	ETSP (SP 8), Mixed Use (MU),

Regional Location



The Tustin Market Place Rezone Project
City of Tustin

Figure 2-1

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Local Vicinity



The Tustin Market Place Rezone Project
City of Tustin

Figure 2-2

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Aerial View



The Tustin Market Place Rezone Project
City of Tustin

Figure 2-3

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Project Site APNs

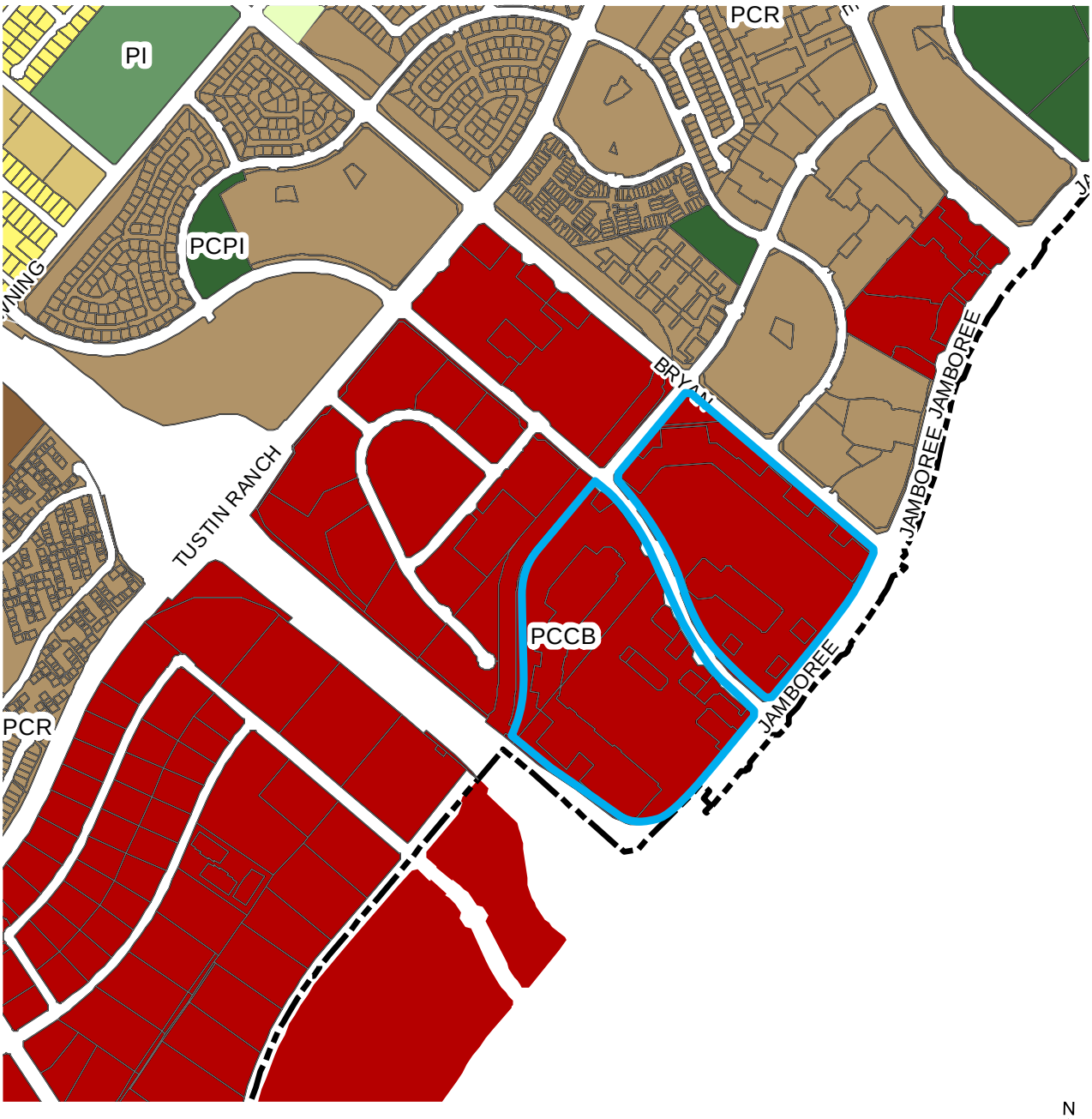


The Tustin Market Place Rezone Project
City of Tustin

Figure 2-4

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Existing General Plan Land Use Designation



Project Site

PCCB - Planned Community Commercial/Business

PCR - Planned Community Residential

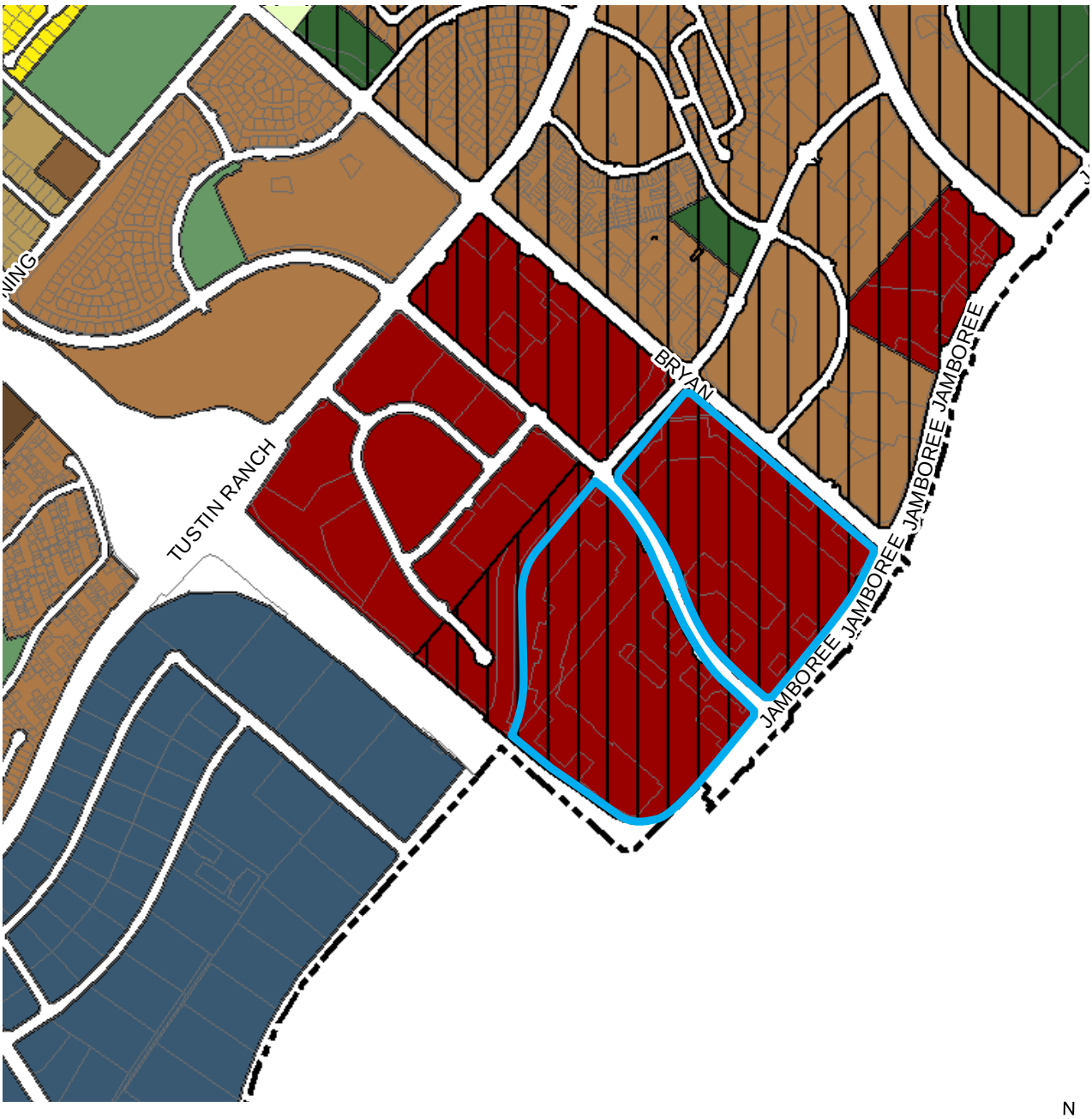
PCPI - Planned Community Public/Institutional

PI - Public/Institutional

Tustin City Limits

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Existing Zoning



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Existing Site Photos



Intersection of Jamboree Rd and West Dr looking west.



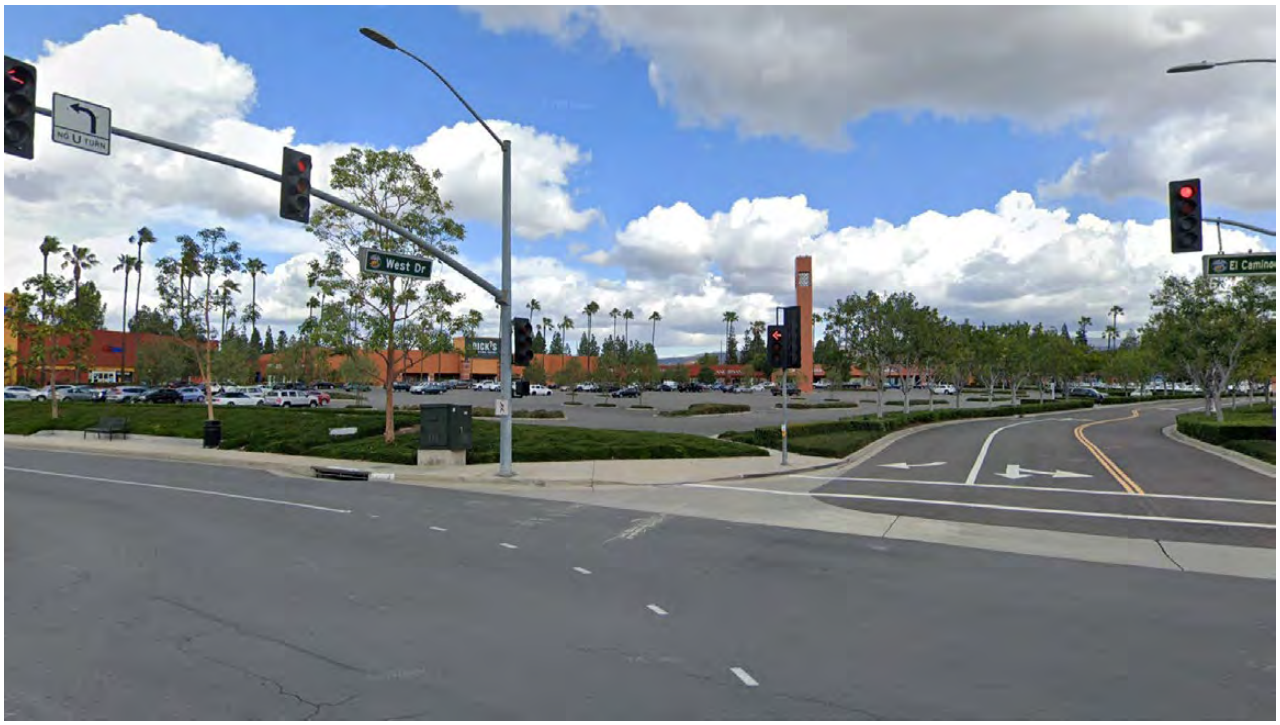
Parking area south of El Camino Real and West Dr.

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Existing Site Photos



Parking area west of Jamboree Rd and south of El Camino Real looking northwest.



View of parking area at West Dr and El Camino Real intersection.

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3 PROJECT DESCRIPTION

3.1 PROJECT OVERVIEW

Pursuant to Housing Element Program 1.1f, the City is proposing to zone an 18 acre portion of The Market Place to allow residential only development. This action requires a General Plan Amendment (GPA) to establish that higher density residential uses are allowed in the Planned Community Commercial Business Designation when prescribed by a Housing Overlay (HO) district or a Specific Plan (SP). It also requires a Specific Plan Amendment (SPA) to identify "High Density Residential" as a new residential density category available within the plan. Additionally, the SPA would identify "High Density Residential" as an allowable use within the MU land use of the ETSP. The SPA would designate the 18-acre site (full and partial APNs 500-291-06, -07, -11, -12, and -25 and 500-312-03 and -10) with the "High Density Residential" use.

The Project implements the City's General Plan Housing Element, which identifies the Project site as having a capacity of up to 900 housing units on 18 acres within seven parcels (APNs 500-291-06, -07, -11, -12, and -25 and 500-312-03 and -10). The anticipated development density was determined through the Housing Element process and is a conservative estimate based on trends in nearby communities. The anticipated development does not rely on the demolition of any existing buildings, but rather focuses on areas currently used for surface parking. In addition to analyzing 900 future residential units on the 18-acres rezone site, the EIR will also analyze the remaining development potential of The Market Place, which is 13,032 SF of nonresidential land uses (i.e. retail, restaurant, office, etc.). This 13,032 of additional nonresidential development is the residual development capacity already entitled but not constructed. No development is proposed as part of this Project; however, the Initial Study and the forthcoming EIR will analyze anticipated impacts associated with the construction and operation of all potential future residential and nonresidential development. Table 3-1 lists the existing and proposed Project site characteristics.

Table 3-1: Existing and Proposed Project Site Characteristics

	Existing			Proposed			
	GP Land Use	**Zoning Designation**	**Maximum Allowable Units**	**GP Land Use**	**Zoning Designation**	**Maximum Residential Acreage**	**Maximum Allowable Units**
The Market Place	PCCB	SP-8 (MU)	0	PCCB	SP-8 (MU)	18	900

3.2 PROJECT FEATURES

"Project," as defined by the CEQA Guidelines, means:

> "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and that is any of the following: (1) …enactment and amendment of zoning ordinances, and the adoption and amendment of local General Plans or elements thereof pursuant to Government Code Sections 65100–65700" (14 Cal. Code of Reg. §15378(a)).

This Initial Study and the subsequent Draft EIR analyze buildout at a Project level of detail, based upon entitlement applications being considered by the City of Tustin, compared to the existing conditions.

General Plan Amendment

As described in Section 2, *Environmental Setting*, the Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB). The PCCB designation is one of several "PC" designations

in the City's General Plan, which are intended to provide for a mix of commercial and office uses, such as hotel/motels, commercial centers, research and development, and professional offices. The Planned Community designations may also permit other uses, such as residential uses, which support the is land use proposal. However, the overall population density range for residential uses within the PCCB designation is currently 2 to 54 persons per acre. Therefore, the General Plan Amendment (GPA) will establish that a higher density of residential uses are allowed in the PCCB designation, subject to density limits established by a Housing Overlay (HO) district, or as established by a specific plan.

Specific Plan Amendment

Residential

As described in Section 2, *Environmental Setting*, within the ETSP, the Project site is designated as Mixed Use (MU), which is intended for development of planned retail commercial, office, and industrial/research and development land uses of an intensity compatible with neighboring residential and the Auto Center land uses. Residential uses are not currently permitted on the Project site within the ETSP. During the Housing Element process, the City identified The Market Place as a suitable commercial site for rezoning to allow higher density housing, including horizontal or vertical mixed-use developments.

Consistent with the requirements of Government Code § 655832(h), seven parcels (whole or partial) are proposed to be rezoned exclusively for residential use (non-residential uses are prohibited), allowing for 18-acres of the Project Site to be developed with housing, as identified in the Housing Element (inclusive of APNs 500-291-06, -07, -11, -12, and -25 and 500-312-03 and -10). Through a SPA to the ETSP, the new High Density Residential (HDR) designation would allow for up to 900 dwelling units within the Project site.

The ETSP would also be amended to implement objective development standards (ODS) related to parking, height, design, and other design criteria applicable to residential development. The ODS would be used during design review to ensure future project consistency with City design standards and would guide overall compatibility of future development with the surrounding area. Projects proposed in compliance with the adopted ODS would be approved by right.

Nonresidential

The remaining portion of the Project site, approximately 58 acres, would remain designated as nonresidential land use within the ETSP. There is currently 13,032 SF of remaining commercial capacity within the nonresidential-designated area of the Project site. Therefore, the Project anticipates the future nonresidential capacity buildout of 13,032 SF within a portion of the Project site that allows non-residential development. Future nonresidential projects proposed pursuant to the remaining development capacity would be required to comply with the existing MU development standards, and the City's plan review process. Future nonresidential development considered as part of the EIR is anticipated to be developed within exiting undeveloped areas, and this Project does not assume demolition of existing structures. No development is proposed as part of this Project.

Housing Element Programs

The 2021-2029 Housing Element included several housing programs to be implemented during the 2021-2029 planning period. The discussion below outlines programs that are applicable to the proposed Project.

Program 1.2a

Program 1.2a provides that the City will amend its Zoning Code to remove subjective design guidance in TCC Section 9272 (Design Review) and adopt new ODS to ensure that the City can provide clear guidance on design to streamline the approval of high-quality residential development. The ODS would include

provisions consistent with the requirements of Senate Bill (SB) 35. Program 1.2a, as applies to the Housing Site Inventory, is anticipated to be complete in October 2024.

As discussed above, the ETSP would include ODS as a result of Housing Element Program 1.2a that would apply to residential projects proposed within the residential-designated areas of the Project site.

Program 1.2c

Program 1.2c directs the City to develop parking standards to facilitate residential housing production as part of mixed-use developments, adaptive reuse projects, and new residential developments. The program provides that parking displaced as a result of redevelopment may be replaced with vertical parking structures, as needed, to provide required parking. Additionally, the parking standards would incentivize creative parking strategies such as parking credits for transit rich development and allowance of parking structures and parking lifts, by right, and subject to ODS.

The proposed Project would utilize these future parking standards to replace displaced parking as a result of future development within The Market Place.

Infrastructure Improvements

Roadways and utilities may be required to support development of projects within the rezone site. Future onsite infrastructure improvements that may be necessary for residential development within The Market Place would include storm drains, wastewater, water (potable and reclaimed), and dry utilities that would connect to existing facilities within the Project site or adjacent to the Project area. Specific infrastructure improvements required to support residential development within The Market Place are not known at this time, and will not be known until a development project is proposed.

3.3 PROJECT OBJECTIVES

CEQA Guidelines §15124(b) (Title 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 primary purpose and goal of the Project is to accommodate the City's 6th Cycle RHNA identified within the City of Tustin 2021-2029 Housing Element. The Project would achieve this goal through the following objectives:

- Rezoning to allow residential development at densities to achieve the estimated capacities determined in the Housing Element, and without inhibitors to residential development, such as overly stringent standards.
- Increase the number of housing opportunities available in Tustin to ensure the City provides its fair share of housing units within a variety of income categories.
- Increase flexibility in allowed uses and development potential in the City of Tustin.
- Promote a diverse housing stock with products that are offered at a wide range of sizes and affordability.

3.4 DISCRETIONARY APPROVALS AND PERMITS

The City of Tustin has primary approval responsibility for the Project. As such, the City serves as the Lead Agency for the Project's EIR pursuant to CEQA Guidelines §15050. The Tustin Planning Commission will evaluate the EIR and the Project and make a recommendation to the City Council as to whether the Project should be approved, and the EIR certified. The City Council is the decision-making authority for the Project and will consider the Project along with the Planning Commission's recommendations, and will make a final

decision to approve, approve with changes, or deny the Project. The City, including the Planning Commission and the City Council, will consider the information in the EIR and the Project's administrative record in its decision-making processes. In the event of approval of the Project and certification of the EIR, the City would conduct administrative and discretionary review (if applicable) and grant ministerial and discretionary permits and approvals to implement Project requirements, conditions of approval, and future developments within The Market Place, as applicable. Approval and implementation of the Project requires City approval of the following discretionary actions:

- Certification of the EIR,
- Specific Plan Amendment to the East Tustin Specific Plan;
- Adoption of Objective Residential Design Standards and Development Guidelines; and
- General Plan Amendment.

The Project's EIR may be used by various governmental decisionmakers for discretionary permits and actions that are necessary or may be requested in connection with implementation of future development projects pursuant to the Project. Additional discretionary, administrative, and/or ministerial actions may be necessary from other responsible agencies to fully implement the Project.

The state or local agencies that may rely upon the information contained in this EIR when considering approval of permits may include, but are not limited to, the following:

- Irvine Ranch Water District for approval of the Water Supply Assessment; and
- Tustin Unified School District.

4 ENVIRONMENTAL CHECKLIST

4.1 BACKGROUND

Project Title: The Market Place Rezone Project
Lead Agency: City of Tustin
Lead Agency Contact: Samantha Beier, Senior Planner
Project Location: West of Jamboree Rd., South of Bryan Ave., East of Myford Rd., and North of Santa Ana Freeway (Interstate 5), CA 92782
Project Sponsor's Name and Address: City of Tustin, 300 Centennial Way, Tustin, CA 92780
General Plan and Zoning Designation: The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of East Tustin Specific Plan (SP 8). The Project site is designated as Mixed Use (MU) within the ETSP and as shown in Figure 2-5, *Existing General Plan Land Use* and Figure 2-6, *Existing Zoning*.
Project Description: Pursuant to the City's 2021-2029 Housing Element Program 1.1f, the City is proposing to rezone a portion of The Market Place to allow residential development, which would require a General Plan Amendment and Specific Plan Amendment to the East Tustin Specific Plan. The Housing Element identifies the Project site as having a capacity of up to 900 housing units. Analysis of potential future development does not rely on the demolition of any existing buildings, but rather focuses on 18 acres currently used for surface parking. No development is proposed as part of this Project.
Surrounding Land Uses and Setting: Northeast: Bryan Avenue followed by multi-family and condominium residential uses. Southeast: Jamboree Road followed by Tustin City Limits and continuation of The Market Place (Irvine). Southwest: Interstate 5 followed by Tustin City Limits. Northwest: Myford Road followed by El Modena-Tustin Channel and commercial uses.
Other Public Agencies Whose Approval is Required: None.

4.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The subject areas checked below were determined to have potentially new significant environmental effects or to be previously identified effects that have a substantial increase in severity either due to a change in project, change in circumstances, or new information of substantial importance, as indicated by the checklist and discussion on the following pages.

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

4.3 DETERMINATION

On the basis of this initial evaluation:

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

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

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

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

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

Signature	Date
Name and Title	Lead Agency

4.4 EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including offsite as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. "Negative Declaration: Potentially Significant Unless Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analysis," as described in (5) below, may be cross-referenced).
5. Earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Guidelines Section 15063 (c)(3)(d). In this case, a brief discussion should identify the following:

    a) Earlier Analysis Used. Identify and state where they are available for review.
    b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used, or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The analysis of each issue should identify: (a) the significance criteria or threshold used to evaluate each question; and (b) the mitigation measure identified, if any, to reduce the impact to less than significance.

5 ENVIRONMENTAL ANALYSIS

This section provides evidence to substantiate the conclusions in the environmental checklist.

5.1 AESTHETICS

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

a) Have a substantial adverse effect on a scenic vista?

No Impact. Scenic vistas consist of expansive, panoramic views of important, unique, or highly valued visual features that are seen from public viewing areas. This definition combines visual quality with information about view exposure to describe the level of interest or concern that viewers may have for the quality of a particular view or visual setting. A scenic vista can be impacted in two ways: a development project can have visual impacts by either directly diminishing the scenic quality of the vista or by blocking the view corridors or "vista" of the scenic resource. Important factors in determining whether a proposed project would block scenic vistas include the project's proposed height, mass, and location relative to surrounding land uses and travel corridors.

The City of Tustin General Plan designates several landforms and visual interest points as scenic resources within the Conservation Element (City of Tustin, 2018). The City of Tustin protects public views along the ridge lines, views toward the inland mountains and along scenic transportation corridors. Specifically, Policy 35, *Protect Scenic Views and Resources*, protects views of the Peter Canyon Ridgeline:

> **Policy 35. Protect Scenic Views and Resources:** Through the Hillside Review process, monitor and limit development of Peters Canyon Ridgeline consistent with the requirements of the East Tustin Specific Plan, Grading and Excavation Code and Grading Manual.

The Project site is currently developed as a commercial site and is surrounded by other commercial developments. The Project site and public roadways surrounding the Project site, including I-5, Jamboree Road, Bryan Avenue, and Myford Road, do not provide views of Peters Canyon Ridgeline due to low elevation and visual obstruction by surrounding buildings and trees (see Figure 2-7, *Site Photos*).

The Project would include a GPA and SPA for the Project site to allow future development of up to 900 housing units, consistent with the City's certified 2021-2029 Housing Element. Future development would be constructed within the boundaries of the existing Project site, which is not a designated scenic vista or provide views of designated scenic resources. Therefore, the Project would result in no impact.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. According to the California Department of Transportation (Caltrans) Scenic Highway Map, the City of Tustin does not contain any scenic highways within or surrounding the City (California Department of Transportation, 2018). The nearest state scenic highway is Route 91 in the City of Orange, approximately 8.5 miles to the north. According to the County of Orange General Plan, there are no designated scenic roadways or scenic vistas in the Project vicinity (County of Orange, 2005). Therefore, the Project would have no impact on scenic resources within a state scenic highway.

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

Less Than Significant Impact. The Project site is currently developed as a commercial site and is surrounded by other commercial developments. The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of Mixed Use (MU) within the East Tustin Specific Plan (SP 8). The Project would include a GPA and SPA to allow for future development of the Project site with up to 900 housing units within 18 acres on seven parcels of the Project site, consistent with the City's certified 2021-2029 Housing Element, and 13,032 SF of nonresidential development. Additionally, the Project anticipates the future nonresidential capacity buildout of 13,032 SF within to occur nonresidential-designated areas of the Project site. No development is proposed as part of this Project.

Per Housing Element Program 1.2a, the City will develop ODS to ensure high quality residential development for future residential proposed within the Project site, while simultaneously meeting the City's goal of streamlining residential development within the City to meet its RHNA goals. Development is not proposed as part of the Project; however, all future development proposed within the Project site would be subject to the requirement and provisions of the applicable ODS.

Design requirements established through ODS for the site would be developed to be highly compatible with the existing development standards for the site established through the ETSP. All future development would be required to comply with the City's ODS for the site, which would ensure high visual character and quality of future development within the Project site. Therefore, the Project would not conflict with applicable zoning and other regulations governing scenic quality and would have a less-than-significant impact on visual character and quality.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less Than Significant Impact. Spill light occurs when lighting fixtures such as streetlights, parking lot lighting, exterior building lighting, and landscape lighting are not properly aimed or shielded to direct light to the desired location and light escapes and partially illuminates a surrounding location. Sensitive uses (e.g., residential uses) surrounding the Project site could be impacted by the light from development within the boundaries of the Project site if light spill occurs.

Glare is the result of improperly aimed or blocked lighting sources that are visible against a dark background such as the night sky. Glare may also refer to the sensation experienced looking into an

excessively bright light source that causes a reduction in the ability to see or causes discomfort. Glare generally does not result in illumination of off-site locations but results in a visible source of light viewable from a distance. Glare could also occur from building materials of the new structures, including glass and other reflective materials.

The City of Tustin Municipal Code, Section 9271hh, *Light and Glare*, includes the following requirements:

> 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.

The Project does not propose development but would allow for the future development of residential land uses within an existing commercial land use designation. Future development could add additional nighttime light sources, such as landscape lighting, security lighting, and the lighting from additional cars. As previously discussed, all future projects would be required to comply with the applicable ODS for the site. The ODS would include specific setbacks, lighting standards, and building materials that would ensure the avoidance of potential lighting impacts. Further, all future projects would be required to comply with the City's light and glare ordinance, which would be verified through plan check prior to project approval. Therefore, the Project would result in a less than significant impact.

5.2 AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) 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?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

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

No Impact. The State of California Department of Conservation's Farmland Mapping and Monitoring Program is charged with producing maps for analyzing impacts on the state's agricultural resources. California's agricultural lands are rated based on soil quality and irrigation status. Per Section 21060.1 of the State CEQA Guidelines, the following categories qualify as "agricultural land": Prime Farmland, Farmland of Statewide Importance, and Unique Farmland.

Per the CDOC FMMP Map, the Project site is designated as Urban and Built-Up Land (California Department of Conservation, 2018). The City does not currently include any commercial agricultural land uses. Existing zoning categories within the City of Tustin do not allow for commercial agricultural uses. Therefore, the Project would result in no impact on Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The Williamson Act (California Land Conservation Act of 1965) restricts the use of agricultural and open space lands to farming and ranching by enabling local governments to contract with private landowners for indefinite terms in exchange for reduced property tax assessments.

The Project site is currently developed with commercial land uses and does not include agricultural land uses. The Project site is not currently under a Williamson Act contract. Therefore, the Project would result in no impact on existing zoning for agricultural use or a Williamson Act contract.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. "Forest land" is defined as "land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." "Timberland" is defined as "land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees." "Timberland Production Zone" (TPZ) is defined as "an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h)."

The Project site is currently completely developed with commercial land use. The Project site does not include forest land or timberland. Additionally, the Project site is currently designated for Mixed-Use (MU) within the ETSP, which does not provide for forest land or timberland production and management. Therefore, the Project would result in no impact on zoning of forest land or timberland.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. As discussed above, the Project site is currently completely developed as commercial land use and does not include forest land. Therefore, the Project would have no impact on forest land.

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

No Impact. The Project site is within an urbanized area and is currently completely developed as commercial land use. The area surrounding the Project site is also completely developed. The existing environment does not include any agricultural land uses or forest land. Therefore, the Project would have no impact on Farmland or forest land.

5.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☒	☐	☐	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard?	☒	☐	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☒	☐	☐	☐

a) through d)

Potentially Significant Impact. As described in Section 3, *Project Description*, the Project would include a GPA and SPA to allow for future development of the Project site with up to 900 housing units within 18 acres on seven parcels, consistent with the City's certified 2021-2029 Housing Element, and 13,032 SF of nonresidential development. No development is proposed as part of this Project; however, the provision of development intensification could facilitate future operational air quality impacts. Residential land uses have not been previously analyzed through applicable air quality plans. The addition of residential land uses could result in a cumulatively considerable net increase of criteria pollutants within the study area. Additionally, the introduction of new land uses to existing development could expose sensitive receptors to substantial pollutant concentrations. Therefore, an air quality study will be conducted for the Project to determine potential impacts and air quality impacts will be further analyzed in an EIR.

5.4 BIOLOGICAL RESOURCES

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

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

No Impact. The Project site consists of approximately 76.9 acres that are developed with existing commercial uses, including restaurant, retail, and office establishments, a paved parking lot, and landscaping. The area proposed for future implementation of residential uses is limited to the existing parking lot areas scattered throughout the Project site over seven parcels (APNs 500-291-06, -07, -11, -12, and -25 and 500-312-03 and -10). Future nonresidential development would occur within the developed nonresidential areas. The Project site is surrounded by urban development with structures, paved parking, and ornamental landscaping. There is no evidence of either suitable habitat for or the presence of any endangered, rare, threatened, or special status plant species (or associated habitats) or wildlife species designated by the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), or California Native Plant Society (CNPS).

The Project does not propose development; however, the Project would provide for future proposed development through implementation of the amended Specific Plan and the City's certified 2021-2029

Housing Element. Landscaping implemented as part of future projects would likely include a variety of ornamental trees, shrubs, and groundcover. As the Project site is currently completely paved, implementation of the Project would not result in an adverse effect, either directly or through habitat modifications, on any sensitive species, and impacts would not occur.

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

No Impact. As discussed above, the area proposed for the provision of future development is completely paved with a parking lot. There is no existing riparian habitat or sensitive natural community within the developable area of the site. Therefore, the Project would result in no impact.

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

No Impact. As discussed above, the area proposed for the provision of future development is completely paved with a parking lot. There are no wetlands or riparian areas within the developable area of the site. Therefore, the Project would result in no impact.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less Than Significant Impact with Mitigation. Wildlife corridors are areas where wildlife movement is concentrated due to natural or anthropogenic constraints and corridors provide access to resources such as food, water, and shelter. Animals use these corridors to move between different habitats and provide avenues for wildlife dispersal, migration, and contact between other populations.

The Project site does not support conditions for migratory wildlife corridors or linkages. The Project site is completely developed and surrounded by a roadway and developed land uses. The site and surrounding areas do not provide function for wildlife movement. Additionally, the surrounding area is developed and urban. There are no rivers, creeks, or open drainages near the site that could function as a wildlife corridor. Thus, implementation of the Project would not result in impacts related to wildlife movement or wildlife corridors.

However, the Project site contains existing ornamental trees that could be used for nesting by common bird species that are protected by the federal Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code Sections 3503.5, 3511, and 3515 during the avian nesting and breeding season that occurs between February 1 and September 15. The provisions of the MBTA prohibit disturbing or destroying active nests. Therefore, Mitigation Measure BIO-1 has been included to require that if commencement of vegetation clearing for any future development project occurs between February 1 and September 15, a qualified biologist shall conduct a nesting bird survey no more than 3 days prior to commencement of activities to confirm the absence of nesting birds. With implementation of Mitigation Measure BIO-1, potential impacts to nesting birds would be less than significant.

e) Conflict with any local policies or ordinances protecting biological resources?

Less Than Significant Impact. The Project site is urban and developed and contains no biological resources to be preserved under the resource protection policies of the City's General Plan. Article 7, Chapter 3 of the Municipal Code addresses the protection of "trees, plants or shrubs in or growing upon or over any public parkway street, highway, alley, right-of-way, City-owned property in the City." The Project would not impact any such trees and shrubs. To the extent that future development facilitated by the Project is required to

plant new trees on public property pursuant to Section 7308 of Article 7, Chapter 3, the Project would be required to comply with the Municipal Code requirements as part of the City permitting process (PPP BIO-1). As a result, impacts would be less than significant.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The Project site is developed and in an urban area. The Project site does not contain any natural lands that are subject to an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, the Project would not result in impacts to biological habitat or conservation plans.

Plans, Programs, or Policies (PPP)

PPP BIO-1 **Street Trees.** Installation of street trees shall occur in compliance with the City of Tustin Municipal Code Article 7, Chapter 3, Section 7308.

Mitigation Measures

MM BIO-1 **Migratory Bird Treaty Act.** Prior to commencement of grading activities, the City Building Division shall verify that, in the event that vegetation and tree removal activities occur within the active breeding season for birds (February 1–September 15), the Project applicant (or their Construction Contractor) shall retain a qualified biologist (meaning a professional biologist that is familiar with local birds and their nesting behaviors) to conduct a nesting bird survey no more than 3 days prior to commencement of construction activities.

The nesting survey shall include the Project site and areas immediately adjacent to the site that could potentially be affected by Project-related construction activities, such as noise, human activity, and dust, etc. If active nesting of birds is observed within 100 feet of the designated construction area prior to construction, the qualified biologist shall establish an appropriate buffer around the active nests (e.g., as much as 500 feet for raptors and 300 feet for non-raptors [subject to the recommendations of the qualified biologist]), and the buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests.

5.5 CULTURAL RESOURCES

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

A Cultural Records Search (see Appendix A) was prepared by Brian F. Smith and Associates Environmental Services (BFSA) for the Project to determine the potential for historic and architectural resources to occur within the Project site and has been incorporated into the discussion below (BFSA Environmental Services, 2023).

a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

No Impact. State CEQA Guidelines Section 15064.5 defines historic resources as resources listed or determined to be eligible for listing by the State Historical Resources Commission, a local register of historical resources, or the lead agency. Generally, a resource is considered "historically significant" if it meets one of the following criteria:

i. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
ii. Is associated with the lives of persons important in our past;
iii. 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;
iv. Has yielded, or may be likely to yield, information important in prehistory or history.

According to results of the cultural record search prepared for the Project, the Project site does not contain any previously identified eligible or listed historic resources (Appendix A). Existing structures within the Project site date back to the 1980s, and therefore would become of an age (50 years or older) in the near future that would allow for their consideration as historic resources. However, the area proposed for future implementation of residential and nonresidential development is within the existing parking lot and open space areas, which do not contain any structures that could become historic. Therefore, the Project would result in no impact on a historical resource.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less Than Significant Impact with Mitigation. According to results of the cultural record search prepared for the Project, the Project site does not contain any archaeological resources. The Project site is currently developed as a commercial site and is surrounded by other commercial developments. Therefore, the Project site and soils are heavily disturbed. However, the Project could facilitate future construction potentially at depths greater than previous excavation activities, which could result in the disturbance of undisturbed native soils. Therefore, there is a low potential that future construction could result in inadvertent discovery of a buried archeological resource. Mitigation Measure CUL-1 has been incorporated to mitigate any potential impact to an archeological resource. In the event of an inadvertent discovery of a buried archeological

resource, work shall cease within 50 feet of the find until a qualified archaeologist from the City or County List of Qualified Archaeologists has evaluated the find to determine whether the find constitutes a "unique archaeological resource", and if the discovered resource(s) appears Native American in origin, a Native American Monitor shall be contacted to evaluate any potential tribal cultural resource(s) and shall have the opportunity to consult on appropriate treatment and curation of these resources. Prior to the issuance of any permits for ground-disturbing activities that include the excavation of soils (including as grading, excavation, and trenching), the City of Tustin shall ensure that all Project grading and construction plans and specifications include requirement to halt construction activity and contact an archaeologist.

The City has detailed standards and requirements for grading that are designed to protect sensitive topographic, soil, palaeontologic, and archaeologic resources. The Tustin Grading Manual prescribes appropriate measures to protect the earth by controlling erosion, sedimentation, and storm drainage (PPP HYD-2). Proper grading, soil management, and open space standards will work to preserve any potential archaeological resources in the unlikely event that a resource is encountered. Therefore, the Project would result in a less than significant impact with mitigation on archeological resources.

c) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact. The Project site has been previously disturbed, as described above, and has not been previously used as a cemetery. Thus, human remains are not anticipated to be uncovered during project construction. In addition, California Health and Safety Code Section 7050.5, CEQA Section 15064.5, and Public Resources Code Section 5097.98 (included as PPP CUL-1) mandate the process to be followed in the event of an accidental discovery of any human remains. Specifically, California Health and Safety Code Section 7050.5 requires that if human remains are discovered, disturbance of the site shall remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of death, and made recommendations concerning the treatment and disposition of the human remains 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 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 be less than significant through the implementation of future construction facilitated by the Project.

Plans, Policies, and Programs (PPP)

PPP CUL-1 **Human Remains.** In the event that human remains are encountered on the Project site, work within 50 feet of the discovery shall cease and the County Coroner shall be notified immediately consistent with the requirements of California Code of Regulations (CCR) Section 15064.5(e). State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code (PRC) Section 5097.98. Prior to the issuance of grading permits, the City Community Department Director, or designee, shall verify that all grading plans specify the requirements of CCR Section 15064.5(e), State Health and Safety Code Section 7050.5, and PRC Section 5097.98, as stated above.

PPP HYD-2 **City of Tustin Grading Manual.** All future projects are required to comply with the City of Tustin Grading Manual (1990). Implementation of grading manual standards would be verified by the City during the plan check and permitting process.

Mitigation Measures (MM)

MM CUL-1 **Inadvertent Discovery.** In the event that potential archaeological resources are discovered during excavation, grading, or construction activities, work shall cease within 50 feet of the find until a qualified archaeologist from the City or County List of Qualified Archaeologists has evaluated the find to determine whether the find constitutes a "unique archaeological resource," as defined in Section 21083.2(g) of the California Public Resources Code. Any resources identified shall be treated in accordance with California Public Resources Code Section 21083.2(g).

If the discovered resource(s) appears Native American in origin, a Native American Monitor shall be contacted to evaluate any potential tribal cultural resource(s) and shall have the opportunity to consult on appropriate treatment and curation of these resources. The discovery would also be reported to the City and the South Central Coastal Information Center (SCCIC).

Prior to the issuance of any permits for ground-disturbing activities that include the excavation of soils (including as grading, excavation, and trenching), the City of Tustin shall ensure that all Project grading and construction plans and specifications include requirement to halt construction activity and contact an archaeologist as specified above.

5.6 ENERGY

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

a) and b)

Potentially Significant Impact. As described in Section 3, *Project Description*, the Project would include a GPA and SPA to allow for future development of the Project site with up to 900 housing units within 18 acres on seven parcels, consistent with the City's certified 2021-2029 Housing Element, and 13,032 SF of nonresidential development. No development is proposed as part of this Project; however, the provision of development intensification could facilitate future energy impacts. Residential land uses have not been previously analyzed for consistency with state or local energy plans and policies. Additionally, the future construction and operation of potential development could result in a substantial increase in energy consumption. Therefore, an energy study will be conducted for the Project to determine potential impacts and energy impacts will be further analyzed within the EIR.

5.7 GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) 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? (Refer to Division of Mines and Geology Special Publication 42)	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☒	☐	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☒	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☒	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. 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?

Less Than Significant Impact. In 1972, the Alquist-Priolo Special Studies Zones Act was signed into law. In 1994, it was renamed the Alquist-Priolo Earthquake Fault Zoning Act (A-P Act). The primary purpose of the Act is to mitigate the hazard of fault rupture by prohibiting the location of structures for human occupancy across the trace of an active fault. The A-P Act requires the State Geologist (Chief of the California Geology Survey) to delineate "Earthquake Fault Zones" along with faults that are "sufficiently active" and "well-defined." The boundary of an "Earthquake Fault Zone" is generally about 500 feet from major active faults and 200 to 300 feet from well-defined minor faults. The A-P Act dictates that cities and counties withhold development permits for sites within an Alquist-Priolo Earthquake Fault Zone until geologic investigations demonstrate that the site zones are not threatened by surface displacements from future faulting.

The Project site is located on the eastern border of the City of Tustin, bordered by the City of Irvine, across Jamboree Road. According to the California Geological Survey available fault maps, the Project is approximately 13 miles to the south of the nearest A-P fault, Whittier Fault (Parrish, Earthquake Zones of Required Investigation, Tustin Quadrangle, 2001). The Project is also approximately 11 miles to the northeast of the North Branch Fault (Parrish, Earthquake Zones of Required Investigation, Seal Beach Quadrangle, 1999). Due to the location of these faults, the general region is subject to the potential for earthquakes; however, the Project site is outside of a 500-foot radius from an active fault and is not subject to a special development permit. The Project site contains existing development, and the provision for additional development would not exacerbate existing risk of earthquake. Further, all future development permitted would be required to comply with the requirement of the California Building Code (CBC) (California Code of Regulations, Title 24, Part 2) (PPP GEO-1), which is a minimum requirement intended to protect life safety and prevent collapse of structures. Therefore, the Project would result in a less-than-significant impact.

ii. Strong seismic ground shaking?

Less Than Significant Impact. The Project site is located within a seismically active region of Southern California. As mentioned previously, the North Branch Fault is located 11 miles from the site (Parrish, Earthquake Zones of Required Investigation, Tustin Quadrangle, 2001). Thus, moderate to strong ground shaking can be expected at the Project site. The amount of motion expected at the Project site can vary from none to forceful depending upon the distance to the fault and the magnitude of the earthquake. Greater movement can be expected at sites located closer to an earthquake epicenter, which consists of poorly consolidated material such as alluvium, and in response to an earthquake of great magnitude.

Structures built in the City are required to be built in compliance with the CBC (California Code of Regulations, Title 24, Part 2) that provides provisions for earthquake safety based on factors including building occupancy type, the types of soils onsite, and the probable strength of ground motion. Compliance with the CBC would require the incorporation of 1) seismic safety features to minimize the potential for significant effects as a result of earthquakes; 2) proper building footings and foundations; and 3) construction of the building structure so that it would withstand the effects of strong ground shaking. Implementation of CBC standards would be verified by the City during the plan check and permitting process (PPP GEO-1). Because the proposed Project would be constructed in compliance with the CBC, the proposed Project would result in a less-than-significant impact related to strong seismic ground shaking.

iii. Seismic-related ground failure, including liquefaction?

Less Than Significant Impact with Mitigation. Soil liquefaction is a phenomenon in which saturated, cohesionless soils layers, located within approximately 50 feet of the ground surface, lose strength due to cyclic pore water pressure generation from seismic shaking or other large cyclic loading. During the loss of stress, the soil acquires "mobility" sufficient to permit both horizontal and vertical movements. Soil properties and soil conditions such as type, age, texture, color, and consistency, along with historical depths to ground water are used to identify, characterize, and correlate liquefaction susceptible soils.

Soils that are most susceptible to liquefaction are clean, loose, saturated, and uniformly graded fine-grained sands that lie below the groundwater table within approximately 50 feet below ground surface. Lateral spreading is a form of seismic ground failure due to liquefaction in a subsurface layer.

According to the California Geological Survey available fault maps, the Project is within a liquefaction zone in the City of Tustin (Parrish, Earthquake Zones of Required Investigation, Tustin Quadrangle, 2001). The California Geological Survey defines a liquefaction zone as, "Areas where historical occurrence of liquefaction, or local geological, geotechnical and ground water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required." Therefore, the Project site would require additional geotechnical investigation prior to

development of potential future projects. Mitigation Measure GEO-1 has been included to require all future projects implemented within the Project site to conduct a project-specific geotechnical investigation to ensure that the site's soils are adequate for the construction and operation of the proposed project. Future projects would be required to implement measures identified within the project-specific geotechnical investigation. All mitigation measures identified through the geotechnical investigation shall be implemented to avoid potential geotechnical hazards through construction or operation of the Project. The City will ensure completion of the geotechnical investigation and identification of necessary measures prior to plan approval of future proposed projects. Through investigation and implementation of necessary measures to mitigate potential liquefaction hazards, future development would result in a less than significant impact. Therefore, the Project would result in a less-than-significant impact with mitigation.

iv. Landslides?

No Impact. Landslides and other slope failures are secondary seismic effects that are common during or soon after earthquakes. Areas that are most susceptible to earthquake induced landslides are steep slopes underlain by loose, weak soils, and areas on or adjacent to existing landslide deposits.

The Project site is currently fully developed with commercial and office uses. The Project site is flat and is not adjacent to or within the vicinity of steep slopes or other landforms susceptible to landslides. No development is proposed as part of this Project. The provision of future development would not result in new risk of loss, injury, or death involving a landslide. Therefore, the Project would result in no impact.

b) Result in soil erosion or the loss of topsoil?

Less Than Significant Impact. The Project site is currently fully developed with commercial and office uses. However, future development facilitated by the provision of residential land uses within the Project site could result in ground disturbing activities as part of the construction.

All proposed development construction would be required to comply with the California Regional Water Quality Control Board (RWQCB) Order No. R8-2010-0033, National Pollutant Discharge Elimination System (NPDES) Permit No. CAS618033 – Construction General Permit requirements (PPP HYD-1). Requirements include installation of Best Management Practices (BMPs), which establish minimum stormwater management requirements and controls. To reduce the potential for soil erosion and the loss of topsoil, a Stormwater Pollution Prevention Plan (SWPPP) is required by the RWQCB regulations to be developed by a QSD (Qualified SWPPP Developer). The SWPPP is required to address site-specific conditions related to specific grading and construction activities. The SWPPP would identify potential sources of erosion and sedimentation to prevent loss of topsoil during construction, and to identify erosion control BMPs to reduce or eliminate the erosion and loss of topsoil, such as use of silt fencing, fiber rolls, or gravel bags; stabilized construction entrances/exits; hydroseeding, and similar measures. In addition to RWQCB requirements, proposed development would need to comply with the City of Tustin Grading Manual procedures (PPP HYD-2). The City of Tustin Grading Manual is a compilation of rules, procedures, and interpretations necessary to carry out the provisions of the Tustin City Code relating to grading and excavation.

Following construction, future development would be required to prepare and implement a Water Quality Management Plan (WQMP) per City standards. Future projects would be required to comply with the requirements of the Orange County Drainage Area Management Plan (DAMP) and the intent of the non-point source NPDES Permit for Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the incorporated cities of Orange County within the Santa Ana Region (included as PPP HYD-3).

The DAMP regulations are included in the City's Municipal Code in Section 4902 and are the implementation method for NPDES Stormwater Permit compliance. The DAMP:

- Provides the framework for the program management activities and plan development;
- Provides the legal authority for prohibiting unpermitted discharges into the storm drain system and for requiring BMPs in new development and significant redevelopment;
- Ensures that all new development and significant redevelopment incorporates appropriate Site Design, Source Control, and Treatment Control BMPs to address specific water quality issues; and
- Ensures that construction sites implement control practices that address construction related pollutants including erosion and sediment control and onsite hazardous materials and waste management.

The DAMP requires that new development and significant redevelopment projects develop and implement a WQMP that includes BMPs and low impact development (LID) design features that would provide onsite treatment of stormwater to prevent pollutants from onsite uses from leaving the site. These requirements would ensure that future projects would not result in substantial soil erosion or the loss of topsoil. With implementation of uniformly applicable requirements (SWPPP, City of Tustin Grading Manual, and the DAMP), the Project would result in a less-than-significant impact.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?

Less Than Significant Impact with Mitigation. Landslides and other forms of mass wasting, including mud flows, debris flows, and soil slips, occur as soil moves downslope under the influence of gravity. Landslides are frequently triggered by intense rainfall or seismic shaking. As described in Response (a) (iv), the Project site is located in a relatively flat developed urban area that does not contain or adjacent to large slopes, and the Project would not generate large slopes. Therefore, impacts related to landslides would not occur.

Lateral spreading is a type of liquefaction-induced ground failure associated with the lateral displacement of surficial blocks of sediment resulting from liquefaction in a subsurface layer. Once liquefaction transforms the subsurface layer into a fluid mass, gravity plus the earthquake inertial forces may cause the mass to move downslope towards a free face (such as a river channel or an embankment). Lateral spreading may cause large horizontal displacements and such movement typically damages pipelines, utilities, bridges, and structures. As discussed in Response (a), the Project site is within a zone identified as susceptible to liquefaction. Further, the Project site then has a potential for lateral spreading. However, all future projects implemented would be required to conduct a project-specific geotechnical investigation to ensure that the site's soils are adequate for the construction and operation of the proposed project, per MM GEO-1. Implementing measures identified in the geotechnical investigation prepared for future projects would mitigate lateral spreading hazards to a less-than-significant impact.

Subsidence is a general lowering of the ground surface over a large area that is generally attributed to lowering of the ground water levels within a groundwater basin. Localized or focal subsidence or settlement of the ground can occur as a result of an earthquake motion in an area where groundwater in basin is lowered. The United States Geological Survey (USGS) has surveyed the state for areas of recorded subsidence—historical and current—across California. According to the USGS Areas of Subsidence in California Map, the Project site is within an area of subsidence as a result of excessive groundwater pumping (United States Geological Survey, 2023). As described above, all future projects implemented through the proposed amended Specific Plan would be required to conduct a project-specific geotechnical investigation to ensure that the site's soils are adequate for the construction and operation of the proposed project. Future projects would be required to implement measures identified within the project-specific geotechnical investigation (MM GEO-1).

Therefore, the Project would result in a less-than-significant impact with mitigation on the risk of landslide, lateral spreading, subsidence, liquefaction or collapse.

d) Be located on expansive soil, as defined in in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less Than Significant Impact with Mitigation. Expansive soils contain certain types of clay minerals that shrink or swell as the moisture content changes; the shrinking or swelling can shift, crack, or break structures built on such soils. Arid or semiarid areas with seasonal changes of soil moisture experience, such as southern California, have a higher potential of expansive soils than areas with higher rainfall and more constant soil moisture.

The Project site is currently developed as a commercial site and is surrounded by other commercial developments. The Project would include a GPA and SPA to allow for future development of the Project site with up to 900 housing units within 18 acres on seven parcels, consistent with the City's certified 2021-2029 Housing Element, and 13,032 SF of nonresidential development. Additionally, Project anticipates the future nonresidential capacity buildout of 13,032 SF within the remaining nonresidential-designated area of the Project site. No development is proposed as part of this Project. All future projects would be required to comply with applicable federal, state, and local policies and regulations established to prevent or reduce impacts due to expansive soil, including Policy 8.5 of the Conservation/Open Space/Recreation Element of the City's General Plan, which requires City review of threats from expansive soils during the development review process (PPP GEO-2). Further, if necessary, geological investigations would be prepared and implemented for each future project to reduce significant impacts (MM GEO-1). Therefore, the project would result in a less-than-significant impact with mitigation.

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

No Impact. All future development would be served by the City sewer utilities and would not include the use of septic tanks or alternative wastewater disposal systems. Therefore, the Project would result in no impact.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact. The Project site is currently developed as a commercial site and is surrounded by other commercial developments. Therefore, the Project site is heavily disturbed and does not contain any native undisturbed soils. However, the Project could facilitate future construction potentially at depths greater than previous excavation activities, which could result in the disturbance of undisturbed native soils. Figure COSR-2 of the City's Conservation/Open Space/Recreation Element of the General Plan identifies areas sensitive to paleontological resources (City of Tustin, 2018). The Project site is not located in an area identified by the General Plan as "High Paleontological Sensitivity." The City has detailed standards and requirements for grading that are designed to protect sensitive topographic, soil, palaeontologic, and archaeologic resources. The Tustin Grading Manual prescribes appropriate measures to protect the earth by controlling erosion, sedimentation, and storm drainage (PPP HYD-2). Proper grading, soil management, and open space standards will work to preserve any potential paleontological resources in the unlikely event that a resource is encountered. Therefore, the Project would result in a less-than-significant impact on a paleontological resource, site, or geologic feature.

Plans, Policies, and Programs (PPP)

The Project would be subject to the following PPP:

PPP GEO-1 **CBC Title 24, Part 2.** Structures built in the City are required to be built in compliance with the CBC (California Code of Regulations, Title 24, Part 2) that provides provisions for earthquake safety based on factors including building occupancy type, the types of soils onsite, and the probable strength of ground motion. Compliance with the CBC would require the incorporation of 1) seismic safety features to minimize the potential for significant effects

as a result of earthquakes; 2) proper building footings and foundations; and 3) construction of the building structure so that it would withstand the effects of strong ground shaking. Implementation of CBC standards would be verified by the City during the plan check and permitting process.

PPP GEO-2 **Policy 8.5 of the Conservation/Open Space/Recreation Element.** Project applicants would be required to submit 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, which would be reviewed by the City during plan check.

PPP HYD-1 **SWPPP.** Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB). The permit requirement applies to grading and construction sites of one acre or larger. The Project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site.

PPP HYD-2 **City of Tustin Grading Manual.** All future projects are required to comply with the City of Tustin Grading Manual (1990). Implementation of grading manual standards would be verified by the City during the plan check and permitting process.

PPP HYD-3 **WQMP**. Prior to the approval of the Grading Plan and issuance of Grading Permits a completed Water Quality Management Plan (WQMP) shall be prepared by the Project applicant and submitted to and approved by the City Public Works Department. The WQMP shall identify all Post-Construction, Site Design. Source Control, and Treatment Control Best Management Practices (BMPs) that will be incorporated into the development Project in order to minimize the adverse effects on receiving waters.

Mitigation Measures (MM)

MM GEO-1 All future projects implemented within the Project site shall be required to conduct a project-specific geotechnical investigation to ensure that the site's soils are adequate for the construction and operation of the proposed project. Future projects would be required to implement measures identified within the project-specific geotechnical investigation. All mitigation measures identified through the geotechnical investigation shall be implemented to avoid potential geotechnical hazards through construction or operation of the Project. The City will ensure completion of the geotechnical investigation and identification of necessary measures prior to plan approval of future proposed projects.

5.8 GREENHOUSE GAS EMISSIONS

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

a) through b)

Potentially Significant Impact. Global climate change is not confined to a particular project area. A typical project does not generate enough greenhouse gas (GHG) emissions on its own to influence global climate change significantly; hence, the issue of global climate change is, by definition, a cumulative environmental impact. GHGs are produced by both direct and indirect emissions sources. Direct emissions include consumption of natural gas, heating and cooling of buildings, landscaping activities and other equipment used directly by land uses. Indirect emissions include the consumption of fossil fuels for vehicle trips, electricity generation, water usage, and solid waste disposal.

The Project site is currently developed as a commercial site and is surrounded by other commercial developments. As described in Section 3, *Project Description*, the Project would include a GPA and SPA to allow for future development of the Project site with up to 900 housing units within 18 acres on seven parcels, consistent with the City's certified 2021-2029 Housing Element, and 13,032 SF of nonresidential development. No development is proposed as part of this Project; however, the provision of development intensification could result in construction and operational GHG impacts due to the introduction of new residential land uses. Specifically, the addition of mobile source emissions through the generation of residential traffic could result in a significant GHG impact. Further, the Project could result in conflicts with applicable plan, policy, and regulations adopted for the purpose of reducing the emissions of GHG. Therefore, an air quality study will be conducted for the Project to determine potential impacts and GHG impacts will be further analyzed within the EIR.

5.9 HAZARDS AND HAZARDOUS MATERIALS

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

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less Than Significant Impact. A hazardous material is defined as any material that, due to its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous wastes, and any material that a business or the local implementing agency has a reasonable basis for believing would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

Construction

The Project site is currently developed and designated as a commercial site and is surrounded by other commercial developments. The Project would include a GPA and SPA to allow for future development of the Project site with up to 900 housing units within 18 acres on seven parcels, consistent with the City's certified 2021-2029 Housing Element, and 13,032 SF of nonresidential development. Additionally, the Project anticipates the future nonresidential capacity buildout of 13,032 SF within the remaining nonresidential-designated area of the Project site. No development is proposed as part of this Project.

Future construction activities could involve the transport, use, and disposal of hazardous materials such as paints, solvents, oils, grease, and caulking. In addition, hazardous materials could be needed for fueling and servicing construction equipment on the site. These types of materials are not acutely hazardous, and all storage, handling, use, and disposal of these materials are regulated by federal and state requirements that are implemented by the City during building permitting for construction activities. These regulations include: the federal Occupational Safety and Health Act and Hazardous Materials Transportation Act; Title 8 of the California Code of Regulations (CalOSHA), and the state Unified Hazardous Waste and Hazardous Materials Management Regulatory Program. As a result, routine transport and use of hazardous materials during construction would be consistent with applicable regulations and would be less than significant.

Operation

The Project involves the provision for future development of up to 900 housing units and 13,032 SF of commercial use, which involve routinely using household hazardous materials including solvents, cleaning agents, paints, pesticides, batteries, fertilizers, and aerosol cans. These types of materials are not acutely hazardous and would only be used and stored in limited quantities. The normal routine use of these products pursuant to existing regulations would not result in a significant hazard to people or the environment in the vicinity of the Project. Additionally, the Project would result in a horizontal mixed-use environment, in which residential land uses would be introduced in proximity to existing commercial land uses. Existing commercial uses include a mix of office, restaurant, and retail establishments. Existing commercial uses require the routine use of similar hazardous materials as residential land uses (solvents, cleaning agents, paints, pesticides, batteries, fertilizers, and aerosol cans) and would not impose additional hazards to potential future residential uses. Therefore, operation of the Project would not result in a significant hazard to the public or to the environment through the routine transport, use, or disposal of hazardous waste, and impacts would be less than significant.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less Than Significant Impact.

Construction

While the routine use, storage, transport, and disposal of hazardous materials in accordance with applicable regulations during potential future construction activities would not pose health risks or result in significant impacts; improper use, storage, transportation, and disposal of hazardous materials and wastes could result in accidental spills or releases, posing health risks to workers, the public, and the environment. To avoid an impact related to an accidental release, the use of BMPs during construction are implemented as part of a SWPPP as required by the NPDES General Construction Permit (and included as PPP HYD-1). Implementation of a SWPPP would minimize potential adverse effects to workers, the public, and the environment. Construction contract specifications would include strict on-site handling rules and BMPs that include, but are not limited to:

- Establishing a dedicated area for fuel storage and refueling and construction dewatering activities that includes secondary containment protection measures and spill control supplies;
- Following manufacturers' recommendations on the use, storage, and disposal of chemical products used in construction;
- Avoiding overtopping construction equipment fuel tanks;
- Properly containing and removing grease and oils during routine maintenance of equipment; and
- Properly disposing of discarded containers of fuels and other chemicals.

All future development resulting from the implementation of the amended Specific Plan and the City's certified 2021-2029 Housing Element would be required to develop and implement a SWPPP with BMPs as required through NPDES. Therefore, construction of future development would result in a less-than-significant impact.

Operation

As described previously, future operation of up to 900 residential units and 13,032 SF of commercial use would include use of limited hazardous materials, such as solvents, cleaning agents, paints, pesticides, batteries, fertilizers, and aerosol cans. Normal routine use of typical residential products pursuant to existing regulations would not result in a significant hazard to the environment, residents, or workers in the vicinity of the Project. As a result, operation of the proposed Project would not create a reasonably foreseeable upset and accident condition involving the release of hazardous materials into the environment, and impacts would be less than significant.

c) Emit hazardous emissions or handle hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less Than Significant Impact. The Project site is generally bounded by the Santa Ana Freeway (Interstate-5), Jamboree Road, Bryan Avenue, and Myford Road. The Project site contains an existing learning center, Fibo Kids Art Academy, a business that provides art instruction to children and young adults. Classes are offered during after school hours (beginning at 3:30 PM) and on weekends. The nearest school, Pacific Coast High School/CHEP, is located approximately 2,000 feet to the southeast of the Project site across Interstate-5.

As described previously, construction and operation of the Project could involve the use, storage, and disposal of small amounts of hazardous materials on the Project site. Prior to construction, a SWPPP would need to be prepared and implemented, which would ensure hazardous materials are properly handled during construction and BMP would be in place to avoid potential contaminated runoff from leaving the project site (PPP HYD-1). During operation, these hazardous materials would be limited and used and disposed of in compliance with federal, state, and local regulations, which would reduce the potential for accidental release into the environment near a school. Therefore, the Project would not emit or handle acutely hazardous materials, substances, or waste near a school, and impacts would be less than significant.

d) 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?

No Impact. The Project site is not located on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Department of Toxic Substances Control, 2023). Therefore, the Project would result in no impact.

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

No Impact. The Airport Land Use Commission (ALUC) for Orange County has responsibility under state law for formulating a comprehensive airport land use plan (ALUP) for the anticipated growth of each public use airport and its surrounding vicinity. General Plans for cities affected by an ALUP must be consistent with that plan. The purpose of the ALUP is to safeguard the general welfare of the inhabitants within the vicinity of airports and to ensure the continued operation of the airports. The ALUC for Orange County has adopted the Airport Environs Land Use Plan (AELUP) governing John Wayne Airport, AFRC Los Alamitos Fullerton Airport, and heliports.

The Project site is approximately 4 miles to the north of John Wayne Airport, which is the nearest airport to the Project site. The Project site is not located within any land use compatibility zone for John Wayne Airport, nor is it within an airport safety zone within the AELUP (Orange County Airport Land Use Commission, 2008). The Project's proximity to the airport would not result in potential safety hazards or excessive noise for people that would reside or work within the Project site in the future. Therefore, the Project would result in no impact.

f) Impair implementation of an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. The Project site is generally bounded by the Santa Ana Freeway (Interstate-5), Jamboree Road, Bryan Avenue, and Myford Road. Adjacent roadways would likely be utilized as evacuation routes in the event of an emergency evacuation of the Project site. Pursuant to the City's Emergency Operations Plan, specific evacuation requirements will vary with each situation, but should be carried out in a manner consistent with other critical functions (City of Tustin, 2019). Under ideal circumstances there will be enough time for radio and/or television stations to broadcast the required evacuation information via the Emergency Alert System, and if enough time is available, copies of the evacuation order or notice and route. The Project site is not designated as part of an emergency evacuation route. The Project does not include proposed development and would not impair the implementation of evacuation protocol in the event of an emergency within the City or Project site. Additionally, each future residential project implemented as part of the amended Specific Plan and Housing Element would require a project-level plan check with the City and would be reviewed by the City's fire department (Orange County Fire Authority) to ensure proper emergency access to and from the site. Therefore, the Project would result in a less-than-significant impact.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

No Impact. The Project site is currently developed as a commercial site and is surrounded by other commercial developments. According to the CalFire Fire Hazard Severity Zone Map, the City of Tustin contains very high fire severity zones in the northeast portion of the City (California Department of Forestry and Fire Protection, 2023). The Project site is not located within or near state responsibility areas or lands classified as very high fire hazard severity zones. Therefore, the Project would result in no impact regarding the exposure of people or structures to risk of loss, injury, or death involving a wildland fire.

Plans, Policies, and Programs (PPP)

PPP HYD-1 **SWPPP.** Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB). The permit requirement applies to grading and construction sites of one acre or larger. The Project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site.

5.10 HYDROLOGY AND WATER QUALITY

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

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less Than Significant Impact.

The Project site is currently developed as a commercial site and is surrounded by other commercial developments. The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of Mixed Use (MU) within the East Tustin Specific Plan (SP 8). The Project would include a GPA and SPA to allow for future development of the Project site with up to 900 housing units within 18 acres on seven parcels, consistent with the City's certified 2021-2029 Housing Element, and 13,032 SF of nonresidential development. Additionally, the Project anticipates the future nonresidential capacity buildout of 13,032 SF within the remaining nonresidential-designated area of the Project site. No development is proposed as part of this Project.

Construction

The Project site is located on the eastern border of Tustin, which is part of the Newport Bay Watershed (OC Watersheds, 2006). The entire watershed spans 154 square miles and is contained in the jurisdictional boundary of Orange County. The largest drainage, San Diego Creek, and its many tributaries begin along the coastal foothills of the Santa Ana Mountains and flow predominantly southwest into Newport Bay. The Newport Bay Watershed is within the jurisdiction of the Santa Ana Regional Water Quality Control Board (Regional Board), within the subunit of the Lower Santa Ana River Basin (designated Hydrologic Unit 801.11). The Water Quality Control Plan for the Santa Ana River Basin lists Newport Bay both Upper and Lower, as tributaries to the Pacific Ocean and also as receiving waters for San Diego Creek.

The Project site is within the Tustin/Irvine/Modeno Channel Subwatershed, which is a tributary of the San Diego Creek: Reach 1. As of the 2018 303(d) impaired waters list, San Diego Creek: Reach 1 was listed as impaired for nutrients, sedimentation/siltation, selenium, toxaphene, toxicity, indicator bacteria, benthic community effects, DDT (dichlorodiphenyltrichloroethane), and malathion (California Waterboards, 2023).

Construction of future development facilitated by the Project would require grading and excavation of soils over approximately seven acres, which would loosen sediment, and then have the potential to mix with surface water runoff and degrade water quality. Additionally, construction would require the use of heavy equipment and construction-related chemicals, such as concrete, cement, asphalt, fuels, oils, antifreeze, transmission fluid, grease, solvents and paints. These potentially harmful materials could be accidentally spilled or improperly disposed of during construction and, if mixed with surface water runoff, could wash into and pollute waters.

These types of water quality impacts during construction would be prevented through implementation of a SWPPP (PPP HYD-1). Construction of the Project would disturb more than one acre of soil; therefore, the proposed Project would be required to obtain coverage under the NPDES General Permit for Discharges of Storm Water Associated with Construction Activity. Construction activity subject to this permit includes clearing, grading, and ground disturbances such as trenching, stockpiling, or excavation. The Construction General Permit requires implementation of a SWPPP that is required to identify all potential sources of pollution that are reasonably expected to affect the quality of storm water discharges from the construction site. The SWPPP would generally contain a site map showing the construction perimeter, proposed buildings, stormwater collection and discharge points, general pre- and post-construction topography, drainage patterns across the site, and adjacent roadways. The SWPPP would also include construction BMPs.

Adherence to the existing requirements and implementation of the appropriate BMPs, as ensured through the City's plan check and permitting process, would ensure that the Project would not violate any water quality standards or waste discharge requirements, potential water quality degradation associated with construction activities would be minimized, and construction impacts would be less than significant.

Operation

Future development facilitated by the Project would include operation of residential and nonresidential uses. Potential pollutants associated with the proposed uses include various chemicals from cleaners, pathogens from pet wastes, nutrients from fertilizer, pesticides and sediment from landscaping, trash and debris, and oil and grease from vehicles. If these pollutants discharge into existing stormwater systems, it could result in further degradation of water quality.

However, operation of the proposed Project would be required to comply with the requirements of the Orange County DAMP and the intent of the non-point source NPDES Permit for Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the incorporated Cities of Orange County within the Santa Ana Region (included as PPP HYD-3).

The DAMP regulations are included in the City's Municipal Code in Section 4902 and are the implementation method for NPDES Stormwater Permit compliance. The DAMP:

- Provides the framework for the program management activities and plan development;
- Provides the legal authority for prohibiting unpermitted discharges into the storm drain system and for requiring BMPs in new development and significant redevelopment;
- Ensures that all new development and significant redevelopment incorporates appropriate Site Design, Source Control, and Treatment Control BMPs to address specific water quality issues; and
- Ensures that construction sites implement control practices that address construction related pollutants including erosion and sediment control and onsite hazardous materials and waste management.

The DAMP requires that new development and significant redevelopment projects develop and implement a WQMP that includes BMPs and LID design features that would provide onsite treatment of stormwater to prevent pollutants from onsite uses from leaving the site. A WQMP is required to be approved prior to the issuance of a building or grading permit. WQMPs prepared for future development would be reviewed and approved by the City to ensure it complies with the MS4 Permit regulations. In addition, the City's permitting process would ensure that all BMPs in the WQMP would be implemented with the project. Overall, implementation of the WQMP pursuant to the existing regulations (included as PPP HYD-3) would ensure that operation of the proposed Project would not violate any water quality standards, waste discharge requirements, or otherwise degrade water quality, and impacts would be less than significant.

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

Potentially Significant Impact. The Project site is currently developed and designated as a commercial site and is surrounded by other commercial developments. The Project would include a GPA and SPA to allow for future development of the Project site with up to 900 housing units within 18 acres on seven parcels, consistent with the City's certified 2021-2029 Housing Element, and 13,032 SF of nonresidential development. Additionally, the Project anticipates the future nonresidential capacity buildout of 13,032 SF within the remaining nonresidential-designated area of the Project site. No development is proposed as part of this Project. However, the provision for 900 housing units would require additional water supply, which could result in decreased groundwater supply. Therefore, this topic will be further analyzed in the EIR.

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

i. result in a substantial erosion or siltation on- or off-site?

Less Than Significant Impact. The Project site does not include, and is not adjacent to, a natural stream or river. Implementation of the Project would not alter the course of a stream or river.

The Project site is currently developed with commercial uses. The Project site currently drains into the City's stormwater sewer system via a series of culverts and drains. Stormwater drains to several catch basins along El Camino Real and around the perimeter of the Project site. The storm drains run beneath the existing roadways and to the southwest corner of the Project site, where drains discharge to the existing Orange County Flood Control District (OCFCD) facility, El Modena-Tustin Channel, a concrete lined channel that runs along the west side of the Project site.

Construction

Construction of future development facilitated by the Project would require the removal of asphalt within the existing parking lot areas of the Project site and excavation of underlying soils. Construction could result in a temporary disturbance of soils that could cause erosion or siltation on- and off-site.

All proposed development construction would be required to comply with the California Regional Water Quality Control Board (RWQCB) Order No. R8-2010-0033, National Pollutant Discharge Elimination System (NPDES) Permit No. CAS618033 – Construction General Permit requirements (PPP HYD-1). Requirements include installation of Best Management Practices (BMPs), which establish minimum stormwater management requirements and controls. To reduce the potential for soil erosion and the loss of topsoil, a Stormwater Pollution Prevention Plan (SWPPP) is required by the RWQCB regulations to be developed by a QSD (Qualified SWPPP Developer). The SWPPP is required to address site-specific conditions related to specific grading and construction activities. The SWPPP would identify potential sources of erosion and sedimentation to prevent loss of topsoil during construction, and to identify erosion control BMPs to reduce or eliminate the erosion and loss of topsoil, such as use of silt fencing, fiber rolls, or gravel bags; stabilized construction entrances/exits; hydroseeding, and similar measures. In addition to RWQCB requirements, proposed development would need to comply with the City of Tustin Grading Manual procedures (PPP HYD-2). The City of Tustin Grading Manual is a compilation of rules, procedures, and interpretations necessary to carry out the provisions of the Tustin City Code relating to grading and excavation.

Following construction, future development would be required to prepare and implement a WQMP per City standards. Future projects would be required to comply with the requirements of the Orange County DAMP and the intent of the non-point source NPDES Permit for Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the incorporated Cities of Orange County within the Santa Ana Region (included as PPP HYD-3).

The DAMP regulations are included in the City's Municipal Code in Section 4902 and are the implementation method for NPDES Stormwater Permit compliance. The DAMP:

- Provides the framework for the program management activities and plan development;
- Provides the legal authority for prohibiting unpermitted discharges into the storm drain system and for requiring BMPs in new development and significant redevelopment;
- Ensures that all new development and significant redevelopment incorporates appropriate Site Design, Source Control, and Treatment Control BMPs to address specific water quality issues; and
- Ensures that construction sites implement control practices that address construction related pollutants including erosion and sediment control and onsite hazardous materials and waste management.

The DAMP requires that new development and significant redevelopment projects develop and implement a WQMP that includes BMPs and LID design features that would provide onsite treatment of stormwater to prevent pollutants from onsite uses from leaving the site. These requirements would ensure that future projects would not result in substantial soil erosion or the loss of topsoil. With implementation of uniformly applicable requirements (SWPPP, City of Tustin Grading Manual, and the DAMP), the Project would result in a less-than-significant impact.

Operation

Changes to development of the Project site could result in potential changes in the drainage pattern due to siltation and erosion. However, the City's MS4 permit and County DAMP require new development projects to prepare a WQMP (included as PPP HYD-3) that is required to include BMPs to reduce the potential of erosion and/or sedimentation through site design and structural treatment control BMPs. As part of the permitting approval process, the proposed drainage and water quality design and engineering plans would be reviewed by the City's Engineering Division to ensure that the site-specific design limits the potential for

erosion and siltation. Overall, adherence to the existing regulations would ensure that impacts as a result of future development related to alteration of a drainage pattern and erosion/siltation from operational activities would be less than significant.

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

Less Than Significant Impact.

Construction

Future construction facilitated by the Project would require the construction of building structures, including foundations, floor slabs, and utilities systems, and crushing existing pavement. These activities could temporarily alter the existing drainage pattern of the site and change runoff flow rates. However, as described previously, implementation of the Project requires a SWPPP (included as PPP HYD-1) that would address site specific drainage issues related to construction of the Project and include BMPs to eliminate the potential of flooding or alteration of a drainage pattern during construction activities. This includes regular monitoring and visual inspections during construction activities. Compliance with the Construction General Permit and a SWPPP prepared by a QSD and implemented by a QSP (per PPP HYD-1) as verified by the City through the construction permitting process would prevent construction-related impacts related to potential alteration of a drainage pattern or flooding on- or offsite from development activities. Therefore, construction impacts would be less than significant.

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

Less Than Significant Impact.

The Project site is currently developed as a commercial site and is surrounded by other commercial developments. The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of zoning designation of Mixed Use (MU) within the East Tustin Specific Plan (SP 8), and is identified as Mixed Use in the East Tustin Specific Plan (SP 8). The Project would include a GPA and SPA to allow for future development of the Project site with up to 900 housing units on 18 acres within seven parcels, consistent with the City's certified 2021-2029 Housing Element, and 13,032 SF of nonresidential development. Additionally, Project anticipates the future nonresidential capacity buildout of 13,032 SF within the remaining nonresidential-designated area of the Project site. No development is proposed as part of this Project.

Construction

Construction of future development could result in a temporary disturbance of soils and the use of construction equipment and materials that could increase pollutant loads discharged into stormwater runoff.

However, implementation of the Project requires a SWPPP (included as PPP HYD-1) that would address site-specific pollutant and drainage issues related to construction of the Project and include BMPs to eliminate the potential of polluted runoff and increased runoff during construction activities. This includes regular monitoring and visual inspections during construction activities. Compliance with the Construction General Permit and a SWPPP prepared by a QSD and implemented by a QSP (per PPP HYD-1) as verified by the City through the construction permitting process would prevent construction-related impacts related to increases in run-off and pollution from development activities. Therefore, impacts would be less than significant.

Operation

The Project site currently drains into the City's stormwater sewer system via a series of culverts and drains and catch basins. Stormwater drains confluence at the southwest corner of the site and discharge into the existing Orange County Flood Control District (OCFCD) facility, El Modena-Tustin Channel, a concrete lined channel that runs along the west side of the Project site. Because the site is currently almost entirely paved, future development would increase intensity of development, but would not result in additional impervious surfaces that could increase the volume and velocity of stormwater runoff. Therefore, future development would not be anticipated to exceed capacity of the existing stormwater drainage system.

Additionally, as discussed previously, the City's MS4 permit and County DAMP require new development projects to prepare a WQMP (included as PPP HYD-3) that is required to include BMPs to reduce the potential of stormwater pollutants through site design and structural treatment control BMPs. As part of the permitting approval process, the proposed drainage and water quality design and engineering plans would be reviewed by the City's Engineering Division to ensure that the site-specific design limits the potential for sources of polluted runoff. Overall, adherence to the existing regulations would ensure that impacts as a result of future development related to stormwater runoff would be less than significant.

iv. impede or redirect flood flows?

Less Than Significant Impact.

The Project site is included in the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Map Number 06059C0161J (Federal Emergency Management Agency, 2009). The southern portion of the Project site is within an area designated as Zone AH, a Special Flood Hazard Area subject to inundation by the one percent annual chance flood with a flood depth of one to three feet. Therefore, the Project would facilitate the development of housing within a flood zone.

The City of Tustin Municipal Code, Chapter 8, *Floodplain Management*, includes requirements for residential and nonresidential development within a flood hazard zone (PPP HYD-4). Requirements include measures to avoid potential hazards from flooding, such as ensuring the bottom floor of the structure is raised above the flood elevation and anchoring structures to prevent shifting. Future development would be required to comply with all local and state requirements for the construction of residential and nonresidential development within a flood hazard zone. Implementation of the City's floodplain management design requirements would ensure future development does not impede or redirect existing flood flows.

The Project site is currently completely developed and completely paved, with the exception of some ornamental landscaped areas. Future development would not result in additional impervious surfaces that could increase the volume and velocity of stormwater runoff that would exacerbate flood conditions. Therefore, the Project would result in a less-than-significant impact.

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

No Impact.

As described above, the Project site is included in the FEMA FIRM Map Number 06059C0161J (Federal Emergency Management Agency, 2009). The southern portion of the Project site is within an area designated as Zone AH, a Special Flood Hazard Area subject to inundation by the one percent annual chance flood with a flood depth of one to three feet. Therefore, the Project would facilitate the development of housing within a flood zone. However, the City of Tustin Municipal Code, Chapter 8, *Floodplain Management*, includes requirements for residential and nonresidential development within a flood hazard zone (PPP HYD-4). Implementation of the City's floodplain management design requirements would ensure future development does not risk release of pollutants due to project inundation.

A seiche is a surface wave created when an inland body of water is shaken, usually by earthquake activity. The site also is not subject to flooding hazards associated with a seiche because there are no large body of surface water located near the project site to result in effects related to a seiche, which could result in release in pollutants due to inundation of the site. The Project site is not located near an inland body of water that could result in impacts due to seiche.

The Pacific Ocean is located over 12 miles southwest of the Project site; consequently, there is no potential for the Project site to be inundated by a tsunami that could release pollutants. In addition, the Project site is flat and not located near any steep hillsides; therefore, there is no potential for the site to be adversely affected by mudflow. Thus, implementation of the proposed Project would not expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow that could release pollutants due to inundation of the Project site. No impact would occur.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Potentially Significant Impact. The Project site is currently developed and designated as a commercial site and is surrounded by other commercial developments. The Project would include a GPA and SPA to allow for future development of the Project site with up to 900 housing units on 18 acres within seven parcels, consistent with the City's certified 2021-2029 Housing Element, and 13,032 SF of nonresidential development. Additionally, the Project anticipates the future nonresidential capacity buildout of 13,032 SF within the remaining nonresidential-designated area of the Project site. No development is proposed as part of this Project. However, the provision for 900 additional housing units would require additional water supply, which could result in conflict with a sustainable groundwater management plan. Therefore, this topic will be further analyzed in the EIR.

Plans, Policies, and Programs (PPP)

PPP HYD-1 **SWPPP.** Prior to issuance of any grading or demolition permits, the applicant shall provide the City Building Division evidence of compliance with the NPDES (National Pollutant Discharge Elimination System) requirement to obtain a construction permit from the State Water Resource Control Board (SWRCB). The permit requirement applies to grading and construction sites of one acre or larger. The Project applicant/proponent shall comply by submitting a Notice of Intent (NOI) and by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) and a monitoring program and reporting plan for the construction site.

PPP HYD-2 **City of Tustin Grading Manual.** All future projects are required to comply with the City of Tustin Grading Manual (1990). Implementation of grading manual standards would be verified by the City during the plan check and permitting process.

PPP HYD-3 **WQMP**. Prior to the approval of the Grading Plan and issuance of Grading Permits a completed Water Quality Management Plan (WQMP) shall be prepared by the Project applicant and submitted to and approved by the City Public Works Department. The WQMP shall identify all Post-Construction, Site Design. Source Control, and Treatment Control Best Management Practices (BMPs) that will be incorporated into the development Project in order to minimize the adverse effects on receiving waters.

PPP HYD-4 **Flood Hazard**. Prior to the approval of the Grading Plan and issuance of Grading Permits the City engineer shall ensure that the project complies with the requirements within Chapter 8, Floodplain Management, of the City Municipal Code Chapter 8, and any additional applicable requirements related to the applicable flood zone.

5.11 LAND USE AND PLANNING

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

a) Physically divide an established community?

No Impact.

The Project site is currently developed as a commercial site and is surrounded by other commercial developments. The Project site has a General Plan land use designation of Planned Community Commercial/Business (PCCB) and a zoning designation of zoning designation of Mixed Use (MU) within the East Tustin Specific Plan (SP 8). The Project would include a GPA and SPA to allow for future development of the Project site with up to 900 housing units on 18 acres within seven parcels, consistent with the City's certified 2021-2029 Housing Element, and 13,032 SF of nonresidential development. Additionally, the Project anticipates the future nonresidential capacity buildout of 13,032 SF within the remaining nonresidential-designated area of the Project site. No development is proposed as part of this Project. Implementation of the Project would allow for the intensification of the existing site; however, the introduction of residential land uses on an existing commercial designated site would not result in division of an established community. Therefore, the Project would result in no impact.

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

Potentially Significant Impact.

The introduction of residential land uses to an existing commercial site as described above could result in conflicts with existing land use plans, policies, and regulations. Therefore, the Project could result in a potentially significant impact and this topic will be analyzed in the EIR.

5.12 MINERAL RESOURCES

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

a) 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?

No Impact. In order to protect the availability of mineral resources of value, the California Department of Conservation identifies sites to which continuing access is important to satisfying mineral production needs of the region and the State. The relative importance of potential mineral resource sites is indicated by inclusion in one of four Mineral Resource Zones (MRZ):

- MRZ 1: No mineral resources
- MRZ 2: Significant resource area (quality and quantity known)
- MRZ 3: Significant resource area (quality and quantity unknown)
- MRZ 4: No information (applies primarily to high-value ores)

The Conservation/Open Space/Recreation Element of the City's General Plan identifies one mineral resource within the Tustin Planning Area known as Mercury-Barite in Red Hill (City of Tustin, 2018), although this resource is not utilized. The Project site is not identified for mineral resource extraction. Therefore, the Project would result in no impact on the loss of availability of a known mineral resource.

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

No Impact. As discussed above, the Project site is not identified for mineral resource extraction per the City's General Plan Conservation Element (City of Tustin, 2018). Therefore, the Project would result in no impact on the loss of availability of a locally important mineral resource recovery.

5.13 NOISE

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

a) through c)

Potentially Significant Impact.

As previously described, the Project would allow for the provision of up to 900 housing units on a currently commercial zoned site, consistent with the City's certified 2021-2029 Housing Element. The provision of development intensification could facilitate future noise impacts. Residential land uses have not been previously analyzed for consistency with applicable noise standards. The addition of residential land uses could result in a cumulatively considerable net increase of noise within the study area due to the introduction of new mobile and stationary noise sources. Therefore, a noise study will be conducted for the Project to determine potential noise impacts and this topic will be further analyzed in the EIR.

5.14 POPULATION AND HOUSING

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

a) Induce substantial unplanned population growth in an area, either directly or indirectly?

Potentially Significant Impact. The provision of residential development within the Project site was not previously analyzed under existing local or regional housing and land use plans. Therefore, the Project could facilitate substantial unplanned population growth and this topic will be further analyzed within the EIR.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The Project would include land use changes to allow for the future development of up to 900 housing units, consistent with the City's certified 2021-2029 Housing Element, within an existing commercial land use. The Project would not include demolition or removal of housing. Therefore, the Project would not result in the displacement of existing people or housing and there would be no impact.

5.15 PUBLIC SERVICES

a) Would the project 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 any of the public services:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
i) Fire protection?	☒	☐	☐	☐
ii) Police protection?	☒	☐	☐	☐
iii) Schools?	☒	☐	☐	☐
iv) Parks?	☒	☐	☐	☐
v) Other public facilities?	☒	☐	☐	☐

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: (i) fire protection; (ii) police protection; (iii) schools; (iv) parks; or (v) other public facilities?

Potentially Significant Impact. As previously discussed, the provision of residential development within the Project site was not previously analyzed under existing local or regional plans and could result in substantial unplanned population growth. Therefore, the potential unplanned future demand placed on public service providers could require the development of new or physically altered fire, police, school, park, or library facilities. The Project would result in a potentially significant impact and this topic will be further analyzed in the EIR.

5.16 RECREATION

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

a) and b)

Potentially Significant Impact. As previously discussed, the provision of residential development within the Project site was not previously analyzed under existing local or regional plans and could result in substantial unplanned population growth. Therefore, the potential unplanned future demand placed on recreational facilities could result in deterioration of nearby recreational facilities and/or require the development of new or physically altered recreational facilities. The Project would result in a potentially significant impact and this topic will be further analyzed within the EIR.

5.17 TRANSPORTATION

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

a) through d)

Potentially Significant Impact. As previously discussed, the proposed Project would allow for future development of up to 900 housing units, consistent with the City's certified 2021-2029 Housing Element, on an existing commercial land use site. Future residential and commercial development would result in the generation of additional trips and demand placed on the existing circulation system. Land use changes could result in inconsistencies with programs, plans, policies, and local ordinances regarding the circulation system. Further, future commercial and residential development could result in a vehicle miles traveled (VMT) impact. Therefore, a VMT study will be prepared for the Project and this topic will be analyzed in the EIR.

5.18 TRIBAL CULTURAL RESOURCES

a) Would the project 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:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
i) 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)?	☒	☐	☐	☐
ii) 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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☒	☐	☐	☐

a) Would the project 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:

Potentially Significant Impact. Tribal cultural resources are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either eligible or listed in the California Register of Historical Resources or local register of historical resources (Public Resources Code § 21074). Pursuant to Assembly Bill 52 (AB 52), the City will conduct consultation with tribes that indicate an interest in consulting on the Project. The results of the consultation will be incorporated into the EIR and this topic will be further analyzed.

5.19 UTILITIES AND SERVICE SYSTEMS

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

a) through e)

Potentially Significant Impact. As previously discussed, the provision of residential development within the Project site was not previously analyzed under existing local or regional plans and could result in substantial unplanned population growth. The potential demand that could result from additional residential uses could surpass the existing capacity and availability of resources and existing utility infrastructure. Therefore, the potential unplanned future demand placed on water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities could require the development of construction of new or expanded utility facilities. Additionally, future waste potentially generated by residential land uses could exceed the solid waste capacity and standards/reduction goals for the Project site. Therefore, the Project would result in a potentially significant impact and this topic will be further analyzed in the EIR.

5.20 WILDFIRE

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

a) through d)

No Impact.

The Project site is currently developed as a commercial site and is surrounded by other commercial developments. According to the CalFire Fire Hazard Severity Zone Map, the City of Tustin contains very high fire severity zones in the northeast portion of the City (California Department of Forestry and Fire Protection, 2023). The Project site is not located within or near state responsibility areas or lands classified as very high fire hazard severity zones. Therefore, the Project would result in no impact due to wildfire hazard.

5.21 MANDATORY FINDINGS OF SIGNIFICANCE

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

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

Less Than Significant Impact with Mitigation. As discussed in Section 5.4, *Biological Resources*, the Project site is currently developed and does not contain habitat of a fish or wildlife species. However, the Project site contains existing ornamental trees that could be used for nesting by common bird species that are protected by the federal Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code Sections 3503.5, 3511, and 3515 during the avian nesting and breeding season that occurs between February 1 and September 15. The provisions of the MBTA prohibits disturbing or destroying active nests. Therefore, Mitigation Measure BIO-1 has been included to require that if commencement of vegetation clearing occurs between February 1 and September 15, a qualified biologist shall conduct a nesting bird survey no more than 3 days prior to commencement of activities to confirm the absence of nesting birds. With implementation of Mitigation Measure BIO-1, potential impacts to nesting birds would be less than significant.

Additionally, as described in Section 5.5, *Cultural Resources*, the project site does not contain any buildings or structures that meet any of the California Register of Historical Resources (California Register) criteria or qualify as "historical resources" as defined by CEQA. The Project site is completely paved and is not anticipated to contain archaeological resources; however, Mitigation Measure CUL-2 has been included to stop all ground disturbing activity within a 50-foot radius of an inadvertent discovery in the unlikely event that a potential archeological resources is unearthed during excavation activities. Therefore, the proposed project would not cause a substantial adverse change in the significance of a historical or archaeological resource. Additionally, as discussed in Section 5.8, *Geology and Soils*, the Project site is not sensitive to paleontological resources.

Therefore, the Project would result in a less-than-significant impact with mitigation on the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory.

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

Potentially Significant Impact. Cumulative impacts are defined as two or more individual effects that, when considered together, are considerable or that compound or increase other environmental impacts. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the development when added to the impacts of other closely related past, present, and reasonably foreseeable or probable future developments. Cumulative impacts can result from individually minor, but collectively significant, developments taking place over a period. The CEQA Guidelines, Section 15130 (a) and (b), states:

a) Cumulative impacts shall be discussed when the project's incremental effect is cumulatively considerable.

b) The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided of the effects attributable to the project. The discussion should be guided by the standards of practicality and reasonableness.

As presented in this document, potential Project-related impacts are either less than significant, would be less than significant with mitigation incorporated, or would result in no impact for impacts related to aesthetics, agriculture and forestry resources, biological resources, cultural resources, geology and soils, hazards and hazardous materials, mineral resources, and wildfire risk. Given that these impacts would be less than significant or mitigated to a less-than-significant level, implementation of the proposed Project would not result in impacts that are cumulatively considerable when evaluated with the impacts of other current projects, or the effects of probable future projects. Therefore, the proposed Project's contribution to any significant cumulative impacts would be less than cumulatively considerable for aesthetics, agriculture and forestry resources, biological resources, cultural resources, geology and soils, hazards and hazardous materials, mineral resources, and wildfire risk.

The Project could result in significant impacts for several other environmental topics, and thus, cumulatively considerable impacts. Specifically, the Project has the potential to result in cumulatively considerable impacts related to air quality, energy, greenhouse gas emissions, hydrology and water quality, land use and planning, noise, population and housing, public services, recreation, transportation, tribal cultural resources, and utilities and service systems. The Project's potential for contribution to cumulatively considerable impacts related to these environmental topics will be further analyzed in the EIR.

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

Potentially Significant Impact. As discussed in Sections 5.3, 5.11, and 5.13, the Project could facilitate development that could result in significant air quality and noise impacts, as well as conflict with policies implemented to mitigate environmental impacts on existing populations. An air quality and noise study will be prepared for the Project to evaluate potential impacts on human beings, with specific focus on sensitive receptor populations. Therefore, the Project could result in a potentially significant impact and this topic will be further analyzed in the EIR.

6 REFERENCES

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End of document.

Appendix A: Cultural Record Search Results

February 16, 2024

Jazmin Rodriguez
EPD Solutions
3333 Michelson Drive, Suite 500
Irvine, California 92660

RE: Archaeological Resources Records Search Results for the Market Place Project, Tustin, California (APNs 500-291-02, -04, -06 through-08, -11, -21, -23 through -27, 500-312-01, -02, -04, -06, -08, and-09)

Dear Ms. Rodriguez:

An archaeological resources records search has been completed for the Market Place Project. The proposed approximately 77-acre project is located north of the intersection of Jamboree Road and Santa Ana Freeway (Assessor's Parcel Numbers [APNs] 500-291-02, -04, -06 through-08, -11, -21, -23 through -27, 500-312-01, -02, -04, -06, -08, and-09) within the city of Tustin, California. The subject property is situated within the former ranchos of Lomas De Santiago and San Joaquin, Township 1 South, Range 6 West on the U.S. Geological Survey (USGS) *Tustin*, *California* (7.5-minute) topographic quadrangle map. As part of the environmental review process, BFSA Environmental Services, a Perennial Company (BFSA), conducted a archaeological resources records search at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton.

Archaeological Records Search Results

The cultural resources records search was completed by BFSA at the SCCIC on August 22, 2023, and encompassed the project area as well as a 500-foot buffer surrounding the project. Based upon the records search results, no resources are recorded within the project or the 500-foot search buffer. Record search results indicate that the subject property was partially overlapped by five previous studies (Wlodarski and Romani 1984; Mason 1984; Casen, Romani, and Webb 1985). However, none of the studies are directly related to the project area. Four of the studies, which surveyed the southern corner of the project area, were focused on the Interstate 5 exchange (Wlodarski and Romani 1984; Casen, Romani, Webb 1985; Webb and Synder 1985; and Synder 1982). The other study surveyed an 11-mile-long and two-to-three-mile-wide section of land from

Interstate 5 to Highway 91 (Mason 1984). Further, the SCCIC search identified an additional eleven previous studies within the search radius. These studies did not overlap the project area.

BFSA requested a review of the Sacred Lands File (SLF) by the Native American Heritage Commission (NAHC) on August 18, 2023, to determine if any recorded Native American sacred sites or locations of religious or ceremonial importance are present within one mile of the project. The results of this search were received on October 3, 2023. The results were negative.

The full results of the SCCIC completed records search and the NAHC SLF search results are attached to this letter report (Attachments A and B). Please contact us should you have any questions or require additional study for this project.

Regards,



Tracy Stropes, M.A., RPA
Director/Principal Archaeologist
BFSA Environmental Services

Attachments:

Attachment A – Archaeological Records Search Results
Attachment B – NAHC Sacred Lands File Search Results

ATTACHMENT A

Archaeological Records Search Results

BFSA Environmental Services, a Perennial Company

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEMS

RECORDS SEARCH

Company:	BFSA Environmental Services, a Perennial Company
Processed By:	Emily T. Soong
Date Processed:	August 24, 2023
Project Identification:	The Market Place
Information Center:	South Central Coastal Information Center
Search Radius:	500 Feet Buffer

Historical Resources:

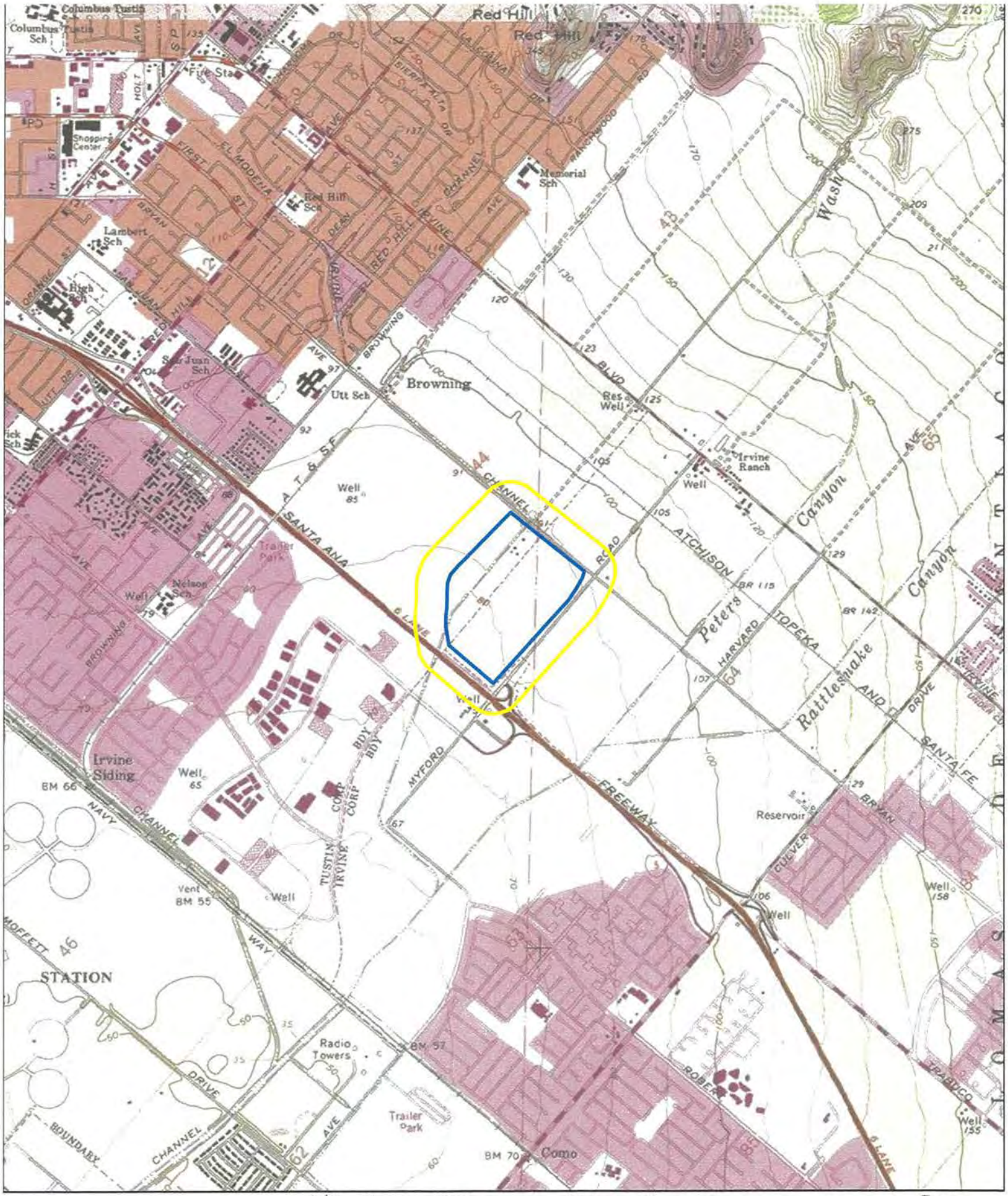
Trinomial and Primary site maps have been reviewed. All sites within the project boundaries and the specified radius of the project area have been plotted. Copies of the site record forms have been reviewed for all recorded sites.

There are no resources located within a 500 feet radius of the current project area or within the subject property.

Previous Survey Report Boundaries:

Project boundary maps have been reviewed. National Archaeological Database (NADB) citations for reports within the project boundaries and within the specified radius of the project area have been reviewed.

There are 16 reports within a 500 feet radius of the current project area, three of which are located within the subject property (OR-747, OR-752, and OR-3277).



NO RESOURCES IN SEARCH RADIUS

500 Ft Buffer

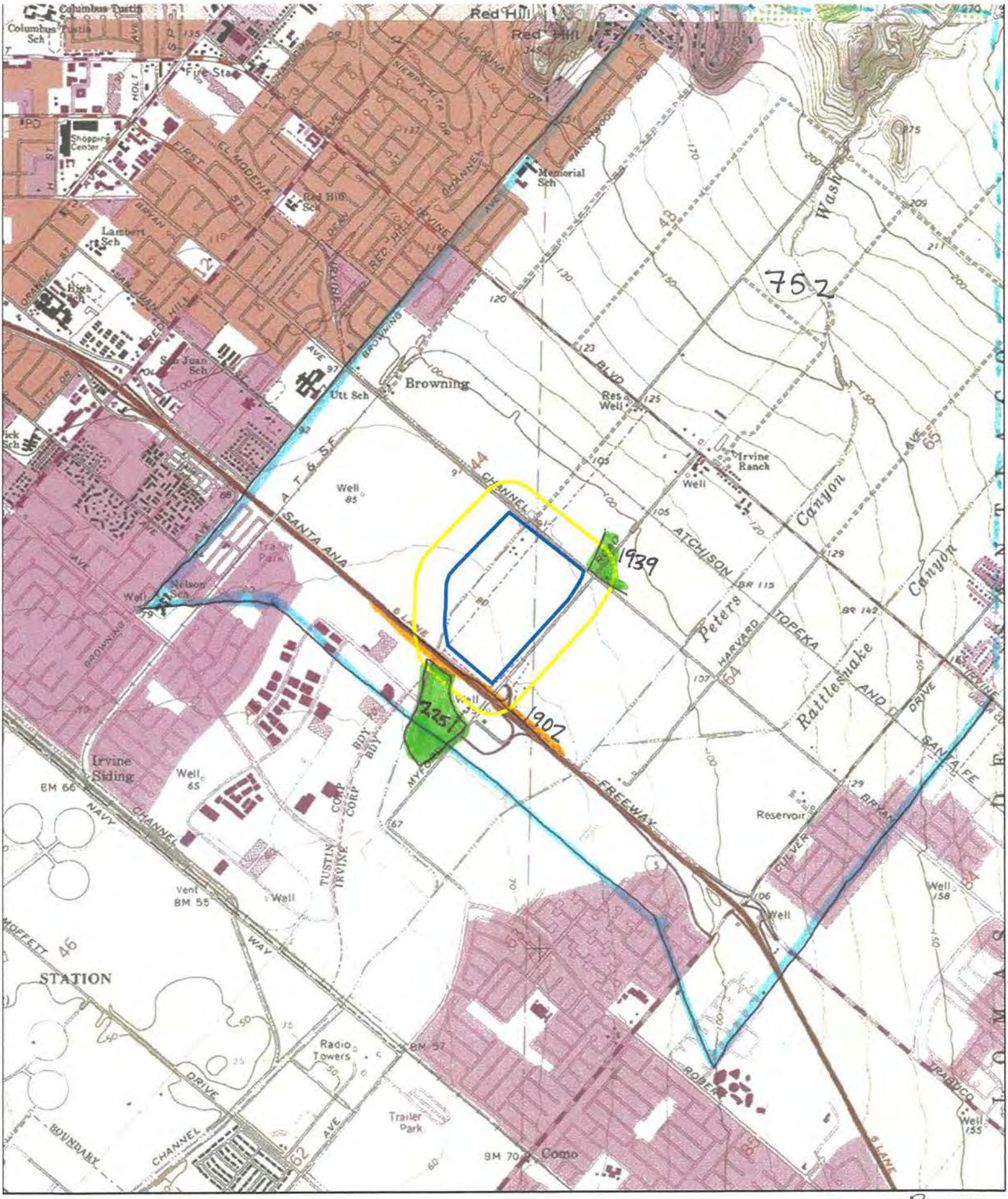
Project

The Market Place Project
USGS *Tustin* Quadrangle
(7.5-minute series)

N

Resource
1:24,000

ETS BFSAES: 8/21/2023



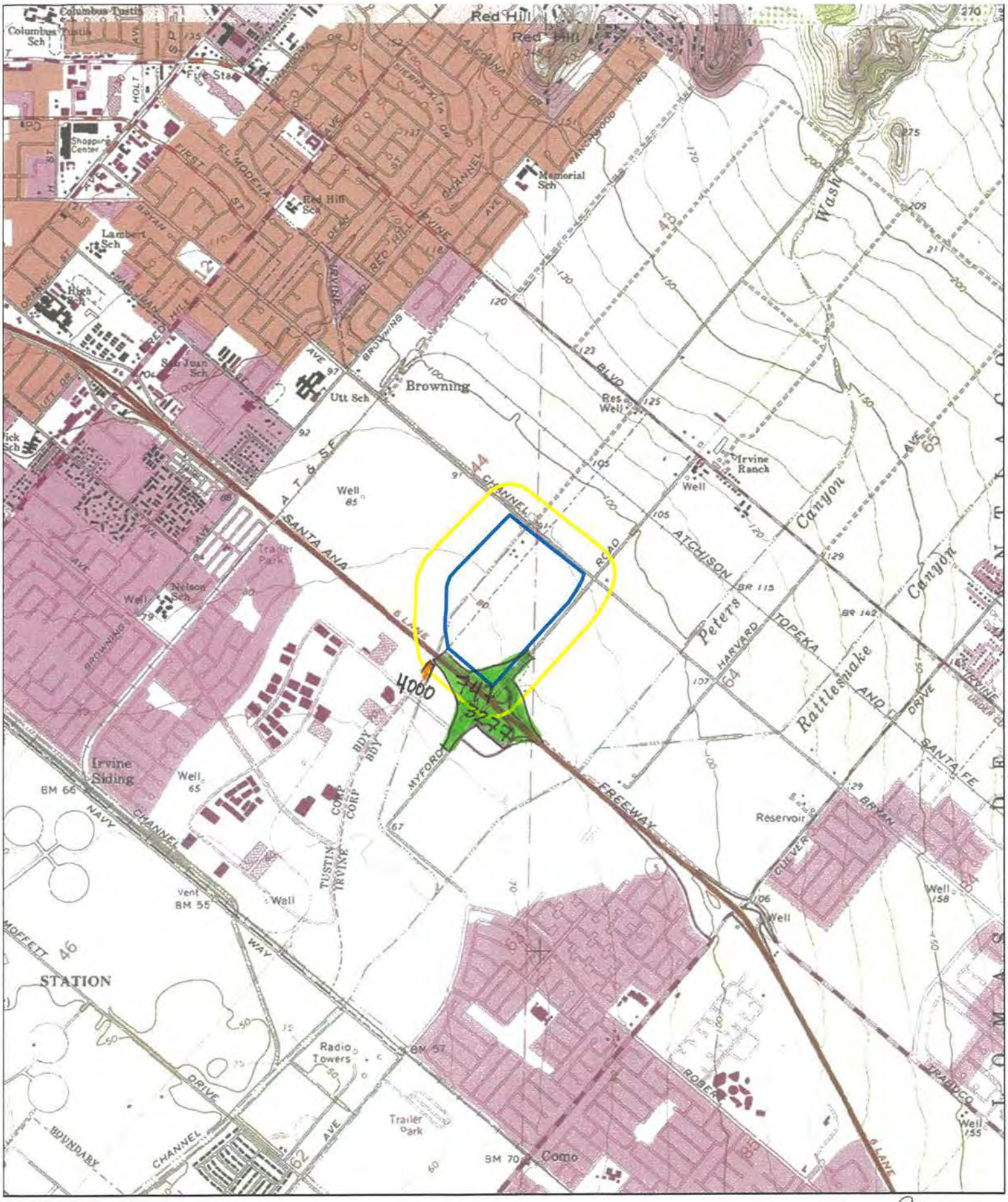
500 Ft Buffer

Project

The Market Place Project
USGS *Tustin* Quadrangle
(7.5-minute series)

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ETS BFSAES: 8/21/2023



500 Ft Buffer

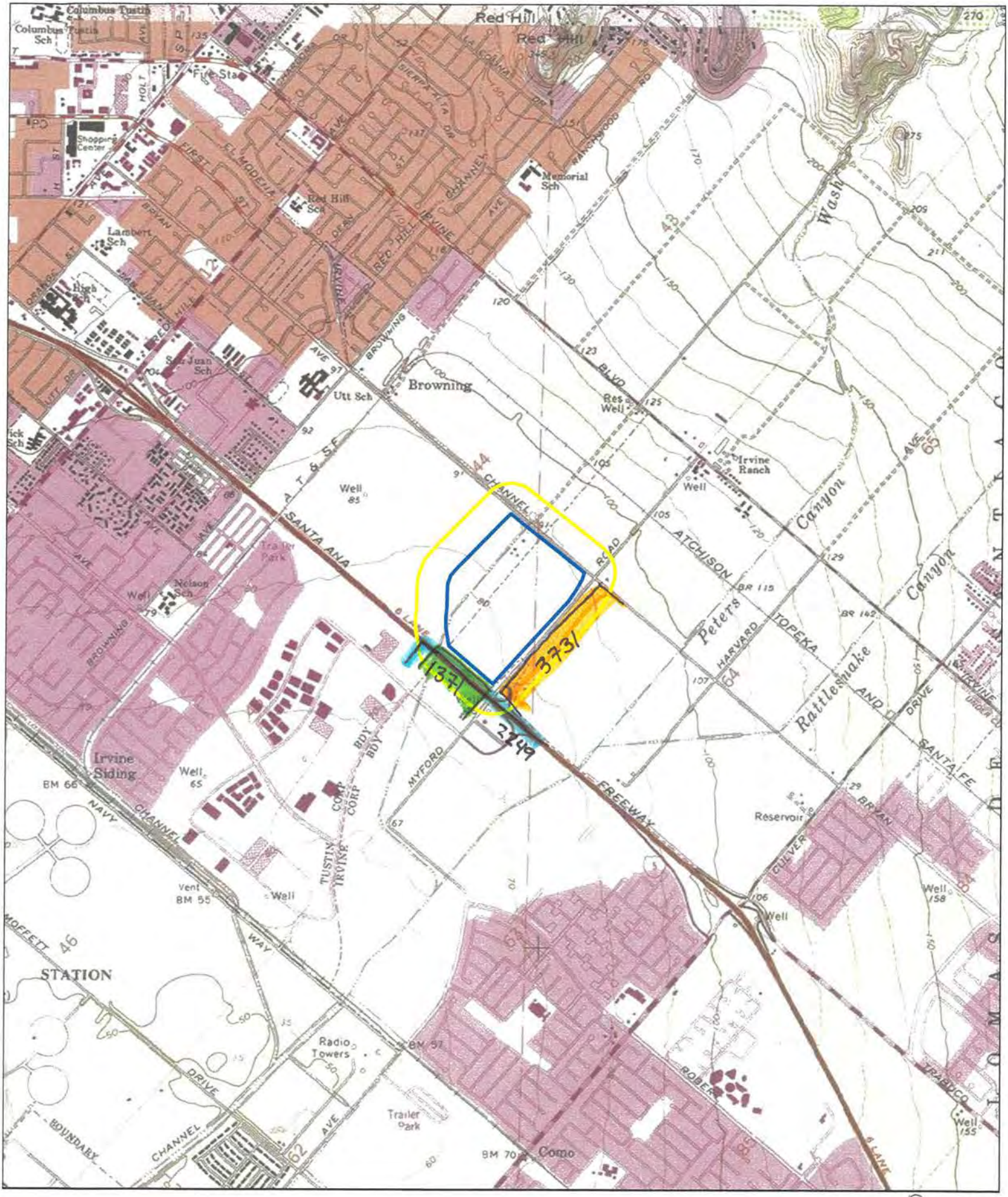
Project

The Market Place Project
USGS *Tustin* Quadrangle
(7.5-minute series)

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Reports
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2 of 4

ETS BFSAES: 8/21/2023



500 Ft Buffer

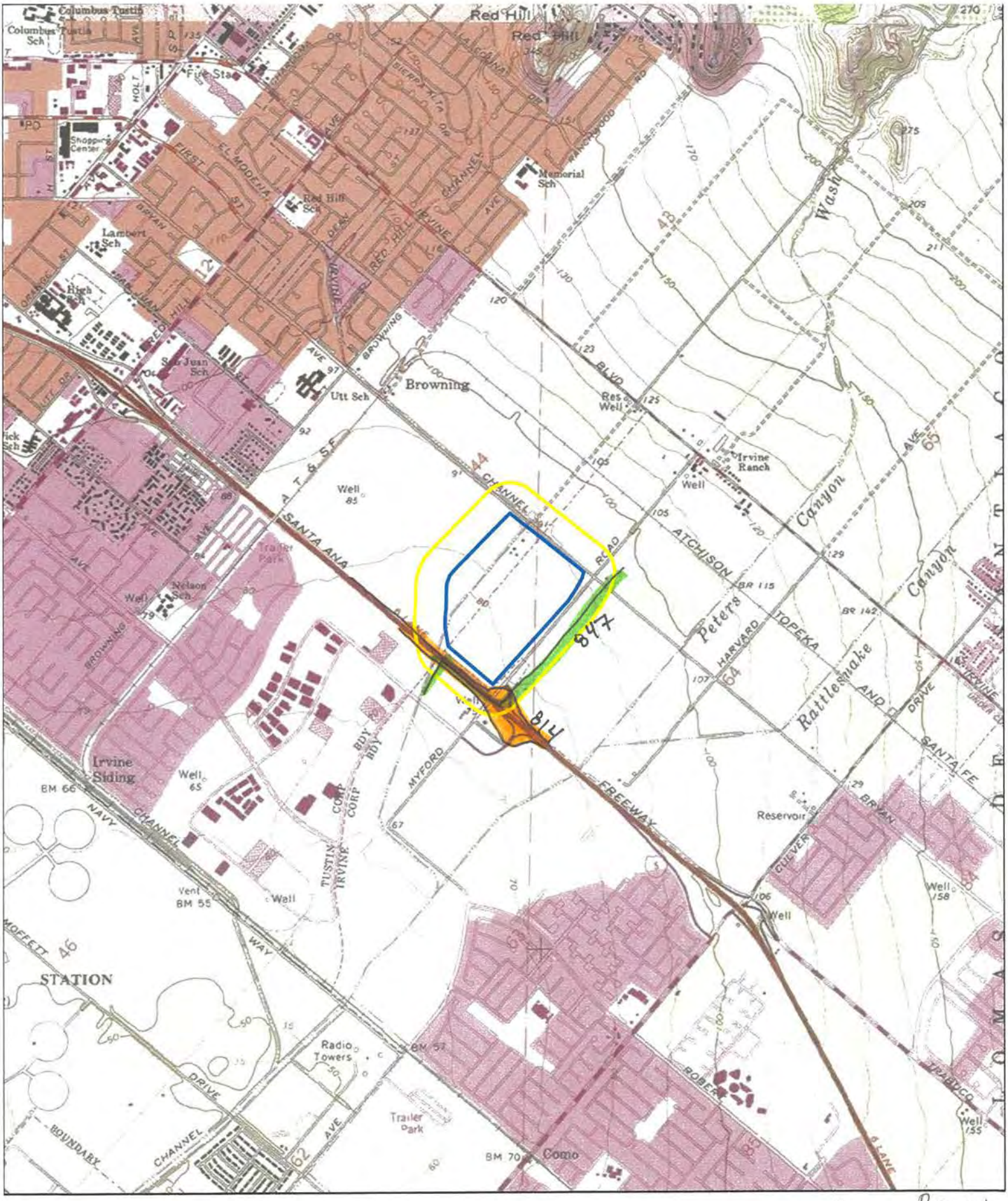
Project

The Market Place Project
USGS *Tustin* Quadrangle
(7.5-minute series)

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Reports
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3 of 4

ETS BFSAES: 8/21/2023



500 Ft Buffer

Project

The Market Place Project
USGS *Tustin* Quadrangle
(7.5-minute series)

N

1:24,000

Reports
41 of 4

ETS BFSAES: 8/21/2023

Report List

The Market Place

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
OR-00747		1984	Wlodarski, Robert J. and John F. Romani	Negative Archaeological Survey Report: The Proposed Project Involved the I-5 Interchange at Myford Road Where Several Alternatives Are Proposed.	Caltrans	
OR-00752		1984	Mason, Roger D.	Eastern Corridor Alignment Study, Orange County, California; Volume II: Prehistory and History	Scientific Resource Surveys, Inc.	30-000184, 30-000303, 30-000304, 30-000321, 30-000513, 30-000541, 30-000546, 30-000547, 30-000556, 30-000557, 30-000584, 30-000585, 30-000586, 30-000587, 30-000588, 30-000589, 30-000590, 30-000591, 30-000592, 30-000626, 30-000770, 30-000771, 30-000772, 30-000793, 30-000794, 30-000795, 30-000818, 30-000819, 30-000820, 30-000962, 30-001067, 30-001068, 30-001195, 30-001196, 30-001197, 30-001198, 30-001199, 30-001200, 30-001201
OR-00814		1982	Romani, John F.	ARCHAEOLOGICAL SURVEY REPORT for the Route I-5 Santa Ana Transportation Corridor, Route 405 in Orange County to Route 605 in Los Angeles County Pm 21.30/44.38; 0.00/6.85	Caltrans	
OR-00847		1985	Padon, Beth	Archaeological Resource Inventory City of Irvine and its Sphere of Influence	LSA Associates, Inc.	30-000161, 30-000349, 30-000361, 30-000383, 30-000478, 30-000494, 30-000495, 30-000496, 30-000499, 30-000545, 30-000601, 30-000734, 30-000735, 30-000767, 30-000803, 30-000804, 30-000805, 30-000806, 30-000807, 30-000808
OR-01371	Paleo -	1993	Padon, Beth and Fran Govean	An Archaeological and Paleontological Assessment of the Proposed Planning Area 10 Project, City of Irvine, Orange County	Petra Resources Inc.	
OR-01902		1985	Casen, George A., John F. Romani, and Lois M. Webb	Hiistoric Property Survey 07 ORA 5 Route 405 to Route 55 PM 21.3/30.3 07210 - 065480	Caltrans	
OR-01902A		1985	Webb, Lois M. and George A. Casen	Historic Architectural Evaluation 07 Ora 5 Route 405 to Route 55 PM 21.3/30.3 07210 065480	Office of Environmental Analysis Department of Transportation	
OR-01902B		1982	Snyder, John W.	Evaluations of Standard Bridges and Culverts on 07-Ora, LA-5 Santa Ana Transit Corridor	Office of Environmental Planning Department of Transportation	

Report List

The Market Place

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
OR-01939	Paleo -	1999	Padon, Beth	Archaeological and Paleontological Monitoring of Preliminary Grading for Market Place III Retail Center, Irvine, California	Discovery Works, Inc.	
OR-02249		1978	Schilz, Allan J.	Archaeological Survey Conducted for Village 10 City of Irvine	Archaeological Resource Management Corp.	
OR-02251	Paleo -	2000	Padon, Beth	Archaeological and Paleontological Monitoring Scope of Work for Planning Area 10, Parcel 8, 9, and 10 Project	Discovery Works, Inc.	
OR-03277		1985	Casen, George A., John F. Romani, and Lois M. Webb	The Proposed Project Is the Widening and General Improvement of Interstate Route 5 Between Route 405 and Route 55 in Orange County, California	Caltrans Environmental Planning Branch	30-157788, 30-161870, 30-161875, 30-161889, 30-176772
OR-03277		1985	Webb, Lois M. and John W. Snyder	Historic Architectural Evaluation 07 Ora 5 Route 405 to Route 55	Environmnetal Planners Caltrans	
OR-03277		1982	Snyder, John W.	Evaluations of Standard Bridges and Culverts on 07-Ora, LA-5 Santa Ana Transit Corridor	Environmental Planning, Caltrans	
OR-03731	Paleo -	1996	Rosenthal, Jane	Archaeological and Paleontological Monitoring of Preliminary Grading and Trenching for the Lower Peters Canyon Retail Site, Tentative Parcel Map 93-204, 940122, County Permit # GA950034.	Petra Resources Inc.	
OR-04000		2010	Strauss, Monica, Ehringer, Candace, and Bray, Madeleine	Irvine Ranch Water District Wells 21 and 22 and Tustin Legacy Well 1 (TL-1) Projects, Phase I Cultural Resources Assessment	ESA	30-000300, 30-000301, 30-000350, 30-000351, 30-000353, 30-000373, 30-000381, 30-001652

ATTACHMENT B

NAHC Sacred Lands File Search Results

August 18, 2023

For: Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, California 95814

From: Emily T. Soong
BFSA Environmental Services, a Perennial Company
14010 Poway Rd. Suite A
Poway, CA 92064

Re: Request for Sacred Lands File and Native American Contact List for the Chase Road Project, Fontana, San Bernardino County, California.

I would like to request a record search of the Sacred Lands File and a list of appropriate Native American contacts for the following project: The Market Place Project (Project No. 23-223). The project is an archaeological study located north of the intersection of Jamboree Road and Santa Ana Freeway (APNs 500-291-02, -04, -06, -07, -08, -11, -21, -23, -24, -25, -26, -27, 500-312-01, -02, -04, -06, -08, -09), Tustin, Orange County, California. Specifically, the project is in former Lomas De Santiago and San Joaquin Ranchos, Township 1 South, Range 6 West as seen on the USGS *Tustin*, California topographic quadrangle. Please find the enclosed map on which the project is delineated.

Thank you for your time.

Sincerely,

Emily T. Soong
Graphics/GIS
Billing: 14010 Poway Road, Suite A, Poway, CA 92064
Phone: 858-484-0915
Email: esoong@bfsa.perennialenv.com

Attachments:
USGS 7.5 *Tustin,* California, topographic maps with project area delineated.
Sacred Lands File request form

Sacred Lands File & Native American Contacts List Request
NATIVE AMERICAN HERITAGE COMMISSION

915 Capitol Mall, RM 364 ∗ Sacramento, CA 95814 ∗ (916) 653-4082
(916) 657-5390 – Fax ∗ nahc@pacbell.net

Information Below is Required for a Sacred Lands File Search

Project: The Market Place Project (Project No. 22-223)

County: Orange

USGS Quadrangle Name(s): *Tustin*

Township 5 South, Range 9 West

Company/Firm/Agency: BFSA Environmental Services, a Perennial Company

Contact Person: Emily T. Soong

Street Address: 14010 Poway Road, Suite A

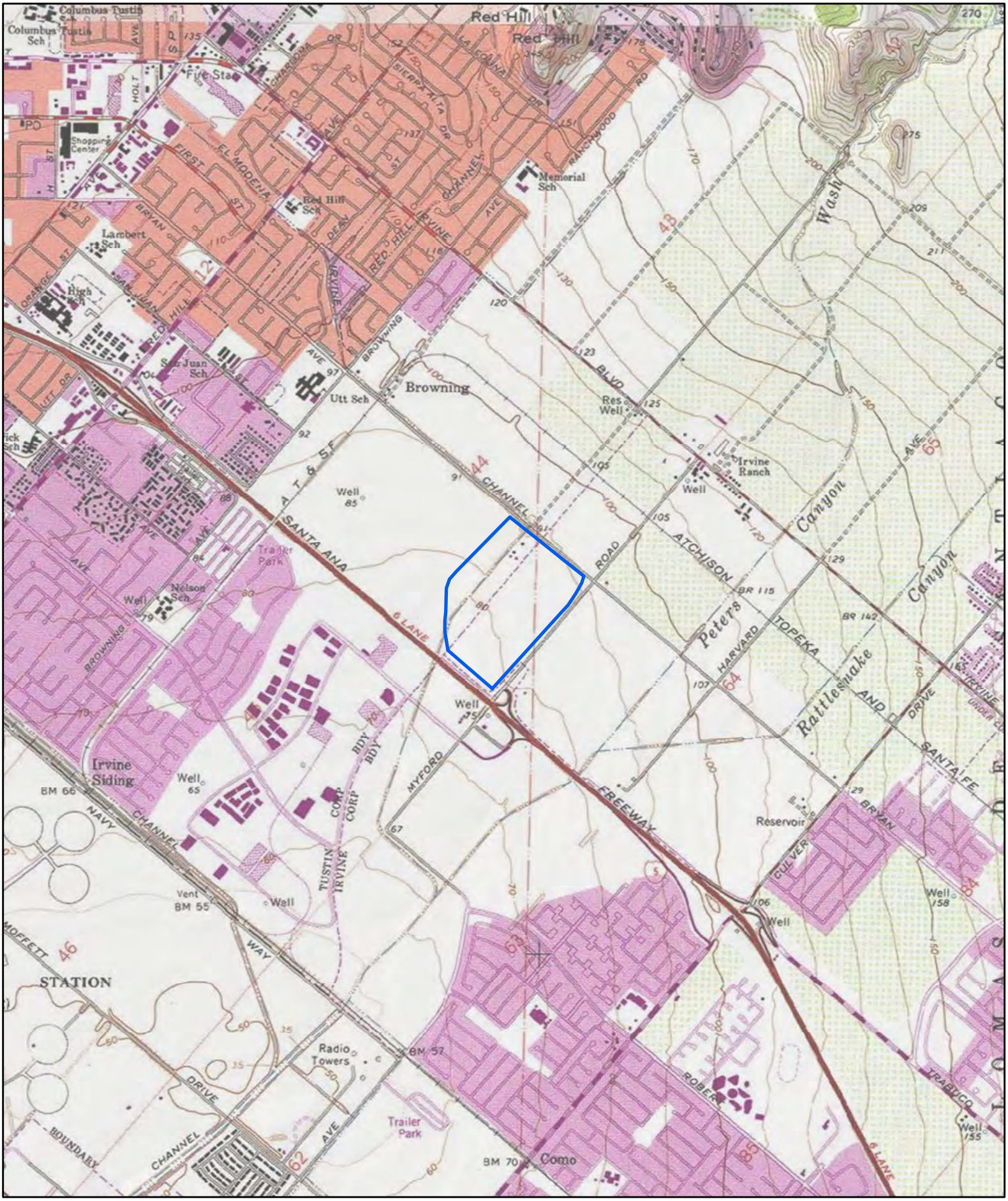
City: Poway Zip: 92064

Phone: 858-484-0915

Fax: 858-679-9896

Email: esoong@bfsa.perennialenv.com

Project Description:
I would like to request a record search of the Sacred Lands File and a list of appropriate Native American contacts for the following project: The Market Place Project (Project No. 23-223). The project is an archaeological study located north of the intersection of Jamboree Road and Santa Ana Freeway (APNs 500-291-02, -04, -06, -07, -08, -11, -21, -23, -24, -25, -26, -27, 500-312-01, -02, -04, -06, -08, -09), Tustin, Orange County, California. Specifically, the project is in former Lomas De Santiago and San Joaquin Ranchos, Township 1 South, Range 6 West as seen on the USGS *Tustin*, California topographic quadrangle. Please find the enclosed map on which the project is delineated.



Project

The Market Center Project
USGS *Tustin* Quadrangle
(7.5-minute series)

N

1:24,000

ETS BFSAES: 8/18/2023

From:	NAHC@NAHC
To:	Emily Soong
Cc:	Green, Andrew@NAHC
Subject:	RE: Request for Sacred Land Search for The Market Place Project (23-223)
Date:	Saturday, August 19, 2023 9:16:27 AM
Attachments:	image001.png The Market Place Project Sacred Lands File form.pdf The Market Place Project NAHC Search Request.pdf The Market Place Map.pdf

This sender is trusted.

Hello,

Thank you for your message. We're in receipt of your request. We have recently hired new staff, and this change in our office is creating some delays. We estimate a turn-around time of 4 weeks and don't anticipate responding sooner than the end of that time frame. Please let us know if you have any questions.

Kind regards,

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
(916) 373-3710

From: Emily Soong <esoong@bfsa.perennialenv.com>
Sent: Friday, August 18, 2023 10:48 AM
To: NAHC@NAHC <NAHC@nahc.ca.gov>
Cc: Jenni Stropes <jstropes@bfsa.perennialenv.com>
Subject: Request for Sacred Land Search for The Market Place Project (23-223)

To whom it may concern,

I would like to request a record search of the Sacred Lands File and a list of appropriate Native American contacts for the following project: The Market Place Project (Project No. 23-223). The project is an archaeological study located north of the intersection of Jamboree Road and Santa Ana Freeway (APNs 500-291-02, -04, -06, -07, -08, -11, -21, -23, -24, -25, -26, -27, 500-312-01, -02, -04, -06, -08, -09), Tustin, Orange County, California. Specifically, the project is in former Lomas De Santiago and San Joaquin Ranchos, Township 1 South, Range 6 West as seen on the USGS *Tustin*, California topographic quadrangle. Please find the enclosed map on which the project is delineated.

Best regards,

Emily T. Soong
BFSA Environmental Services



Phone: 858-484-0915

Email: esoong@bfsa.perennialenv.com

14010 Poway Road, Suite A

Poway, CA 92064

www.bfsa-ca.com

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Reginald Pagaling
Chumash

VICE-CHAIRPERSON
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

SECRETARY
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Miwok

PARLIAMENTARIAN
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Luiseño

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Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
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NAHC.ca.gov

October 3, 2023

Emily T. Soong
BFSA Environmental Services

Via Email to: esoong@bfsa.perennialenv.com

Re: The Market Place Project, Orange County

Dear Ms. Soong:

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

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

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

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Orange County
10/3/2023

Tribe Name	Fed (F) Non-Fed (N)	Contact Person	Contact Address	Phone #	Fax #	Email Address	Cultural Affiliation
Gabrieleno Band of Mission Indians - Kizh Nation	N	Christina Swindall Martinez, Secretary	P.O. Box 393 Covina, CA, 91723	(844) 390-0787		admin@gabrielenoindians.org	Gabrieleno
Gabrieleno Band of Mission Indians - Kizh Nation	N	Andrew Salas, Chairperson	P.O. Box 393 Covina, CA, 91723	(844) 390-0787		admin@gabrielenoindians.org	Gabrieleno
Gabrieleno/Tongva San Gabriel Band of Mission Indians	N	Anthony Morales, Chairperson	P.O. Box 693 San Gabriel, CA, 91778	(626) 483-3564	(626) 286-1262	GTTribalcouncil@aol.com	Gabrieleno
Gabrielino /Tongva Nation	N	Sandonne Goad, Chairperson	106 1/2 Judge John Aiso St., #231 Los Angeles, CA, 90012	(951) 807-0479		sgoad@gabrielino-tongva.com	Gabrielino
Gabrielino Tongva Indians of California Tribal	N	Robert Dorame, Chairperson	P.O. Box 490 Bellflower, CA, 90707	(562) 761-6417	(562) 761-6417	gtongva@gmail.com	Gabrielino
Gabrielino Tongva Indians of California Tribal	N	Christina Conley, Cultural Resource Administrator	P.O. Box 941078 Simi Valley, CA, 93094	(626) 407-8761		christina.marsden@alumni.usc.edu	Gabrielino

Tribe Name	Fed (F) Non-Fed (N)	Contact Person	Contact Address	Phone #	Fax #	Email Address	Cultural Affiliation
Gabrielino-Tongva Tribe	N	Sam Dunlap, Cultural Resource Director	P.O. Box 3919 Seal Beach, CA, 90740	(909) 262-9351		tongvatcr@gmail.com	Gabrielino
Gabrielino-Tongva Tribe	N	Charles Alvarez, Chairperson	23454 Vanowen Street West Hills, CA, 91307	(310) 403-6048		Chavez1956metro@gmail.com	Gabrielino
Juaneno Band of Mission Indians Acjachemen Nation -	N	Joyce Perry, Cultural Resource Director	4955 Paseo Segovia Irvine, CA, 92603	(949) 293-8522		kaamalam@gmail.com	Juaneno
Juaneno Band of Mission Indians Acjachemen Nation 84A	N	Heidi Lucero, Chairperson, THPO	31411-A La Matanza Street San Juan Capistrano, CA, 92675	(562) 879-2884		jbmian.chairwoman@gmail.com	Juaneno
Pala Band of Mission Indians	F	Alexis Wallick, Assistant THPO	PMB 50, 35008 Pala Temecula Road Pala, CA, 92059	(760) 891-3537		awallick@palatribe.com	Cupeno Luiseno
Pala Band of Mission Indians	F	Shasta Gaughen, Tribal Historic Preservation Officer	PMB 50, 35008 Pala Temecula Road Pala, CA, 92059	(760) 891-3515	(760) 742-3189	sgaughen@palatribe.com	Cupeno Luiseno
Santa Rosa Band of Cahuilla Indians	F	Lovina Redner, Tribal Chair	P.O. Box 391820 Anza, CA, 92539	(951) 659-2700	(951) 659-2228	lsaul@santarosa-nsn.gov	Cahuilla

Tribe Name	Fed (F) Non-Fed (N)	Contact Person	Contact Address	Phone #	Fax #	Email Address	Cultural Affiliation
Soboba Band of Luiseno Indians	F	Joseph Ontiveros, Tribal Historic Preservation Officer	P.O. Box 487 San Jacinto, CA, 92581	(951) 663-5279	(951) 654-4198	jontiveros@soboba-nsn.gov	Cahuilla Luiseno
Soboba Band of Luiseno Indians	F	Jessica Valdez, Cultural Resource Specialist	P.O. Box 487 San Jacinto, CA, 92581	(951) 663-6261	(951) 654-4198	jvaldez@soboba-nsn.gov	Cahuilla Luiseno

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed The Market Place Project, Orange County.

Appendix B
Air Quality, Energy, and Greenhouse Gas Report

Tustin Market Place Draft EIR

AIR QUALITY, ENERGY, AND GREENHOUSE GAS IMPACT REPORT

THE MARKET PLACE PROJECT

CITY OF TUSTIN, CALIFORNIA

LSA

May 2024

AIR QUALITY, ENERGY, AND GREENHOUSE GAS IMPACT REPORT

THE MARKET PLACE PROJECT

CITY OF TUSTIN, CALIFORNIA

Submitted to:

EPD Solutions, Inc.
3333 Michelson Drive, Suite 500
Irvine, California 92612

Prepared by:

LSA
3210 El Camino Real, Suite 100
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Project No. ESL2201.76

LSA

May 2024

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LIST OF ABBREVIATIONS AND ACRONYMS

°C	degrees Celsius
°F	degrees Fahrenheit
µg/m^3	micrograms per cubic meter
AAQS	ambient air quality standards
AB	Assembly Bill
ADT	average daily trips
APN	Assessor's Parcel Number
AQMP	Air Quality Management Plan
Basin	South Coast Air Basin
BTU	British thermal units
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen Code	California Green Building Standards Code
CARB	California Air Resources Board
CAT	Climate Action Team
CBC	California Building Code
CBSC	California Building Standards Commission
CCAA	California Clean Air Act
CCR	California Code of Regulations

CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH_4	methane
City	City of Tustin
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
County	County of Orange
CPUC	California Public Utilities Commission
DPM	diesel particulate matter
du/ac	dwelling units per acre
EIA	Energy Information Administration
EIR	Environmental Impact Report
EMFAC	California Emissions Factor Model
EO	Executive Order
ETSP	East Tustin Specific Plan
GHG	greenhouse gas
GPA	General Plan Amendment
GWh	gigawatt-hour
GWP	global warming potential
H_2S	hydrogen sulfide
HFCs	hydrofluorocarbons
I-5	Interstate-5
IPCC	Intergovernmental Panel on Climate Change

kWh	kilowatt-hour
lbs/day	pounds per day
LCFS	Low Carbon Fuel Standard
LST	Local Significance Threshold
mg/m^3	milligrams per cubic meter
MMT	million metric tons
MMT CO_2e	million metric tons of carbon dioxide equivalent
mpg	miles per gallon
mph	miles per hour
MPO	Metropolitan Planning Organization
MT	metric tons
MT CO_2e	metric tons of carbon dioxide equivalent
MT CO_2e/yr	metric tons of carbon dioxide equivalent per year
MT CO_2e/yr/SP	metric tons of carbon dioxide equivalent per year per service population
MU	Mixed Use
MW	megawatt
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NHTSA	National Highway Traffic Safety Administration
NO	nitric oxide
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
O_3	ozone (or smog)

OPR	Governor's Office of Planning and Research
PC COM	Planned Community Commercial
PCCB	Planned Community Commercial/Business
PFCs	perfluorocarbons
PM	particulate matter
$PM_{2.5}$	particulate matter less than 2.5 microns in size
PM_{10}	particulate matter less than 10 microns in size
ppb	parts per billion
ppm	parts per million
PRC	Public Resources Code
project	The Market Place Project
RCP	Regional Comprehensive Plan
RHNA	Regional Housing Needs Allocation
ROCs	reactive organic compounds
ROGs	reactive organic gases
RPS	Renewables Portfolio Standard
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SCAG	Southern California Association of Governments
SCE	Southern California Edison
SCS	Sustainable Communities Strategy
SF_6	sulfur hexafluoride

SO_2	sulfur dioxide
SO_X	sulfur oxides
SoCalGas	Southern California Gas Company
SPA	Specific Plan Amendment
sq ft	square foot/feet
sq mi	square mile
SRA	Source Receptor Area
TAC	toxic air contaminant
TDM	Transportation Demand Management
UNFCCC	United Nations Framework Convention on Climate Change
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
VMT	vehicle miles traveled
VOCs	volatile organic compounds
ZEV	zero-emission vehicle
ZNE	zero net energy

INTRODUCTION

This Air Quality, Energy, and Greenhouse Gas (GHG) Impact Report has been prepared to evaluate the potential air quality, energy, and GHG emissions impacts associated with The Market Place Project (project) in the City of Tustin (City), County of Orange (County), California. This report follows the guidelines identified by the South Coast Air Quality Management District (SCAQMD) in its *California Environmental Quality Act (CEQA) Air Quality Handbook*,[1] and associated updates. In keeping with these guidelines, this analysis describes existing air quality, including air quality and GHG emissions generated from project-related sources, regional air pollution, and global climate change. In addition, this analysis discusses energy use resulting from implementation of the proposed project and evaluates whether the proposed project would result in the wasteful, inefficient, or unnecessary consumption of energy resources or conflict with any applicable plans for renewable energy and energy efficiency.

PROJECT LOCATION

The 76.9-acre project site consists of Assessor's Parcel Numbers (APNs) 500-291-06, 500-291-07, 500-291-11, 500-291-12, and 500-291-25 and 500-312-03 and 500-312-10. The project site is generally bounded by Myford Road to the northwest, Bryan Avenue to the northeast, Jamboree Road to the southeast, and Interstate-5 (I-5, Santa Ana Freeway) to the southwest. The project location is shown in Figure 1.

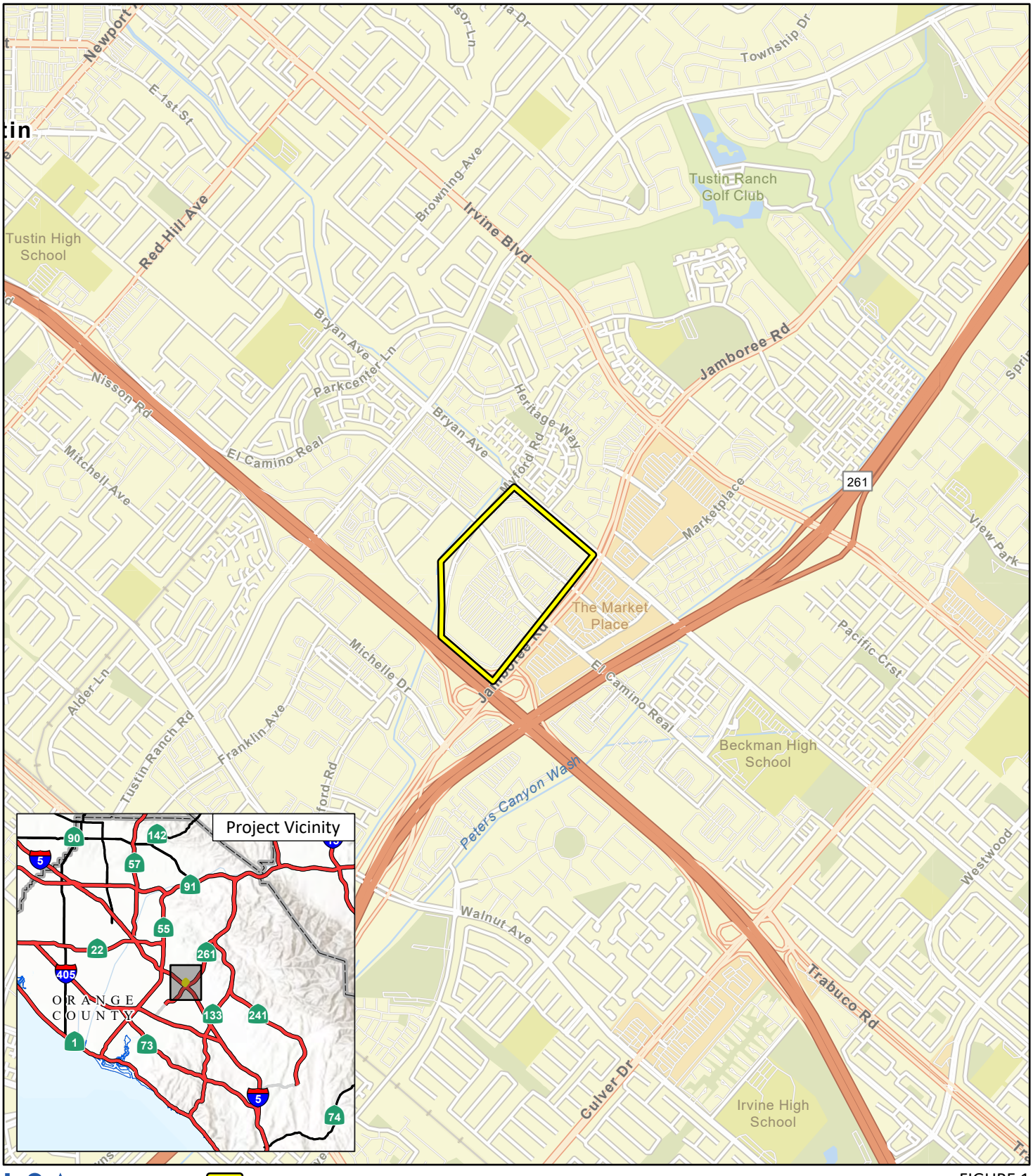
The Market Place is currently developed with 747,205 square feet (sq ft) of commercial business uses, including 57,456 sq ft of restaurant use, 23,662 sq ft of community center use, 24,483 sq ft of retail use, 5,559 sq ft of office use, and surface parking lots. The site also includes ornamental landscaping along the perimeter and throughout the parking areas. See Figure 2.

The project site has a General Plan land use designation of Planned Community Commercial/ Business (PCCB) and a zoning designation of Planned Community Commercial (PC COM) with an overlay of SP 8 - East Tustin. The Market Place is also located within the East Tustin Specific Plan (ETSP). Within the ETSP, the site is currently designated as Mixed Use (MU) which is intended for development of planned retail commercial, office, and industrial/research and development land uses of an intensity compatible with neighboring residential and commercial land uses.

PROJECT DESCRIPTION

The City of Tustin prepared the 2021–2029 Housing Element of the General Plan in accordance with Government Code Section 65580 et seq. The City is required by State law to periodically update its Housing Element, a mandatory component of the City's General Plan. The update to the Housing Element covers the Sixth Cycle planning period from October 15, 2021, to October 15, 2029.

[1] South Coast Air Quality Management District (SCAQMD). 1993. *CEQA Air Quality Handbook*. Website: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993) (accessed January 2024).



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FIGURE 1

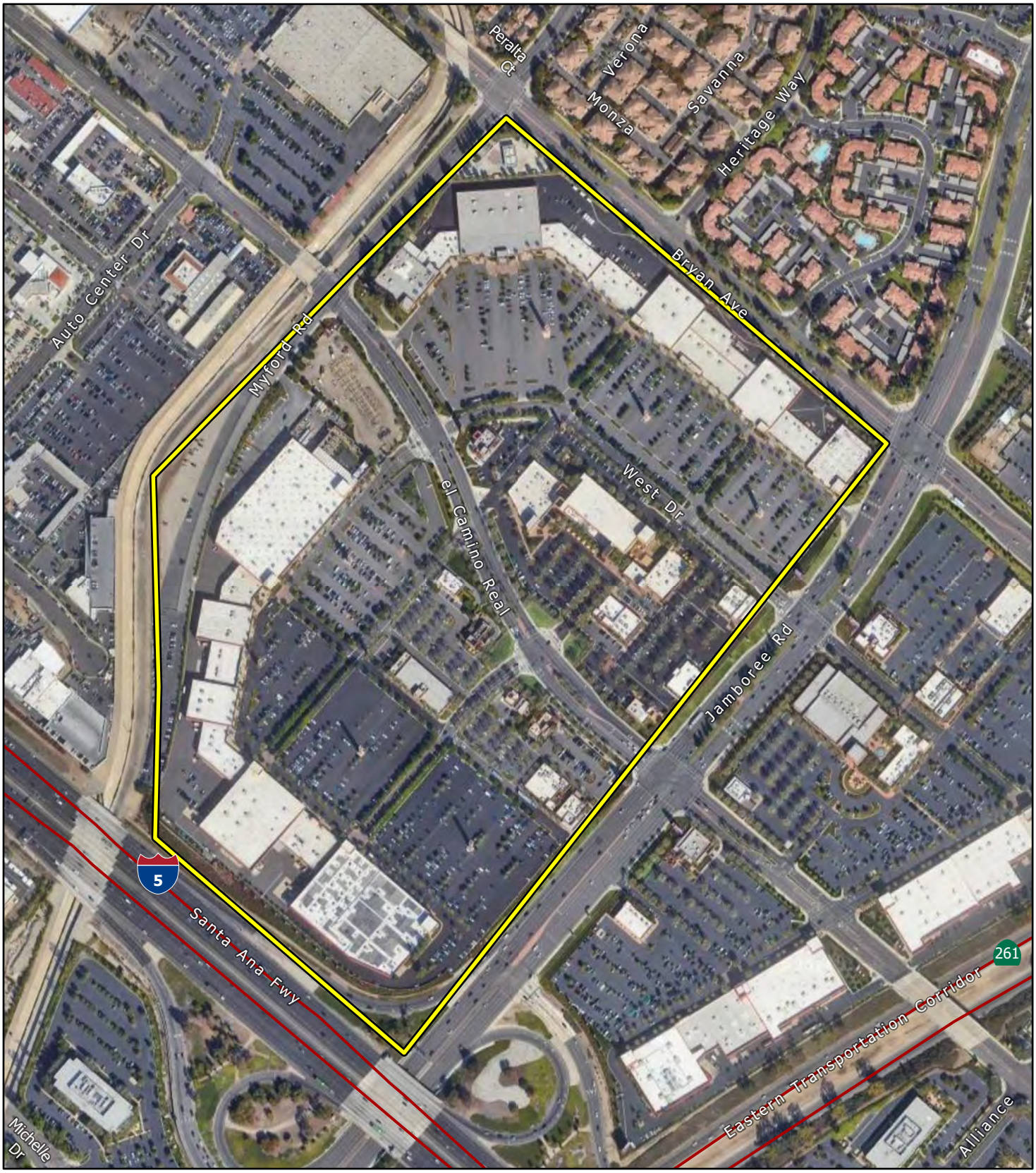
0 1000 2000
FEET

SOURCE: Esri World Street Map (2024)

J:\ESL2201.75\GIS\Pro\The Market Place Project\The Market Place Project.aprx (2/21/2024)

The Market Place Project

Regional Project Location



LSA

Project Location

FIGURE 2

N

0 200 400

FEET

The Market Place Project

Project Site

SOURCE: Google Maps (2023)

J:\ESL2201.75\GIS\Pro\The Market Place Project\The Market Place Project.aprx (2/20/2024)

The Housing Element is the City's housing policy and planning document that identifies housing needs and constraints, and sets forth goals, policies, and programs that address the future housing needs for all income levels over an eight-year planning period that coincides with a Regional Housing Needs Allocation (RHNA). During the Housing Element process, the City assessed a number of properties and areas throughout the community that would be able to accommodate the City's assigned RHNA. Of the Housing Element inventory sites, The Market Place (the project site) was identified as necessary for rezoning under Housing Element Program 1.1f to allow for high density residential development.

Pursuant to Housing Element Program 1.1f, the City is proposing an overlay zone (overlay district) for the project site. To accommodate this, the proposed project would amend a portion of The Market Place to allow residential development, which requires a General Plan Amendment (GPA) for the project site and a Specific Plan Amendment (SPA) for seven parcels (APNs 500-291-06, -07, -11, -12, and -25 and 500-312-03 and -10). The Housing Element identifies the project site as having a capacity of up to 900 housing units. The proposed Housing Overlay would allow for residential development with a maximum density of 50 dwelling units per acre (du/ac) over a maximum development area of 18 acres, which would allow up to 900 dwelling units within the project site. The anticipated development density was determined through the Housing Element process and is a conservative estimate based on development trends in nearby communities. The anticipated development does not rely on the demolition of any existing building, but rather focuses on areas used for surface parking. No development is proposed as part of this project.

Residential uses are currently not allowed on the project site. Upon approval of the Housing Overlay Zone, the project site could accommodate 900 units over approximately 18 acres of developable land within the existing 76.9-acre site. The anticipated development over 18 acres would take place on underutilized asphalt parking lot areas, and not require demolition of any existing buildings. Parking displaced as a result of redevelopment would be accommodated by vertical parking structures located within any future proposed development.

In addition, the project site is envisioned to function as a mixed-use site and a portion of the project site would remain as non-residential land use. The project site is assumed to be developed with an additional 13,032 sq ft of non-residential use.

Roadways and utilities may be required to support development of future residential construction within the project site. However, specific infrastructure improvements required to support residential development within The Market Place are not known at this time and will not be known until a development project is proposed.

The proposed project does not propose or approve any specific development projects. However, for the purposes of this analysis, future development of the additional 900 units and remaining commercial buildout capacity associated with the Housing Overlay Zone could occur anytime between October 2024 and October 2029. Construction activities for the residential units would include demolition of the surface parking lot, site preparation, grading, building construction, paving, and architectural coatings.

The existing uses generate approximately 31,374 average daily trips (ADT).[2] With the buildout of the proposed housing units and remaining commercial buildout capacity, the proposed project would generate approximately 36,857 ADT, resulting in 5,483 net new ADT.

The residential units would be constructed in compliance with the version of the California Title 24 Energy Efficiency Standards (Title 24 energy standards) and the Title 24 California Green Building Standards Code (CALGreen Code) in effect at the time building permit applications are submitted.

EXISTING LAND USES IN THE PROJECT AREA

For the purposes of this analysis, sensitive receptors are areas of population that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include residences, schools, daycare centers, hospitals, parks, and similar uses which are sensitive to air quality. Impacts on sensitive receptors are of particular concern because they are the population most vulnerable to the effects of air pollution. The project site is surrounded primarily by residential, commercial, and office uses. The areas adjacent to the project site include residential uses to the north, commercial uses to the east, office uses to the south, and commercial uses to the west.

The closest sensitive receptors to the project site are residential uses, located approximately 110 feet northeast of the project's site boundary.

[2] EPD Solutions, Inc. 2024. *The Market Place Trip Generation*.

BACKGROUND

This section provides current background information on air pollutants and their health effects. It also provides current regulatory background information, including information from the California Air Resources Board's (CARB) Air Quality and Land Use Handbook[3] (CARB Handbook); a description of the general health risks of toxics, and the significance criteria for project evaluation. In addition, this section provides background information on energy usage in the project area and provides regulatory background information, including federal, State, and local energy regulations.

AIR POLLUTANTS AND HEALTH EFFECTS

Both State and federal governments have established health-based ambient air quality standards (California Ambient Air Quality Standards [CAAQS] and National Ambient Air Quality Standards [NAAQS], respectively) for six criteria air pollutants:[4] carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), and suspended particulate matter (PM). In addition, 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. Long-term exposure to elevated levels of criteria pollutants may result in adverse health effects. However, emission thresholds established by an air district are used to manage total regional emissions within an air basin based on the air basin's attainment status for criteria pollutants. These emission thresholds were established for individual projects that would contribute to regional emissions and pollutant concentrations and could adversely affect or delay the projected attainment target year for certain criteria pollutants.

Because of the conservative nature of the thresholds and the basin-wide context of individual project emissions, there is no known direct correlation between a single project and localized air quality-related health effects. One individual project that generates emissions exceeding a threshold does not necessarily result in adverse health effects for residents in the project vicinity. This condition is especially true when the criteria pollutants exceeding thresholds are those with regional effects, such as ozone precursors like nitrogen oxides (NO_X) and volatile organic compounds (VOCs).

Occupants of facilities such as schools, daycare centers, parks and playgrounds, hospitals, and nursing and convalescent homes are considered to be more sensitive than the general public to air pollutants because these population groups have increased susceptibility to respiratory disease. Persons engaged in strenuous outdoor work or exercise also have increased sensitivity to poor air quality. Residential areas are considered more sensitive to air quality conditions, compared to commercial and industrial areas, because people generally spend longer periods of time at their residences, with greater associated exposure to ambient air quality conditions. Recreational uses

[3] California Air Resources Board (CARB). 2005. *Air Quality and Land Use Handbook: A Community Health Perspective.* April.

[4] Criteria pollutants are defined as those pollutants for which the federal and State governments have established ambient air quality standards, or criteria, for outdoor concentrations in order to protect public health.

are also considered sensitive compared to commercial and industrial uses due to greater exposure to ambient air quality conditions associated with exercise.

Ozone

Rather than being directly emitted, ozone (O_3 or smog) is formed by photochemical reactions between NO_X and VOCs. Ozone is a pungent, colorless gas. Elevated ozone concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors such as the sick, elderly, and young children. Ozone levels peak during the summer and early fall months.

Carbon Monoxide

Carbon monoxide (CO) is formed by the incomplete combustion of fossil fuels, almost entirely from automobiles. It is a colorless, odorless gas that can cause dizziness, fatigue, and impairments to central nervous system functions. CO passes through the lungs into the bloodstream, where it interferes with the transfer of oxygen to body tissues.

Particulate Matter

Particulate matter (PM) is the term used for a mixture of solid particles and liquid droplets found in the air. Coarse particles are those that are 10 microns or less in diameter, or PM_{10}. Fine, suspended particulate matter with an aerodynamic diameter of 2.5 microns or less, or $PM_{2.5}$, is not readily filtered out by the lungs. Nitrates, sulfates, dust, and combustion particulates are major components of PM_{10} and $PM_{2.5}$. These small particles can be directly emitted into the atmosphere as byproducts of fuel combustion; through abrasion, such as tire or brake lining wear; or through fugitive dust (wind or mechanical erosion of soil). They can also be formed in the atmosphere through chemical reactions. Particulates may transport carcinogens and other toxic compounds that adhere to the particle surfaces and can enter the human body through the lungs.

Nitrogen Dioxide

Nitrogen dioxide (NO_2) is a reddish brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Aside from its contribution to ozone formation, NO_2 also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition. NO_2 may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels. NO_2 decreases lung function and may reduce resistance to infection.

Sulfur Dioxide

Sulfur dioxide (SO_2) is a colorless, irritating gas formed primarily from incomplete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous SO_2 levels in the region. SO_2 irritates the respiratory tract, can injure lung tissue when combined with fine particulate matter, and reduces visibility and the level of sunlight.

Lead

Leaded gasoline (phased out in the United States beginning in 1973), paint (on older houses and cars), smelters (metal refineries), and the manufacture of lead storage batteries have been the primary sources of lead (Pb) released into the atmosphere. Lead has multiple adverse neurotoxic health effects, and children are at special risk. Some lead-containing chemicals cause cancer in animals. Lead levels in the air have decreased substantially since leaded gasoline was eliminated. Ambient lead concentrations are only monitored on an as-warranted, site-specific basis in California. On October 15, 2008, the United States Environmental Protection Agency (USEPA) strengthened the NAAQS for lead by lowering it from 1.5 to 0.15 micrograms per cubic meter ($\mu g/m^3$). The USEPA revised the monitoring requirements for lead in December 2010. These requirements focus on airports and large urban areas, resulting in an increase in 76 monitors nationally.

Volatile Organic Compounds

Volatile organic compounds (VOCs) (also known as reactive organic gases [ROGs] and reactive organic compounds [ROCs]) are formed from the combustion of fuels and the evaporation of organic solvents. VOCs are not defined as criteria pollutants, however, because VOCs accumulate in the atmosphere more quickly during the winter, when sunlight is limited and photochemical reactions are slower, they are a prime component of the photochemical smog reaction. There are no attainment designations for VOCs.

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are injurious in small quantities and are regulated by the USEPA and the CARB. Some examples of TACs include benzene, butadiene, formaldehyde, and hydrogen sulfide. The identification, regulation, and monitoring of TACs is relatively recent compared to that for criteria pollutants.

TACs do not have ambient air quality standards (AAQS), but are regulated by the USEPA, the CARB, and the SCAQMD. In 1998, the CARB identified particulate matter from diesel-fueled engines as a TAC. The CARB has completed a risk management process that identified potential cancer risks for a range of activities using diesel-fueled engines.[5] High-volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic (e.g., distribution centers and truck stops) were identified as posing the highest risk to adjacent receptors. Other facilities associated with increased risk include warehouse distribution centers, large retail or industrial facilities, high-volume transit centers, and schools with a high volume of bus traffic. Health risks from TACs are a function of both concentration and duration of exposure.

Unlike TACs emitted from industrial and other stationary sources noted above, most diesel particulate matter (DPM) is emitted from mobile sources—primarily "off-road" sources such as construction and mining equipment, agricultural equipment, and truck-mounted refrigeration units, as well as "on-road" sources such as trucks and buses traveling on freeways and local roadways.

[5] CARB. 2000. Stationary Source Division and Mobile Source Control Division. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.* October.

Although not specifically monitored, recent studies indicate that exposure to DPM may contribute significantly to a cancer risk (a risk of approximately 500 to 700 in 1,000,000) that is greater than all other measured TACs combined.[6] The technology for reducing DPM emissions from heavy-duty trucks is well established, and both State and federal agencies are moving aggressively to regulate engines and emission control systems to reduce and remediate diesel emissions. The CARB anticipated that by 2020, average statewide DPM concentrations will decrease by 85 percent from levels in 2000 with full implementation of the CARB's Diesel Risk Reduction Plan,[7] meaning that the statewide health risk from DPM is expected to decrease from 540 cancer cases in 1,000,000 to 21.5 cancer cases in 1,000,000. The CARB 2000 Diesel Risk Reduction Plan is still the most recent version and has not been updated.

Table A summarizes the sources and health effects of air pollutants discussed in this section. Table B presents a summary of CAAQS and NAAQS.

Table A: Sources and Health Effects of Air Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	● Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust ● Natural events, such as decomposition of organic matter	● Reduced tolerance for exercise ● Impairment of mental function ● Impairment of fetal development ● Death at high levels of exposure ● Aggravation of some heart diseases (angina)
Nitrogen Dioxide (NO_2)	● Motor vehicle exhaust ● High temperature stationary combustion ● Atmospheric reactions	● Aggravation of respiratory illness ● Reduced visibility ● Reduced plant growth ● Formation of acid rain
Ozone (O_3)	● Atmospheric reaction of organic gases with nitrogen oxides in sunlight	● Aggravation of respiratory and cardiovascular diseases ● Irritation of eyes ● Impairment of cardiopulmonary function ● Plant leaf injury
Lead (Pb)	● Contaminated soil	● Impairment of blood functions and nerve construction ● Behavioral and hearing problems in children
Suspended Particulate Matter ($PM_{2.5}$ and PM_{10})	● Stationary combustion of solid fuels ● Construction activities ● Industrial processes ● Atmospheric chemical reactions	● Reduced lung function ● Aggravation of the effects of gaseous pollutants ● Aggravation of respiratory and cardiorespiratory diseases ● Increased cough and chest discomfort ● Soiling ● Reduced visibility
Sulfur Dioxide (SO_2)	● Combustion of sulfur-containing fossil fuels ● Smelting of sulfur-bearing metal ores Industrial processes	● Aggravation of respiratory diseases (asthma, emphysema) ● Reduced lung function ● Irritation of eyes ● Reduced visibility ● Plant injury ● Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board (2015).

[6] CARB. 2000. Stationary Source Division and Mobile Source Control Division. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.* October.

[7] Ibid.

Table B: Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]		Federal Standards[b]		
		Concentration[c]	Method[d]	Primary[c,e]	Secondary[c,f]	Method[g]
Ozone (O_3)[h]	1-Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.07 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
Respirable Particulate Matter (PM_{10})[i]	24-Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		–		
Fine Particulate Matter ($PM_{2.5}$)[i]	24-Hour	-		35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	9.0 µg/m³		
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m³)	–	Non-Dispersive Infrared Photometry (NDIR)
	1-Hour	20 ppm (23 mg/m³)		35 ppm (40 mg/m³)		
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m³)		–	–	
Nitrogen Dioxide (NO_2)[j]	Annual Arithmetic Mean	0.03 ppm (57 µg/m³)	Gas Phase Chemiluminescence	53 ppb (100 µg/m³)	Same as Primary Standard	Gas Phase Chemi-luminescence
	1-Hour	0.18 ppm (339 µg/m³)		100 ppb (188 µg/m³)	-	
Lead (Pb)[l,m]	30-Day Average	1.5 µg/m³	Atomic Absorption	–	–	High-Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 µg/m³ (for certain areas)[l]	Same as Primary Standard	
	Rolling 3-Month Average[i]	–		0.15 µg/m³		
Sulfur Dioxide (SO_2)[k]	24-Hour	0.04 ppm (105 µg/m³)	Ultraviolet Fluorescence	0.14 ppm (for certain areas)	–	Ultraviolet Fluorescence; Spectro-photometry (Pararosaniline Method)
	3-Hour	–		–	0.5 ppm (1300 µg/m³)	
	1-Hour	0.25 ppm (655 µg/m³)		75 ppb (196 µg/m³)[k]	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas)[k]	–	
Visibility-Reducing Particles[l]	8-Hour	See footnote n	Beta Attenuation and Transmittance through Filter Tape.	No Federal Standards		
Sulfates	24-Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride[j]	24-Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

Source: California Air Resources Board (2016) (Website: https://www.arb.ca.gov/research/aaqs/aaqs2.pdf).

Table notes are provided on the following page.

[a] California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California Ambient Air Quality Standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact USEPA for further clarification and current national policies.

[c] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[d] Any equivalent measurement method which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.

[e] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[f] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[g] Reference method as described by the USEPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the USEPA.

[h] On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

[i] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing national 24- hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

[j] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[k] On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

[l] The CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[m] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

[n] In 1989, the CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

°C = degrees Celsius
µg/m^3 = micrograms per cubic meter
CARB = California Air Resources Board
mg/m^3 = milligrams per cubic meter
ppb = parts per billion
ppm = parts per million
USEPA = United States Environmental Protection Agency

ENERGY

Electricity

Electricity is a manmade resource. The production of electricity requires the consumption or conversion of energy resources (including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources) into energy. Electricity is used for a variety of purposes (e.g., lighting, heating, cooling, and refrigeration, and for operating appliances, computers, electronics, machinery, and public transportation systems).

According to the most recent data available, in 2022, California's electricity was generated primarily by natural gas (47.5 percent), renewable sources (52.2 percent), large hydroelectric (7.2 percent), nuclear (8.7 percent), coal (<1.0 percent), and other unspecified sources. Total electric generation in California in 2022 was 287,220 gigawatt-hours (GWh), up 3.4 percent from the 2021 total generation of 277,764 GWh.[8]

The project site is within the service territory of Southern California Edison (SCE). SCE provides electricity to more than 15 million people in a 50,000-square-mile (sq mi) area of Central, Coastal, and Southern California.[9] According to the California Energy Commission (CEC), total electricity consumption in the SCE service area in 2022 was 85,870 GWh (31,604 GWh for the residential sector and 54,266 GWh for the non-residential sector). Total electricity consumption in Orange County in 2022 was 20,244 GWh (20,243,721,856 kilowatt hours [kWh]), including 7,830 GWh for the residential sector and 12,414 GWh for the non-residential sector.[10]

Natural Gas

Natural gas is a non-renewable fossil fuel. Fossil fuels are formed when layers of decomposing plant and animal matter are exposed to intense heat and pressure under the surface of the Earth over millions of years. Natural gas is a combustible mixture of hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas is found in naturally occurring reservoirs in deep underground rock formations. Natural gas is used for a variety of uses (e.g., heating buildings, generating electricity, and powering appliances such as stoves, washing machines and dryers, gas fireplaces, and gas grills).

8 California Energy Commission (CEC). 2021a. *2020 Total System Electric Generation*. Website: https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation (accessed January 2024).

9 Southern California Edison (SCE). 2020. About Us. Website: https://www.sce.com/about-us/who-we-are (accessed January 2024).

10 CEC. 2023b. Electricity Consumption by County and Entity. Website: http://www.ecdms.energy.ca.gov/elecbycounty.aspx and http://www.ecdms.energy.ca.gov/elecbyutil.aspx (accessed January 2024).

Natural gas consumed in California is used for electricity generation (45 percent), residential uses (21 percent), industrial uses (25 percent), and commercial uses (9 percent). California continues to depend on out-of-state imports for nearly 90 percent of its natural gas supply.[11]

The Southern California Gas Company (SoCalGas) is the natural gas service provider for the project site. SoCalGas provides natural gas to approximately 21.8 million people in a 24,000 sq mi service area throughout Central and Southern California, from Visalia to the Mexican border.[12] According to the CEC, total natural gas consumption in the SoCalGas service area in 2022 was 5,026 million therms (2,230 million therms for the residential sector). Total natural gas consumption in Orange County in 2021 was 573 million therms (572,454,744 therms), including 352 million therms for the residential sector and 221 million therms for the non-residential sector.[13]

Fuel

Petroleum is also a non-renewable fossil fuel. Petroleum is a thick, flammable, yellow-to-black mixture of gaseous, liquid, and solid hydrocarbons that occurs naturally beneath the earth's surface. Petroleum is primarily recovered by oil drilling. It is refined into a large number of consumer products, primarily fuel oil, gasoline, and diesel.

The average fuel economy for light-duty vehicles (autos, pickups, vans, and SUVs) in the United States has steadily increased from about 14.9 miles per gallon (mpg) in 1980 to 22.9 mpg in 2021.[14] Federal fuel economy standards have changed substantially since the Energy Independence and Security Act was passed in 2007. This act, which originally mandated a national fuel economy standard of 35 mpg by year 2020[15], applies to cars and light trucks of Model Years 2011 through 2020. In March 2020, the United States Environmental Protection Agency (USEPA) and National Highway Traffic Safety Administration (NHTSA) finalized the Corporate Average Fuel Economy (CAFE) standards for Model Years 2024–2026 Passenger Cars and Light Trucks, further detailed below.

Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles. According to the most recent data available, in 2021, total gasoline consumption in California was 289,918 thousand barrels

11 CEC. 2021b. Supply and Demand of Natural Gas in California. Website: https://www.energy.ca.gov/data-reports/energy-almanac/californias-natural-gas-market/supply-and-demand-natural-gas-california (accessed January 2024).

12 Southern California Gas Company (SoCalGas). 2020. About SoCalGas. Website: https://www3.socalgas.com/about-us/company-profile (accessed January 2024).

13 CEC. 2023c. Gas Consumption by County and Entity. Website: http://www.ecdms.energy.ca.gov/gasbycounty.aspx and http://www.ecdms.energy.ca.gov/gasbyutil.aspx (accessed January 2024).

14 U.S. Department of Transportation (USDOT). "Table 4-23: Average Fuel Efficiency of U.S. Light Duty Vehicles." Website: https://www.bts.dot.gov/bts/bts/content/average-fuel-efficiency-us-light-duty-vehicles (accessed January 2024).

15 U.S. Department of Energy. 2007. "Energy Independence & Security Act of 2007." Website: https://www.afdc.energy.gov/laws/eisa (accessed January 2024).

(12.2 billion gallons) or 1,464.7 trillion British Thermal Units (BTU).[16] Of the total gasoline consumption, 273,289 thousand barrels (11.5 billion gallons) or 1,380.7 trillion BTU were consumed for transportation.[17] Based on fuel consumption obtained from CARB's California Emissions Factor Model, Version 2021 (EMFAC2021), approximately 1.2 billion gallons of gasoline and approximately 157.1 million gallons of diesel will be consumed from vehicle trips in Orange County in 2024..

GREENHOUSE GASES

Global climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans in recent decades. The Earth's average near-surface atmospheric temperature rose 0.6 ± 0.2° Celsius (°C) or 1.1 ± 0.4° Fahrenheit (°F) in the 20th century. The prevailing scientific opinion on climate change is that most of the warming observed over the last 50 years is attributable to human activities. The increased amounts of carbon dioxide (CO_2) and other GHGs are the primary causes of the human-induced component of warming. GHGs are released by the burning of fossil fuels, land clearing, agriculture, and other activities, and lead to an increase in the greenhouse effect.[18]

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change are:

- CO_2
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur hexafluoride (SF_6)

Over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere, and enhancing the natural greenhouse effect, which is believed to be causing global warming. While manmade GHGs include naturally-occurring GHGs such as CO_2, methane, and N_2O, some gases, like HFCs, PFCs, and SF_6 are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is

16 U.S. Energy Information Administration (EIA). 2022. California State Profile and Energy Estimates, Data. Website: www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_mg.html&sid=CA (accessed January 2024).

17 Ibid.

18 The temperature on Earth is regulated by a system commonly known as the "greenhouse effect." Just as the glass in a greenhouse lets heat from sunlight in and reduces the heat escaping, greenhouse gases like carbon dioxide, methane, and nitrous oxide in the atmosphere keep the Earth at a relatively even temperature. Without the greenhouse effect, the Earth would be a frozen globe; thus, although an excess of greenhouse gas results in global warming, the naturally occurring greenhouse effect is necessary to keep our planet at a comfortable temperature.

excluded from the list of GHGs above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation. For the purposes of this air quality analysis, the term "GHGs" will refer collectively to the six gases listed above.

These gases vary considerably in terms of Global Warming Potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The global warming potential is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to carbon dioxide, the most abundant GHG; the definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. GHG emissions are typically measured in terms of pounds or tons of "CO_2 equivalents" (CO_2e). Table C shows the GWP for each type of GHG. For example, SF_6 is 23,900 times more potent at contributing to global warming than CO_2.

Table C: Global Warming Potential of Greenhouse Gases

Gas	Atmospheric Lifetime (Years)	Global Warming Potential (100-Year Time Horizon)
Carbon Dioxide	50-200	1
Methane	12	25
Nitrous Oxide	114	310
HFC-23	270	11,700
HFC-134a	14	140
HFC-152a	1.4	140
PFC: Tetrafluoromethane (CF_4)	50,000	6,500
PFC: Hexafluoromethane (C_2F_6)	10,000	9,200
Sulfur Hexafluoride (SF_6)	3,200	23,900

Source: *Second Update to the Climate Change Scoping Plan: Building on the Framework* (CARB 2017). Website: www.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2017-scoping-plan-documents (accessed January 2024).
CARB = California Air Resources Board
HFC = hydrofluorocarbons
PFC = perfluorocarbons

The following discussion summarizes the characteristics of the six GHGs and black carbon.

Carbon Dioxide

In the atmosphere, carbon generally exists in its oxidized form, as carbon dioxide (CO_2). Natural sources of CO_2 include the respiration (breathing) of humans, animals, and plants, volcanic out gassing, decomposition of organic matter and evaporation from the oceans. Human caused sources of CO_2 include the combustion of fossil fuels and wood, waste incineration, mineral production, and deforestation. Natural sources release approximately 150 billion tons of CO_2 each year, far outweighing the 7 billion tons of manmade emissions of CO_2 each year. Nevertheless, natural removal processes, such as photosynthesis by land- and ocean-dwelling plant species, cannot keep pace with this extra input of manmade CO_2, and consequently, the gas is building up in the atmosphere.

In 2021, total annual CO_2 accounted for approximately 81.2 percent of California's overall GHG emissions.[19] Transportation is the single largest source of CO_2 in California, which is primarily comprised of on-road travel. Electricity production, industrial and residential sources also make important contributions to CO_2 emissions in California.

Methane

Methane (CH_4) is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources include wetlands, termites, and oceans. Decomposition occurring in landfills accounts for the majority of human-generated CH_4 emissions in California and in the United States as a whole. Agricultural processes such as intestinal fermentation, manure management, and rice cultivation are also significant sources of CH_4 in California. Total annual emissions of CH_4 accounted for approximately 9.8 percent of GHG emissions in California in 2021.[20]

Nitrous Oxide

Nitrous oxide (N_2O) is produced naturally by a wide variety of biological sources, particularly microbial action in soils and water. Tropical soils and oceans account for the majority of natural source emissions. Nitrous oxide is a product of the reaction that occurs between nitrogen and oxygen during fuel combustion. Both mobile and stationary combustion emit N_2O, and the quantity emitted varies according to the type of fuel, technology, and pollution control device used, as well as maintenance and operating practices. Agricultural soil management and fossil fuel combustion are the primary sources of human-generated N_2O emissions in California. Nitrous oxide emissions accounted for approximately 3.4 percent of GHG emissions in California in 2021.[21]

Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride

HFCs are primarily used as substitutes for ozone-depleting substances regulated under the Montreal Protocol.[22] PFCs and SF_6 are emitted from various industrial processes, including aluminum smelting, semiconductor manufacturing, electric power transmission and distribution, and magnesium casting. There is no aluminum or magnesium production in California; however, the rapid growth in the semiconductor industry leads to greater use of PFCs. HFCs, PFCs, and SF_6 accounted for about 5.6 percent of GHG emissions in California in 2021.[23]

Black Carbon

Black carbon is the most strongly light-absorbing component of PM formed by burning fossil fuels such as coal, diesel, and biomass. Black carbon is emitted directly into the atmosphere in the form of $PM_{2.5}$ and is the most effective form of PM, by mass, at absorbing solar energy. Per unit of mass in

19 CARB. 2022. *GHGs Descriptions & Sources in California*. Website: ww2.arb.ca.gov/ghg-descriptions-sources (accessed January 2024).

20 Ibid.

21 Ibid.

22 The Montreal Protocol is an international treaty that was approved on January 1, 1989, and was designated to protect the ozone layer by phasing out the production of several groups of halogenated hydrocarbons believed to be responsible for ozone depletion.

23 CARB. 2022. op. cit.

the atmosphere, black carbon can absorb one million times more energy than CO_2.[24] Black carbon contributes to climate change both directly, such as absorbing sunlight, and indirectly, such as affecting cloud formation. However, because black carbon is short-lived in the atmosphere, it can be difficult to quantify its effect on global warming.

Most U.S. emissions of black carbon come from mobile sources (52 percent), particularly from diesel-fueled vehicles. The other major source of black carbon is open biomass burning, including wildfires, although residential heating and industry also contribute. The CARB estimates that the annual black carbon emissions in California will be reduced approximately 50 percent below 2013 levels by 2030.[25]

[24] U.S. Environmental Protection Agency (USEPA). 2015. Black Carbon, Basic Information. February 14, 2017. Website: 19january2017snapshot.epa.gov/www3/airquality/blackcarbon/basic.html (accessed January 2024).

[25] CARB. 2017b. *Short-Lived Climate Pollutant Reduction Strategy.* March. Website: https://ww2.arb.ca.gov/sites/default/files/2020-07/final_SLCP_strategy.pdf (accessed January 2024).

REGULATORY SETTING

AIR QUALITY REGULATIONS

The USEPA and the CARB regulate direct emissions from motor vehicles. The SCAQMD is the regional agency primarily responsible for regulating air pollution emissions from stationary sources (e.g., factories) and indirect sources (e.g., traffic associated with new development), as well as monitoring ambient pollutant concentrations.

Federal Regulations

Federal Clean Air Act

The 1970 federal Clean Air Act (CAA) authorized the establishment of national health-based air quality standards and also set deadlines for their attainment. The Federal Clean Air Act Amendments of 1990 changed deadlines for attaining national standards as well as the remedial actions required of areas of the nation that exceed the standards. Under the Clean Air Act, State and local agencies in areas that exceed the national standards are required to develop State Implementation Plans to demonstrate how they will achieve the national standards by specified dates.

State Regulations

California Clean Air Act

In 1988, the California Clean Air Act (CCAA) required that all air districts in the State endeavor to achieve and maintain CAAQS for CO, O_3, SO_2, and NO_2 by the earliest practical date. The California Clean Air Act provides districts with authority to regulate indirect sources and mandates that air quality districts focus particular attention on reducing emissions from transportation and area-wide emission sources. Each nonattainment district is required to adopt a plan to achieve a 5 percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each nonattainment pollutant or its precursors. A Clean Air Plan shows how a district would reduce emissions to achieve air quality standards. Generally, the State standards for these pollutants are more stringent than the national standards.

California Air Resources Board

The CARB is the State's "clean air agency." The CARB's goals are to attain and maintain healthy air quality, protect the public from exposure to toxic air contaminants, and oversee compliance with air pollution rules and regulations.

Assembly Bill 2588 Air Toxics "Hot Spots" Information and Assessment Act. Under Assembly Bill (AB) 2588, stationary sources of air pollutants are required to report the types and quantities of certain substances their facilities routinely released into the air. The goals of the Air Toxics "Hot Spots" Act are to collect emission data, identify facilities having localized impacts, determine health risks, and notify nearby residents of significant risks.

The California Air Resources Board Handbook. The CARB has developed an Air Quality and Land Use Handbook[26] which is intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. According to the CARB Handbook, air pollution studies have shown an association between respiratory and other non-cancer health effects and proximity to high traffic roadways. Other studies have shown that diesel exhaust and other cancer-causing chemicals emitted from cars and trucks are responsible for much of the overall cancer risk from airborne toxics in California. The CARB Handbook recommends that county and city planning agencies strongly consider proximity to these sources when finding new locations for "sensitive" land uses such as homes, medical facilities, daycare centers, schools, and playgrounds.

Land uses that can produce air pollution sources of concern include freeways, rail yards, ports, refineries, distribution centers, chrome plating facilities, dry cleaners, and large gasoline service stations. Key recommendations in the CARB Handbook include taking steps to avoid siting new, sensitive land uses:

- Within 500 feet of a freeway, urban roads with 100,000 vehicles/day or rural roads with 50,000 vehicles/day;
- Within 1,000 feet of a major service and maintenance rail yard;
- Immediately downwind of ports (in the most heavily impacted zones) and petroleum refineries;
- Within 300 feet of any dry cleaning operation (for operations with two or more machines, provide 500 feet); and
- Within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater).

The CARB Handbook specifically states that its recommendations are advisory and acknowledges land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

The recommendations are generalized and do not consider site-specific meteorology, freeway truck percentages, or other factors that influence risk for a particular project site. The purpose of this guidance is to help land use agencies determine when to further examine project sites for actual health risk associated with the location of new sensitive land uses.

Regional Regulations

South Coast Air Quality Management District

The SCAQMD has jurisdiction over most air quality matters in the South Coast Air Basin (Basin). This area includes all of Orange County, Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of

[26] CARB. 2005. *Air Quality and Land Use Handbook: A Community Health Perspective.* April.

Riverside County. The SCAQMD is the agency principally responsible for comprehensive air pollution control in the Basin and is tasked with implementing certain programs and regulations required by the CAA and the CCAA. The SCAQMD prepares plans to attain CAAQS and NAAQS. SCAQMD is directly responsible for reducing emissions from stationary (area and point) sources. The SCAQMD develops rules and regulations, establishes permitting requirements, inspects emissions sources, and enforces such measures though educational programs or fines, when necessary.

The proposed project could be subject to the following SCAQMD rules and regulations:[27]

- **Regulation IV - Prohibitions:** This regulation sets forth the restrictions for visible emissions, odor nuisance, fugitive dust, various air pollutant emissions, fuel contaminants, start-up/shutdown exemptions, and breakdown events.
    - **Rule 402 - Nuisance:** This rule restricts the discharge of any contaminant in quantities that cause or have a natural ability to cause injury, damage, nuisance, or annoyance to businesses, property, or the public.
    - **Rule 403 - Fugitive Dust:** This rule requires the prevention, reduction, or mitigation of fugitive dust emissions from a project site. Rule 403 restricts visible fugitive dust to a project property line, restricts the net PM_{10} emissions to less than 50 µg/m^3 and restricts the tracking out of bulk materials onto public roads. Additionally, Rule 403 requires an applicant to utilize one or more of the best available control measures (identified in the tables within the rule). Control measures may include adding freeboard to haul vehicles, covering loose material on haul vehicles, watering, using chemical stabilizers, and/or ceasing all activities. Finally, Rule 403 requires that a contingency plan be prepared if so determined by the USEPA. In addition, SCAQMD Rule 403(e), Additional Requirements for Large Operations, includes requirements to provide Large Operation Notification Form 403 N, appropriate signage, additional dust control measures, and employment of a dust control supervisor that has successfully completed the Dust Control training class in the South Coast Air Basin.
- **Regulation XI - Source Specific Standards:** Regulation XI sets emissions standards for different sources.
    - **Rule 1113 - Architectural Coatings:** This rule limits the amount of VOCs from architectural coatings and solvents, which lowers the emissions of odorous compounds.

The SCAQMD is responsible for demonstrating regional compliance with AAQS but has limited indirect involvement in reducing emissions from fugitive, mobile, and natural sources. To that end, the SCAQMD works cooperatively with the CARB, the Southern California Association of Governments (SCAG), county transportation commissions, local governments, and other federal and State government agencies. It has responded to this requirement by preparing a series of Air Quality Management Plans (AQMPs) to meet CAAQS and NAAQS. SCAQMD and the SCAG are responsible for formulating and implementing the AQMP for the Basin. The main purpose of an AQMP is to bring

[27] SCAQMD. 2024. South Coast AQMD Rule Book. Website: https://www.aqmd.gov/home/rules-compliance/rules (accessed January 2024).

the area into compliance with federal and State air quality standards. Every 3 years, SCAQMD prepares a new AQMP, updating the previous plan and 20-year horizon.[28]

The Final 2022 Air Quality Management Plan is the currently adopted AQMP. Key elements of the Final 2022 AQMP include the following:

- Calculating and taking credit for co-benefits from other planning efforts (e.g., climate, energy, and transportation)
- A strategy with fair-share emission reductions at the federal, State, and local levels
- Investment in strategies and technologies meeting multiple air quality objectives
- Seeking new partnerships and significant funding for incentives to accelerate deployment of zero-emission and near-zero emission technologies
- Enhanced socioeconomic assessment, including an expanded environmental justice analysis
- Attainment of the 24-hour $PM_{2.5}$ standard in 2019 with no additional measures
- Attainment of the annual $PM_{2.5}$ standard by 2025 with implementation of a portion of the O_3 strategy
- Attainment of the 1-hour O_3 standard by 2022 with no reliance on "black box" future technology (CAA Section 182(e)(5) measures)

The 2022 AQMP builds upon measures already in place from previous AQMPs. It also includes a variety of additional strategies such as regulation, accelerated deployment of available cleaner technologies (e.g., zero emissions technologies, when cost-effective and feasible, and low NO_X technologies in other applications), best management practices, co-benefits from existing programs (e.g., climate and energy efficiency), incentives, and other CAA measures to achieve the 2015 8-hour ozone standard.

Southern California Association of Governments

SCAG is a council of governments for Los Angeles, Orange, Riverside, San Bernardino, Imperial, and Ventura Counties. It is a regional planning agency and serves as a forum for regional issues relating to transportation, the economy and community development, and the environment. SCAG is the federally designated Metropolitan Planning Organization (MPO) for the majority of the southern California region and is the largest MPO in the nation. With regard to air quality planning, SCAG prepares the Regional Transportation Plan (RTP) and Regional Transportation Improvement Program (RTIP), which address regional development and growth forecasts and form the basis for the land use and transportation control portions of the AQMP and are utilized in the preparation of the air

[28] SCAQMD. 2022. *Final 2022 Air Quality Management Plan*. December 2.

quality forecasts and consistency analysis included in the AQMP. The RTP, RTIP, and AQMP are based on projections originating within local jurisdictions.

Although SCAG is not an air quality management agency, it is responsible for developing transportation, land use, and energy conservation measures that affect air quality. SCAG's Regional Comprehensive Plan (RCP) provides growth forecasts that are used in the development of air quality-related land use and transportation control strategies by the SCAQMD. The RCP is a framework for decision-making for local governments, assisting them in meeting federal and State mandates for growth management, mobility, and environmental standards, while maintaining consistency with regional goals regarding growth and changes. Policies within the RCP include consideration of air quality, land use, transportation, and economic relationships by all levels of government.

SCAG adopted the Connect SoCal: The 2024–2050 Regional Transportation Plan/Sustainable Communities Strategy (Connect SoCal 2024)[29] on April 4, 2024. Connect SoCal 2024 is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. Connect SoCal is an important planning document for the region, allowing project sponsors to qualify for federal funding and takes into account operations and maintenance costs, to ensure reliability, longevity, and cost effectiveness. The forecasted development pattern, when integrated with the financially constrained transportation investments identified in Connect SoCal 2024, would reach the GHG emissions reduction target set by CARB, including the regional target of reducing GHG emissions from autos and light-duty trucks by 19 percent by 2035 (compared to 2005 levels).

Local Regulations

City of Tustin General Plan

The City of Tustin addresses air quality in the Conservation, Open Space, and Recreation Element of the City of Tustin General Plan.[30] The Conservation, Open Space, and Recreation Element contains policies that work to improve air quality and reduce particulate emissions. The following policies are applicable to the proposed project:

- **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.

- **Policy 1.2:** Design safe and efficient vehicular access to commercial land uses from arterial streets to insure efficient vehicular ingress and egress.

[29] Southern California Association of Governments (SCAG). 2024. Connect SoCal: The 2024–2050 Regional Transportation Plan/Sustainable Communities Strategy of the Southern California Association of Governments. Website: https://scag.ca.gov/sites/main/files/file-attachments/23-2987-connect-socal-2024-final-complete-040424.pdf?1712261565 (accessed April 2024).

[30] City of Tustin. 2017. *City of Tustin General Plan*. July.

- **Policy 1.3:** Locate multiple family developments close to commercial areas to encourage pedestrian rather than vehicular travel.
- **Policy 1.7:** Create the maximum possible opportunities for bicycles as an alternative transportation mode and recreational use.
- **Policy 2.1:** Reduce vehicle trips through incentives, regulations and/or Transportation Demand Management (TDM) programs.
- **Policy 2.2:** Reduce total vehicle miles traveled (VMT) through incentives, regulations and/or Transportation Demand Management.
- **Policy 2.6:** Encourage non-motorized transportation through the provision of bicycle and pedestrian pathways.
- **Policy 2.7:** Encourage employer rideshare and transit incentives programs by local businesses.
- **Policy 2.8:** Manage non-residential parking supply to discourage auto use, while ensuring that economic development goals will not be sacrificed.

ENERGY REGULATORY SETTING

Federal and State agencies regulate energy use and consumption through various means and programs. On the federal level, the U.S. Department of Transportation (USDOT), the United States Department of Energy, and the USEPA are three federal agencies with substantial influence over energy policies and programs. Generally, federal agencies influence and regulate transportation energy consumption through establishment and enforcement of fuel economy standards for automobiles and light trucks, through funding of energy-related research and development projects, and through funding for transportation infrastructure improvements. On the State level, the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC) are two agencies with authority over different aspects of energy.

The CPUC regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies and serves the public interest by protecting consumers and ensuring the provision of safe, reliable utility service and infrastructure at reasonable rates, with a commitment to environmental enhancement and a healthy California economy.

The CEC is the State's primary energy policy and planning agency. The CEC forecasts future energy needs, promotes energy efficiency, supports energy research, develops renewable energy resources, and plans for/directs state response to energy emergencies. The applicable federal, State, regional, and local regulatory framework is discussed below.

Federal Regulations

Energy Policy Act of 2005

The Energy Policy Act of 2005 seeks to reduce reliance on non-renewable energy resources and provide incentives to reduce current demand on these resources. For example, under this Act, consumers and businesses can obtain federal tax credits for purchasing fuel-efficient appliances and products (including hybrid vehicles), building energy-efficient buildings, and improving the energy efficiency of commercial buildings. Additionally, tax credits are available for the installation of qualified fuel cells, stationary microturbine power plants, and solar power equipment.

Corporate Average Fuel Economy (CAFE) Standards

On March 31, 2022, the National Highway Traffic Safety Administration (NHTSA) finalized the Corporate Average Fuel Economy (CAFE) standards for Model Years 2024–2026 Passenger Cars and Light Trucks. The amended CAFE standards would require an industry wide fleet average of approximately 49 mpg for passenger cars and light trucks in model year 2026, by increasing fuel efficiency by 8 percent annually for model years 2024–2025, and 10 percent annually for model year 2026. The final standards are estimated to save about 234 billion gallons of gas between model years 2030 to 2050.

State Regulations

Assembly Bill 1575, Warren-Alquist Act

In 1975, largely in response to the oil crisis of the 1970s, the State Legislature adopted Assembly Bill (AB) 1575 (also known as the Warren-Alquist Act), which created the CEC. The statutory mission of the CEC is to forecast future energy needs; license power plants of 50 megawatts (MW) 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 (PRC) Section 21100(b)(3) and *State CEQA Guidelines* Section 15126.4 to require Environmental Impact Reports (EIRs) to include, where relevant, mitigation measures proposed to minimize the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the State Resources Agency created Appendix F to the *State CEQA Guidelines*. Appendix F assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. Appendix F of the *State CEQA Guidelines* also states that the goal of conserving energy implies the wise and efficient use of energy and the means of achieving this goal, including (1) decreasing overall per capita energy consumption; (2) decreasing reliance on fossil fuels such as coal, natural gas, and oil; and (3) increasing reliance on renewable energy sources.

Senate Bill 1389, Energy: Planning and Forecasting

In 2002, the State Legislature passed Senate Bill (SB) 1389, which required the CEC to develop an integrated energy plan every 2 years for electricity, natural gas, and transportation fuels for the California Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies

a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero emission vehicles (ZEVs) and their infrastructure needs, and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

In compliance with the requirements of SB 1389, the CEC adopts an Integrated Energy Policy Report every 2 years and an update every other year. The most recently adopted report includes the *2023 Integrated Energy Policy Report.*[31] The *Integrated Energy Policy Report* covers a broad range of topics, including decarbonizing buildings, integrating renewables, energy efficiency, energy equity, integrating renewable energy, updates on Southern California electricity reliability, climate adaptation activities for the energy sector, natural gas assessment, transportation energy demand forecast, and the California Energy Demand Forecast. The *Integrated Energy Policy Report* provides the results of the CEC's assessments of a variety of energy issues facing California. Many of these issues will require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining energy reliability and controlling costs.

Renewable Portfolio Standard

SB 1078 established the California Renewable Portfolio Standards program in 2002. SB 1078 initially required that 20 percent of electricity retail sales be served by renewable resources by 2017; however, this standard has become more stringent over time. In 2006, SB 107 accelerated the standard by requiring that the 20 percent mandate be met by 2010. In April 2011, SB 2 required that 33 percent of electricity retail sales be served by renewable resources by 2020. In 2015, SB 350 established tiered increases to the Renewable Portfolio Standards of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. In 2018, SB 100 increased the requirement to 60 percent by 2030 and required that all the State's electricity come from carbon-free resources by 2045. SB 100 took effect on January 1, 2019.[32]

Title 24, California Building Code

Energy consumption by new buildings in California is regulated by the Building Energy Efficiency Standards, embodied in Title 24 of the California Code of Regulations (CCR), known as the California Building Code (CBC). The CEC first adopted the Building Energy Efficiency Standards for Residential and Non-residential Buildings in 1978 in response to a legislative mandate to reduce energy consumption in the State. The CBC is updated every 3 years, with the most recent update consisting of the 2022 CBC that became effective January 1, 2023. The efficiency standards apply to both new construction and rehabilitation of both residential and non-residential buildings, and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. The building efficiency standards are enforced through the local building permit process. Local government agencies may adopt and enforce energy standards for new buildings, provided these standards meet or exceed those provided in CCR Title 24.

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31 CEC. 2023a. *2023 Integrated Energy Policy Report*. California Energy Commission. Docket Number: 23-IEPR-01.

32 California Public Utilities Commission (CPUC). 2019. Renewables Portfolio Standard Program. Website: cpuc.ca.gov/rps (accessed January 2024).

California Green Building Standards Code (CALGreen Code)

In 2010, the California Building Standards Commission (CBSC) adopted Part 11 of the Title 24 Building Energy Efficiency Standards, referred to as the California Green Building Standards Code (CALGreen Code). The CALGreen Code took effect on January 1, 2011. The CALGreen Code is updated on a regular basis, with the most recent update consisting of the 2022 CALGreen Code standards that became effective January 1, 2023. The CALGreen Code established mandatory measures for residential and non-residential building construction and encouraged sustainable construction practices in the following five categories: (1) planning and design, (2) energy efficiency, (3) water efficiency and conservation, (4) material conservation and resource efficiency, and (5) indoor environmental quality. Although the CALGreen Code was adopted as part of the State's efforts to reduce greenhouse gas (GHG) emissions, the CALGreen Code standards have co-benefits of reducing energy consumption from residential and non-residential buildings subject to the standard.

California Energy Efficiency Strategic Plan

On September 18, 2008, the CPUC adopted California's first Long-Term Energy Efficiency Strategic Plan, presenting a roadmap for energy efficiency in California. The Plan articulates a long-term vision and goals for each economic sector and identifies specific near-term, mid-term, and long-term strategies to assist in achieving those goals. The plan also reiterates the following four specific programmatic goals known as the "Big Bold Energy Efficiency Strategies" that were established by the CPUC in Decisions D.07-10-032 and D.07-12-051:

- All new residential construction will be zero net energy (ZNE) by 2020.
- All new commercial construction will be ZNE by 2030.
- 50 percent of commercial buildings will be retrofitted to ZNE by 2030.
- 50 percent of new major renovations of State buildings will be ZNE by 2025.

Regional Regulations

There are no regional regulations that apply to the proposed project.

Local Regulations

City of Tustin General Plan

The City of Tustin addresses energy in the Conservation, Open Space, and Recreation Element of the City of Tustin General Plan.[33] The Conservation, Open Space, and Recreation Element contains policies that work to reduce energy consumption. The following policies are applicable to the proposed project:

- **Policy 4.1:** Promote energy conservation in all sectors of the City including residential, commercial, and industrial.

[33] City of Tustin. 2017. op. cit.

- **Policy 4.2:** Promote local recycling of wastes and the use of recycled materials.

GREENHOUSE GAS REGULATORY SETTING

This section describes regulations related to GHGs at the federal, State, and local level.

Federal Regulations

The United States has historically had a voluntary approach to reducing GHG emissions. However, on April 2, 2007, the United States Supreme Court ruled that the USEPA has the authority to regulate CO_2 emissions under the CAA. While there currently are no adopted federal regulations for the control or reduction of GHG emissions, the USEPA commenced several actions in 2009 to implement a regulatory approach to global climate change.

This includes the 2009 USEPA final rule for mandatory reporting of GHGs from large GHG emission sources in the United States. Additionally, the USEPA Administrator signed an endangerment finding action in 2009 under the Clean Air Act, finding that six GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, SF_6) constitute a threat to public health and welfare, and that the combined emissions from motor vehicles cause and contribute to global climate change, leading to national GHG emission standards.

In October 2012, the USEPA and the NHTSA, on behalf of the U.S. Department of Transportation, issued final rules to further reduce GHG emissions and improve CAFE standards for light-duty vehicles for model years 2017 and beyond (77 *Federal Register* 62624). The NHTSA's CAFE standards have been enacted under the Energy Policy and Conservation Act since 1978. This national program requires automobile manufacturers to build a single light-duty national fleet that meets all requirements under both federal programs and the standards of California and other states. This program would increase fuel economy to the equivalent of 54.5 miles per gallon (mpg), limiting vehicle emissions to 163 grams of CO_2 per mile for the fleet of cars and light-duty trucks by model year 2025 (77 *Federal Register* 62630).

On March 31, 2022, the NHTSA finalized the CAFE standards for Model Years 2024–2026 Passenger Cars and Light Trucks. The amended CAFE standards would require an industry wide fleet average of approximately 49 mpg for passenger cars and light trucks in model year 2026, by increasing fuel efficiency by 8 percent annually for model years 2024–2025, and 10 percent annually for model year 2026. The final standards are estimated to save about 234 billion gallons of gas between model years 2030 to 2050.

State Regulations

The CARB is the lead agency for implementing climate change regulations in the State. Since its formation, the CARB has worked with the public, the business sector, and local governments to find solutions to California's air pollution problems. Key efforts by the State are described below.

Assembly Bill 1493 (2002)

In a response to the transportation sector's significant contribution to California's CO_2 emissions, AB 1493 was enacted on July 22, 2002. AB 1493 requires the CARB to set GHG emission standards for passenger vehicles and light duty trucks (and other vehicles whose primary use is noncommercial

personal transportation in the State) manufactured in 2009 and all subsequent model years. These standards (starting in model years 2009 to 2016) were approved by the CARB in 2004, but the needed waiver of CCAA Preemption was not granted by the USEPA until June 30, 2009. The CARB responded by amending its original regulation, now referred to as Low Emission Vehicle III, to take effect for model years starting in 2017 to 2025. The Trump administration revoked California's waiver in 2019; however, the Biden administration restored California's waiver in 2021.

Executive Order S-3-05 (2005)

Governor Arnold Schwarzenegger signed Executive Order (EO) S-3-05 on June 1, 2005, which proclaimed that California is vulnerable to the impacts of climate change. To combat those concerns, the executive order established California's GHG emissions reduction targets, which established the following goals:

- GHG emissions should be reduced to 2000 levels by 2010;
- GHG emissions should be reduced to 1990 levels by 2020; and
- GHG emissions should be reduced to 80 percent below 1990 levels by 2050.

The Secretary of the California Environmental Protection Agency (CalEPA) is required to coordinate efforts of various State agencies in order to collectively and efficiently reduce GHGs. A biannual progress report must be submitted to the Governor and State Legislature disclosing the progress made toward GHG emission reduction targets. In addition, another biannual report must be submitted illustrating the impacts of global warming on California's water supply, public health, agriculture, the coastline, and forestry, and report possible mitigation and adaptation plans to address these impacts.

The Secretary of CalEPA leads this Climate Action Team (CAT) made up of representatives from State agencies as well as numerous other boards and departments. The CAT members work to coordinate statewide efforts to implement global warming emission reduction programs and the State's Climate Adaptation Strategy. The CAT is also responsible for reporting on the progress made toward meeting the statewide GHG targets that were established in the executive order and further defined under AB 32, the "Global Warming Solutions Act of 2006." The first CAT Report to the Governor and the Legislature was released in March 2006, which it laid out 46 specific emission reduction strategies for reducing GHG emissions and reaching the targets established in the executive order. The most recent report was released in December 2020.

Assembly Bill 32 (2006), California Global Warming Solutions Act

California's major initiative for reducing GHG emissions is AB 32, passed by the State legislature on August 31, 2006. This effort aims at reducing GHG emissions to 1990 levels by 2020. The CARB has established the level of GHG emissions in 1990 at 427 million metric tons (MMT) of CO_2e. The emissions target of 427 MMT requires the reduction of 169 MMT from the State's projected business-as-usual 2020 emissions of 596 MMT. AB 32 requires the CARB to prepare a Scoping Plan that outlines the main State strategies for meeting the 2020 deadline and to reduce GHGs that contribute to global climate change. The Scoping Plan was approved by the CARB on December 11, 2008, and contains the main strategies California will implement to achieve the reduction of approximately 169 MMT CO_2e, or approximately 30 percent, from the State's projected 2020

emissions level of 596 MMT CO_2e under a business-as-usual scenario (this is a reduction of 42 MMT CO_2e, 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 Scoping Plan calls for the largest reductions in GHG emissions to be achieved by implementing the following measures and standards:

- Improved emissions standards for light-duty vehicles (estimated reductions of 31.7 MMT CO_2e);
- The Low-Carbon Fuel Standard (15.0 MMT CO_2e);
- Energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMT CO_2e); and
- A renewable portfolio standard for electricity production (21.3 MMT CO_2e).

The CARB approved the First Update to the Climate Change Scoping Plan on May 22, 2014. The First Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The First Update defines CARB climate change priorities until 2020, and also sets the groundwork to reach long-term goals set forth in EOs S-3-05 and B-16-2012. The Update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals as defined in the initial Scoping Plan. It also evaluates how to align the State's "longer-term" GHG reduction strategies with other State policy priorities for water, waste, natural resources, clean energy, transportation, and land use. CARB released a second update to the Scoping Plan, the 2017 Scoping Plan,[34] to reflect the 2030 target set by EO B-30-15 and codified by SB 32.

Most recently, the 2022 Scoping Plan[35] was approved in December 2022 and assesses progress towards achieving the SB 32 2030 target and lay out a path to achieve carbon neutrality no later than 2045. The 2022 Scoping Plan focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

Senate Bill 97 (2007)

SB 97, signed by the Governor in August 2007 (Chapter 185, Statutes of 2007; Public Resources Code [PRC], Sections 21083.05 and 21097), acknowledges climate change is a prominent environmental issue that requires analysis under CEQA. This bill directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Resources Agency guidelines for mitigating GHG emissions or the effects of GHG emissions, as required by CEQA.

The California Natural Resources Agency adopted the amendments to the *State CEQA Guidelines* in November 2018, which went into effect in December 2018. The amendments do not identify a

34 CARB. 2017a. *California's 2017 Climate Change Scoping Plan*. November.

35 CARB. 2021. *2022 Scoping Plan Update*. May 10. Website: https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf (accessed January 2024).

threshold of significance for GHG emissions, nor do they prescribe assessment methodologies or specific mitigation measures. The amendments encourage lead agencies to consider many factors in performing a CEQA analysis, but preserve the discretion granted by CEQA to lead agencies in making their own determinations based on substantial evidence. The amendments also encourage public agencies to make use of programmatic mitigation plans and programs when they perform individual project analyses.

Senate Bill 375 (2008)

SB 375, the Sustainable Communities and Climate Protection Act, which establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions, was adopted by the State on September 30, 2008. On September 23, 2010, the CARB adopted the vehicular GHG emissions reduction targets that had been developed in consultation with the Metropolitan Planning Organization (MPOs); the targets require a 6 to 15 percent reduction by 2020 and between 13 to 19 percent reduction by 2035 for each MPO. SB 375 recognizes the importance of achieving significant GHG reductions by working with cities and counties to change land use patterns and improve transportation alternatives. Through the SB 375 process, MPOs such as the Fresno Council of Governments will work with local jurisdictions in the development of Sustainable Communities Strategy (SCS) designed to integrate development patterns and the transportation network in a way that reduces GHG emissions while meeting housing needs and other regional planning objectives. Pursuant to SB 375, the Los Angeles/Southern California reduction targets for per capita vehicular emissions were 8 percent by 2020 and are 19 percent by 2035 as shown in Table D.

Table D: Senate Bill 375 Regional Greenhouse Gas Emissions Reduction Targets

Metropolitan Planning Organization	By 2020 (percent)	By 2035 (percent)
San Francisco Bay Area	10	19
San Diego	15	19
Sacramento	7	19
Central Valley/San Joaquin	6–13	13–16
Los Angeles/Southern California	8	19

Source: California Air Resources Board (2018).

Executive Order B-30-15 (2015)

Governor Jerry Brown signed EO B-30-15 on April 29, 2015, which added the immediate target of:

- GHG emissions should be reduced to 40 percent below 1990 levels by 2030.

All State agencies with jurisdiction over sources of GHG emissions were directed to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 targets. CARB was directed to update the AB 32 Scoping Plan to reflect the 2030 target, and therefore, is moving forward with the update process. The mid-term target is critical to help frame the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to continue reducing emissions.

Senate Bill 350 (2015) Clean Energy and Pollution Reduction Act

SB 350, signed by Governor Jerry Brown on October 7, 2015, updates and enhances AB 32 by introducing the following set of objectives in clean energy, clean air, and pollution reduction for 2030:

- Raise California's renewable portfolio standard from 33 percent to 50 percent; and
- Increasing energy efficiency in buildings by 50 percent by the year 2030.

The 50 percent renewable energy standard will be implemented by the CPUC for the private utilities and by the CEC for municipal utilities. Each utility must submit a procurement plan showing it will purchase clean energy to displace other non-renewable resources. The 50 percent increase in energy efficiency in buildings must be achieved through the use of existing energy efficiency retrofit funding and regulatory tools already available to state energy agencies under existing law. The addition made by this legislation requires State energy agencies to plan for and implement those programs in a manner that achieves the energy efficiency target.

Senate Bill 32, California Global Warming Solutions Act of 2016, and Assembly Bill 197

In summer 2016 the Legislature passed, and the Governor signed, SB 32, and AB 197. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in Governor Brown's April 2015 EO B-30-15. SB 32 builds on AB 32 and keeps us on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels, consistent with an Intergovernmental Panel on Climate Change (IPCC) analysis of the emissions trajectory that would stabilize atmospheric GHG concentrations at 450 parts per million CO_2e and reduce the likelihood of catastrophic impacts from climate change.

The companion bill to SB 32, AB 197, provides additional direction to CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 meant to provide easier public access to air emissions data that are collected by CARB was posted in December 2016.

Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100, which raises California's Renewables Portfolio Standard (RPS) requirements to 60 percent by 2030, with interim targets, and 100 percent by 2045. The bill also establishes a State policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Executive Order B-55-18

EO B-55-18, signed September 10, 2018, sets a goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." EO B-55-18 directs CARB to work with relevant State agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon

neutrality by 2045 is in addition to other statewide goals, meaning not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions be offset by equivalent net removals of CO_2e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

Assembly Bill 1279

AB 1279 was signed in September of 2022, and codifies the State goals of achieving net carbon neutrality by 2045 and maintaining net negative GHG emissions thereafter. This bill also requires California to reduce statewide GHG emissions by 85 percent compared to 1990 levels by 2045 and directs CARB to work with relevant state agencies to achieve these goals.

Title 24, Part 11, Building Standards Code and CALGreen Code

In November 2008, the California Building Standards Commission established the California Green Building Standards Code (CALGreen Code), which sets performance standards for residential and non-residential development to reduce environmental impacts and encourage sustainable construction practices. The CALGreen Code addresses energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality. The CALGreen Code is updated every 3 years and was most recently updated in 2022 to include new mandatory measures for residential as well as non-residential uses; the new measures took effect on January 1, 2023.

California Building Efficiency Standards (Title 24, Part 6)

The California Building Standards Code, or Title 24 of the California Code of Regulations (CCR) contains the regulations that govern the construction of buildings in California. Within the Building Standards Code, two parts pertain to the incorporation of both energy efficient and green building elements into land use development. Part 6 is California's Energy Efficiency Standards for Residential and Non-Residential Buildings. These standards were first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption and are updated on an approximately 3-year cycle to allow consideration and possible incorporation of new energy efficient technologies and methods. The current set of standards was adopted in 2022 and applies to projects seeking building permits on or after January 1, 2023. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions.

Cap and Trade

The development of a cap-and-trade program was included as a key reduction measure of the CARB AB 32 Climate Change Scoping Plan. The cap-and-trade program will help put California on the path to meet its goal of reducing GHG emissions to 1990 levels by 2020 and ultimately achieving an 80 percent reduction from 1990 levels by 2050. The cap-and-trade emissions trading program developed by the CARB took effect on January 1, 2012, with enforceable compliance obligations beginning January 1, 2013. The cap-and-trade program aims to regulate GHG emissions from the largest producers in the State by setting a statewide firm limit, or cap, on allowable annual GHG emissions. The cap was set in 2013 at approximately 2 percent below the emissions forecast for 2020. In 2014, the cap declined approximately 2 percent. Beginning in 2015 and continuing through

2020, the cap has been declining approximately 3 percent annually. The CARB administered the first auction on November 14, 2012, with many of the qualified bidders representing corporations or organizations that produce large amounts of GHG emissions, including energy companies, agriculture and food industries, steel mills, cement companies, and universities. On January 1, 2015, compliance obligation began for distributors of transportation fuels, natural gas, and other fuels. The cap-and-trade program was initially slated to sunset in 2020 but the passage of SB 398 in 2017 extended the program through 2030.

Executive Order N-79-20

EO N-79-20, which was signed by the Governor on September 23, 2020, sets the following goals for the State: 100 percent of in-state sales of new passenger cars and trucks shall be zero-emission by 2035; 100 percent of medium- and heavy-duty vehicles in the State shall be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks; and 100 percent of off-road vehicles and equipment in the State shall be zero-emission by 2035, where feasible.

Low Carbon Fuel Standard

In January 2007, EO S-01-07 established a Low Carbon Fuel Standard (LCFS). This executive order calls for a statewide goal to be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020, and that an LCFS for transportation fuels be established for California. The LCFS applies to all refiners, blenders, producers, or importers ("Providers") of transportation fuels in California, including fuels used by off-road construction equipment. In June 2007, CARB adopted the LCFS under AB 32 pursuant to Health and Safety Code Section 38560.5, and, in April 2009, CARB approved the new rules and carbon intensity reference values with new regulatory requirements taking effect in January 2011. The standards require providers of transportation fuels to report on the mix of fuels they provide and demonstrate they meet the LCFS intensity standards annually. This is accomplished by ensuring that the number of "credits" earned by providing fuels with a lower carbon intensity than the established baseline (or obtained from another party) is equal to or greater than the "deficits" earned from selling higher intensity fuels. In response to certain court rulings, CARB re-adopted the LCFS regulation in September 2015, and the LCFS went into effect on January 1, 2016. In 2018, CARB approved amendments to the regulation to readjust carbon intensity benchmarks to meet California's 2030 GHG reductions targets under SB 32. These amendments include opportunities to promote zero emission vehicle (ZEV) adoption, carbon capture and sequestration, and advanced technologies for decarbonization of the transportation sector.

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars program, which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of ZEVs, into a single package of regulatory standards for vehicle model years 2017 through 2025. The new regulations strengthen the GHG standard for 2017 models and beyond. This will be achieved through existing technologies, the use of stronger and lighter materials, and more efficient drivetrains and engines. The program's ZEVs regulation requires battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California's new vehicle sales by 2025. The program also includes a clean fuels outlet regulation designed to support the commercialization of

zero-emission hydrogen fuel cell vehicles planned by vehicle manufacturers by 2015 by requiring increased numbers of hydrogen fueling stations throughout the State. The number of stations will grow as vehicle manufacturers sell more fuel cell vehicles. By 2025, when the rules will be fully implemented, the statewide fleet of new cars and light trucks will emit 40 percent fewer GHGs and 75 percent fewer smog-forming emissions than 2012 model year vehicles.

Executive Order B-48-18

In January 2018, Governor Brown signed EO B-48-18 requiring all State entities to work with the private sector to have at least 5 million ZEVs on the road by 2030, as well as install 200 hydrogen fueling stations and 250,000 electric vehicle charging stations by 2025. It specifies that 10,000 of the EV charging stations should be direct current fast chargers. This order also requires all State entities to continue to partner with local and regional governments to streamline the installation of ZEV infrastructure. The Governor's Office of Business and Economic Development is required to publish a Plug-in Charging Station Design Guidebook and update the 2015 Hydrogen Station Permitting Guidebook to aid in these efforts. All State entities are required to participate in updating the 2016 Zero-Emissions Vehicle Action Plan to help expand private investment in ZEV infrastructure with a focus on serving low-income and disadvantaged communities. Additionally, all State entities are to support and recommend policies and actions to expand ZEV infrastructure at residential land uses, through the LCFS program, and recommend how to ensure affordability and accessibility for all drivers.

Regional Regulations

South Coast Air Quality Management District

In 2008, the SCAQMD formed a Working Group to identify GHG emissions thresholds for land use projects that could be used by local lead agencies in the Basin. The Working Group developed several different options that are contained in the SCAQMD 2008 draft guidance document titled, *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules, and Plans,*[36] that could be applied by lead agencies. On September 28, 2010, SCAQMD Working Group Meeting No. 15 provided further guidance, including a tiered approach for evaluating GHG emissions for development projects where the SCAQMD is not the lead agency. The SCAQMD has not presented a finalized version of these thresholds to the governing board.

The SCAQMD identifies the emissions level for which a project would not be expected to substantially conflict with any State legislation adopted to reduce statewide GHG emissions. As such, the utilization of a service population represents the rates of emissions needed to achieve a fair share of the State's mandated emissions reductions. Overall, the SCAQMD identifies a GHG efficiency level that, when applied statewide or to a defined geographic area, would meet the year 2020 and post-2020 emissions targets as required by AB 32 and SB 32. If projects are able to achieve targeted rates of emissions per the service population, the State will be able to accommodate expected population growth and achieve economic development objectives, while also abiding by AB 32's emissions target and future post-2020 targets.

[36] SCAQMD. 2008b. *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules, and Plans*.

Southern California Association of Governments

On April 4, 2024, SCAG adopted Connect SoCal 2024. In general, the SCS outlines a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce vehicle miles traveled (VMT) from automobiles and light-duty trucks and thereby reduce GHG emissions from these sources. For the SCAG region, CARB has set GHG reduction targets at 8 percent below 2005 per capita emissions levels by 2020, and 19 percent below 2005 per capita emissions levels by 2035. The 2024–2050 RTP/SCS lays out a strategy for the region to meet these targets. Overall, the SCS is meant to provide growth strategies that will achieve the regional GHG emissions reduction targets. 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.[37] However, the SCS does not require that local General Plans, Specific Plans, or zoning be consistent with the SCS; SCAG is required to consider local land use controls when drafting the SCS.

The horizon year for Connect SoCal 2024 is 2050 and the plan projects that by 2050, 66 percent of new households and 54 percent of new jobs will be located in Priority Development Areas, either near transit or in walkable communities. The objectives of Connect SoCal 2024 are to create a region with: transit as a backbone of the transportation system; more Complete Streets where people and safety are prioritized; policies that encourage emerging technologies and mobility innovations that support rather than hamper regional goals; more housing, jobs, and mobility options closer together in Priority Development Areas to preserve natural lands and open spaces; more housing to address the existing housing need as defined by the RHNA; safe and fluid movement of goods, with a commitment to the broad deployment of zero- and near-zero emission technologies.

Local Regulations

City of Tustin

The City of Tustin has not prepared a Climate Action Plan. The air quality and energy policies from the City of Tustin General Plan, identified above, would also work to reduce GHG emissions.

[37] Ibid.

SETTING

This section provides the current SCAQMD attainment status, climate and air quality, ambient air quality monitoring results, and GHG emissions inventory.

ATTAINMENT STATUS

The CARB is required to designate areas of the state as attainment, nonattainment, or unclassified for all State standards. An *attainment* designation for an area signifies that pollutant concentrations did not violate the standard for that pollutant in that area. A *nonattainment* designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. An *unclassified* designation signifies that data do not support either an attainment or nonattainment status. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The USEPA designates areas for O_3, CO, and NO_2 as either does not meet the primary standards, or cannot be classified, or better than national standards. For SO_2, areas are designated as does not meet the primary standards, does not meet the secondary standards, cannot be classified, or better than national standards.

Table E provides a summary of the attainment status for the Basin with respect to NAAQS and CAAQS.

Table E: Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
O_3 1 hour	Nonattainment	Extreme Nonattainment
O_3 8 hour	Nonattainment	Extreme Nonattainment
PM_{10}	Nonattainment	Attainment/Maintenance
$PM_{2.5}$	Nonattainment	Serious Nonattainment
CO	Attainment	Attainment/Maintenance
NO_2	Attainment	Attainment/Maintenance
SO_2	N/A	Attainment/Unclassified
Lead	Attainment	Attainment[1]
All others	Attainment/Unclassified	Attainment/Unclassified

Source: South Coast Air Quality Management District (2018).
[1] Except in Los Angeles County.
CO = carbon monoxide
N/A = not applicable
NO_2 = nitrogen dioxide
O_3 = ozone
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
SO_2 = sulfur dioxide

EXISTING CLIMATE AND AIR QUALITY

Air quality in the planning area is not only affected by various emission sources (e.g., mobile and industry), but also by atmospheric conditions (e.g., wind speed, wind direction, temperature, and rainfall). The combination of topography, low mixing height, abundant sunshine, and emissions from

the second-largest urban area in the United States gives the South Coast Air Basin some of the worst air pollution in the nation.

The annual average temperature varies little throughout the Basin, ranging from the low to middle 60s°F. With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station closest to the site is the Tustin Irvine Ranch Station.[38] The monthly average maximum temperature recorded at this station ranged from 66.8°F in January to 85.2°F in August, with an annual average maximum of 75.4°F. The monthly average minimum temperature recorded at this station ranged from 40.2°F in January to 59.1°F in August, with an annual average minimum of 49.4°F. These levels are representative of the project area.

The majority of annual rainfall in the Basin occurs between November and March. Summer rainfall is minimal and is generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern portion of the Basin and along the coastal side of the mountains. Average monthly rainfall at the Tustin Irvine Ranch Station varied from 0.01 inch in July to 2.67 inches in February, with an annual total of 12.86 inches. Patterns in monthly and yearly rainfall totals are unpredictable due to fluctuations in the weather.

The Basin experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the Pacific high. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in mid-afternoon to late afternoon on hot summer days when the air appears to clear up suddenly. Winter inversions frequently break by midmorning.

Winds in the project area blow predominantly from the south-southwest, with relatively low velocities. Wind speeds in the project area average about 5 miles per hour (mph). Summer wind speeds average slightly higher than winter wind speeds. Low average wind speeds, together with a persistent temperature inversion, limit the vertical dispersion of air pollutants throughout the Basin. Strong, dry, north, or northeasterly winds, known as Santa Ana winds, occur during the fall and winter months, dispersing air contaminants. The Santa Ana conditions tend to last for several days at a time.

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are the lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly on shore into Riverside and San Bernardino Counties. In the winter, the greatest pollution problems are CO and NO_X because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and brighter sunshine combine to cause a reaction between hydrocarbons and NO_X to form photochemical smog. Smog is a general term that is naturally occurring fog that has become mixed with smoke or pollution. In this context it is better described as a form of air pollution

[38] Western Regional Climate Center. Recent Climate in the West. Website: http://www.wrcc.dri.edu, (accessed January 2024).

produced by the photochemical reaction of sunlight with pollutants that have been released into the atmosphere, especially by automotive emissions.

AIR QUALITY MONITORING RESULTS

Air quality monitoring stations are located throughout the nation and are maintained by the local air pollution control district and State air quality regulating agencies. The SCAQMD, together with the CARB, maintains ambient air quality monitoring stations in the Basin. The air quality monitoring stations closest to the project site is located at 1630 Pampas Lane in Anaheim.

Pollutant monitoring results for years 2020 to 2022 at the Anaheim ambient air quality monitoring stations, shown in Table F, indicate that air quality in the area has generally been moderate. As indicated in the monitoring results, the federal PM_{10} standard was not exceeded during the 3-year period. The State PM_{10} standard was exceeded 5 times in 2020, once in 2021, and once in 2022. Similarly, the federal $PM_{2.5}$ standard had 12 exceedances in 2020, 10 exceedances in 2021, and no exceedances in 2022. The State 1-hour ozone standards were exceeded 6 times in 2021, no times in 2021, and once in 2022. The State 8-hour ozone standards were exceeded 16 times in 2020, no times in 2021, and once in 2022. The federal 8-hour standards were exceeded 15 times in 2021, no times in 2021, and once in 2022. The CO and NO_2 standards were not exceeded in this area during the 3-year period. SO_2 data were not available from 2020 to 022 at air quality monitoring stations in Orange County.

GREENHOUSE GAS EMISSIONS INVENTORY

An emissions inventory that identifies and quantifies the primary human-generated sources and sinks of GHGs is a well-recognized and useful tool for addressing climate change. This section summarizes the latest information on global, United States, and California GHG emission inventories.

Global Emissions

Worldwide emissions of GHGs in 2020 totaled 22.9 billion metric tons (MT) of CO_2e. Global estimates are based on country inventories developed as part of the programs of the United Nations Framework Convention on Climate Change.[39]

United States Emissions

In 2021, the year for which the most recent data are available, the United States emitted about 5,586.0 million metric tons of CO_2e (MMT CO_2e) after accounting for sequestration from the land sector. Overall, emissions in 2021 increased by 6 percent since and were 17 percent lower than 2005 levels. The increase in total GHG emissions was driven by an increase in CO_2 emissions from fossil fuel combustion.

[39] United Nations Framework Convention on Climate Change (UNFCCC). 2021. GHG Data from UNFCCC. Website: unfccc.int/process-and-meetings/transparency-and-reporting/greenhouse-gas-data/ghg-data-unfccc/ghg-data-from-unfccc (accessed January 2024).

Table F: Ambient Air Quality at the Nearby Monitoring Stations

Pollutant	Standard	2020	2021	2022
Carbon Monoxide (CO)				
Maximum 1-hour concentration (ppm)		2.3	2.1	2.4
Number of days exceeded:	State: > 20 ppm	0	0	0
	Federal: > 35 ppm	0	0	0
Maximum 8-hour concentration (ppm)		1.7	1.5	1.4
Number of days exceeded:	State: > 9 ppm	0	0	0
	Federal: > 9 ppm	0	0	0
Ozone (O_3)				
Maximum 1-hour concentration (ppm)		0.142	0.089	0.102
Number of days exceeded:	State: > 0.09 ppm	6	0	1
Maximum 8-hour concentration (ppm)		0.098	0.068	0.077
Number of days exceeded:	State: > 0.07 ppm	16	0	1
	Federal: > 0.07 ppm	15	0	1
Coarse Particulates (PM_{10})				
Maximum 24-hour concentration (µg/m^3)		74.8	63.6	67.0
Number of days exceeded:	State: > 50 µg/m^3	5	1	1
	Federal: > 150 µg/m^3	0	0	0
Annual arithmetic average concentration (µg/m^3)		30.8	23.4	20.9
Exceeded for the year:	State: > 20 µg/m^3	Yes	Yes	Yes
	Federal: > 50 µg/m^3	No	No	No
Fine Particulates ($PM_{2.5}$)				
Maximum 24-hour concentration (µg/m^3)		64.8	54.4	33.1
Number of days exceeded:	Federal: > 35 µg/m^3	12	10	0
Annual arithmetic average concentration (µg/m^3)		12.4	11.6	9.9
Exceeded for the year:	State: > 12 µg/m^3	Yes	No	No
	Federal[a]: > 12 µg/m^3	No	No	No
Nitrogen Dioxide (NO_2)				
Maximum 1-hour concentration (ppm)		0.071	0.067	0.053
Number of days exceeded:	State: > 0.250 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.013	0.012	0.012
Exceeded for the year:	Federal: > 0.053 ppm	No	No	No
Sulfur Dioxide (SO_2)				
Maximum 1-hour concentration (ppm)		ND	ND	ND
Number of days exceeded:	State: > 0.25 ppm	ND	ND	ND
Maximum 24-hour concentration (ppm)		ND	ND	ND
Number of days exceeded:	State: > 0.04 ppm	ND	ND	ND
	Federal: > 0.14 ppm	ND	ND	ND
Annual arithmetic average concentration (ppm)		ND	ND	ND
Exceeded for the year:	Federal: > 0.030 ppm	ND	ND	ND

Sources: CARB (2023) and USEPA (2023).

[a] On February 7, 2024, the federal annual $PM_{2.5}$ standard was revised from 12.0 µg/m^3 to 9.0 µg/m^3. However, since the data presented in Table 3.C-1 is through 2022, it is uses the 12.0 µg/m^3 standard that was in effect through 2022.

µg/m^3 = micrograms per cubic meter
CARB = California Air Resources Board
ND = No data. There were insufficient (or no) data to determine the value.
ppm = parts per million
USEPA = United States Environmental Protection Agency

In 2021, CO_2 emissions from fossil fuel combustion increased by 7 percent relative to the previous year. This increase in fossil fuel consumption emissions was due primarily to economic activity rebounding after the height of the COVID-19 pandemic. Of the five major sectors—residential and commercial, agricultural, industry, transportation, and electricity generation—transportation accounted for the highest amount of GHG emissions in 2021 (approximately 28 percent), with electricity generation second at 25 percent and emissions from industry third at 23 percent.[40]

State of California Emissions

The State emitted approximately 381.3 MMT CO_2e emissions in 2021, 12.1 MMT CO_2e higher than 2020 levels and 49.7 MMT CO_2e below the 2020 GHG limit of 431 MMT CO_2e.[41] CARB estimates that transportation was the source of approximately 38 percent of the State's GHG emissions in 2021. The next largest sources included industrial sources at approximately 19 percent and electricity generation at 16 percent. The remaining sources of GHG emissions were commercial and residential activities at 10 percent, agriculture at 8 percent, high GWP at 6 percent, and waste at 2 percent.[42]

40 USEPA. 2023. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2021. Website: https://www.epa.gov/system/files/documents/2023-04/US-GHG-Inventory-2023-Main-Text.pdf (accessed January 2024).

41 CARB. 2023. *California Greenhouse Gas Emissions for 2000 to 2021, Trends of Emissions and Other Indicators Report*. Website: https://ww2.arb.ca.gov/sites/default/files/2023-12/2000_2021_ghg_inventory_trends.pdf (accessed January 2024).

42 Ibid.

METHODOLOGY

The methodology used to estimate air quality, energy use, and GHG impacts is described below.

CONSTRUCTION EMISSIONS

Construction activities can generate a substantial amount of air pollution. Construction activities are considered temporary; however, short-term impacts can contribute to exceedances of air quality standards. Construction activities include demolition, site preparation, earthmoving, and general construction. The emissions generated from these common construction activities include fugitive dust from soil disturbance, fuel combustion from mobile heavy-duty diesel and gasoline powered equipment, portable auxiliary equipment, and worker commute trips.

The California Emissions Estimator Model version 2022.1 (CalEEMod) computer program was used to calculate emissions from on-site construction equipment and emissions from worker and vehicle trips to the site. Information regarding a specific development project is not yet known; however, for the purposes of this analysis, future development of the additional 900 units and remaining commercial buildout capacity associated with the proposed project could occur anytime between October 2024 and October 2029. Therefore, to be conservative, this analysis assumes a project construction schedule based on a start date of October 2024 and a default construction duration in CalEEMod and assuming architectural coating would overlap with building construction activities. The proposed project would demolish the existing surface parking but would not demolish any existing buildings. This analysis also assumes that the proposed project would comply with SCAQMD Rule 403 measures. In addition, this analysis assumes the use of Tier 2 construction equipment, which was also included in CalEEMod. All other construction details are not yet known; therefore, default assumptions (e.g., construction worker and truck trips and fleet activities) from CalEEMod were used.

OPERATIONAL EMISSIONS

The air quality analysis includes estimating emissions associated with long-term operation of the proposed project. Consistent with the SCAQMD guidance for estimating emissions associated with land use development projects, the CalEEMod computer program was used to calculate the long-term operational emissions associated with the project.

This analysis evaluates the buildout of 900 units and remaining commercial buildout capacity within the project site and compares the potential impacts to impacts associated with the existing commercial uses as determined based on two CalEEMod runs.

As identified in the Project Description, the existing uses that were modeled consist of The Market Place that is currently developed with 747,205 sq ft of commercial business uses, including 57,456 sq ft of restaurant use, 23,662 sq ft of community center use, 24,483 sq ft of retail use, 5,559 sq ft of office use, and surface parking lots. The analysis was conducted using land use codes *High Turnover (Sit Down Restaurant), Strip Mall, General Office Building*, *Health Club,* and *Parking Lot*. Trip generation rates used in CalEEMod for the existing uses were based on the trip generation rate of 31,374 ADT.

The analysis of the future buildout of the project site included the existing development, the buildout of 900 units, and the addition of the total remaining non-residential use including 13,032 sq ft of restaurant use. The analysis was conducted using land use codes *Apartments Mid Rise, High Turnover (Sit Down Restaurant), Strip Mall, General Office Building*, and *Health Club* assuming a total trip generation of 5,483 ADT. This analysis also assumes that the proposed project would not include any woodburning hearths or wood stoves. Where project-specific data were not available, default assumptions (e.g., energy usage, water usage, and solid waste generation) from CalEEMod were used to estimate project emissions.

ENERGY USE

The analysis of electricity/natural gas usage is based on the CalEEMod modeling conducted by LSA, which quantifies energy use for project operations. Fuel consumption (diesel fuel and gasoline) from vehicle trips during operation was conservatively estimated for the year 2024 of the proposed project based on trip estimates from the CalEEMod model and fuel efficiencies from the CARB EMission FACtor Model (EMFAC2021) model. Estimates of fuel consumption (diesel fuel and gasoline) from construction trucks and construction worker vehicles were based on trip estimates from the CalEEMod model and fuel efficiencies from the CARB EMFAC2021 model.

The analysis focuses on the three sources of energy that are relevant to the proposed project: electricity, the equipment fuel necessary for project construction, and vehicle fuel necessary for project operations. For the purposes of this analysis, the amount of electricity, construction fuel, and fuel use from operations are quantified and compared to that consumed in Orange County. The electricity use of the proposed project is analyzed as a whole on an annual basis. Electricity use was estimated for the project using default energy intensities by land use type in CalEEMod.

GREENHOUSE GAS ANALYSIS

Recognizing that the field of global climate change analysis is rapidly evolving, the approaches advocated most recently indicate that for determining a project's contribution to GHG emissions, lead agencies should calculate, or estimate, emissions from vehicular traffic, energy consumption, water conveyance and treatment, waste generation, construction activities, and any other significant source of emissions within the project area. The CalEEMod results were used to quantify GHG emissions generated by the project.

THRESHOLDS OF SIGNIFICANCE

The *State CEQA Guidelines* indicate that a project would normally have a significant adverse air quality impact if project-generated pollutant emissions would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project is nonattainment under applicable federal or State ambient air quality standards;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Result in other emissions (such as those leading to odors) affecting a substantial number of people.

The *State CEQA Guidelines* indicate that a project would normally have a significant adverse energy impact if the project would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

The *State CEQA Guidelines* indicate that a project would normally have a significant adverse greenhouse gas emission impact if the project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reduction the emissions of greenhouse gases.

Certain air districts (e.g., SCAQMD) have created guidelines and requirements to conduct air quality analysis. The SCAQMD's current guidelines, its *CEQA Air Quality Handbook* with associated updates, were followed in this assessment of air quality and GHG impacts for the proposed project.

CRITERIA POLLUTANT THRESHOLDS

SCAQMD has established daily emissions thresholds for construction and operation of a proposed project in the South Coast Air Basin. The emissions thresholds were established based on the attainment status of the Basin with regard to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety, these emissions thresholds are regarded as conservative and would overstate an individual project's contribution to health risks.

Table G lists the CEQA significance thresholds for construction and operational emissions established for the Basin. Projects in the Basin with construction- or operation-related emissions that exceed any of their respective emission thresholds would be considered significant under SCAQMD guidelines. These thresholds, which SCAQMD developed and that apply throughout the Basin, apply as both project and cumulative thresholds. If a project exceeds these standards, it is considered to have a project-specific and cumulative impact.

Table G: Regional Thresholds for Construction and Operational Emissions

Emissions Source	Pollutant Emissions Threshold (lbs/day)					
	VOCs	NO_X	CO	PM_{10}	$PM_{2.5}$	SO_X
Construction	75	100	550	150	55	150
Operations	55	55	550	150	55	150

Source: SCAQMD. Air Quality Significance Thresholds. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf (accessed January 2024).

CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOCs = volatile organic compounds

LOCALIZED IMPACTS ANALYSIS

The SCAQMD published its *Final Localized Significance Threshold Methodology* in July 2008, recommending that all air quality analyses include an assessment of air quality impacts to nearby sensitive receptors.[43] This guidance was used to analyze potential localized air quality impacts associated with construction of the proposed project. Localized significance thresholds (LST) are developed based on the size or total area of the emission source, the ambient air quality in the source receptor area, and the distance to the project. Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to adverse air quality.

LSTs are based on the ambient concentrations of that pollutant within the project Source Receptor Area (SRA) and the distance to the nearest sensitive receptor. For the proposed project, the appropriate SRA for the LST is the nearby Central Orange County (SRA 17). SCAQMD provides LST screening tables for 25-, 50-, 100-, 200-, and 500-meter source-receptor distances. As identified above, the closest sensitive receptors to the project site include residential uses, located approximately 110 feet northeast of the project's site boundary. As such, a distance of 34 meters (110 feet) was used. Based on the anticipated construction equipment, it is assumed that the maximum daily disturbed acreage during construction would be 3.5 acres.[44] The 5-acre thresholds were used for project operation. Table H lists the emissions thresholds that apply during project construction and operation.

43 SCAQMD. 2008a. *Final Localized Significance Threshold Methodology*. July.

44 SCAQMD. n.d. *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds*. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf (accessed February 2024).

Table H: South Coast Air Quality Management District Localized Significance Thresholds

Emissions Source	Pollutant Emissions Threshold (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Construction	146.0	1,129.0	17.0	6.2
Operations	177.0	1,426.0	5.5	2.4

Source: South Coast Air Quality Management District (2008).
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size

LOCAL MICROSCALE CONCENTRATION STANDARDS

The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project are above or below State and federal CO standards. Because ambient CO levels are below the standards throughout the Basin, a project would be considered to have a significant CO impact if project emissions result in an exceedance of one or more of the 1-hour or 8-hour standards. The following are applicable local emission concentration standards for CO:

- California State 1-hour CO standard of 20 parts per million (ppm)
- California State 8-hour CO standard of 9 ppm

GREENHOUSE GAS THRESHOLD

To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, SCAQMD convened a GHG CEQA Significance Threshold Working Group (Working Group). Based on the last Working Group meeting held in September 2010 (Meeting No. 15), SCAQMD proposed to adopt a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency:

- **Tier 1. Exemptions:** If a project is exempt from CEQA, project-level and cumulative GHG emissions are less than significant.

- **Tier 2. Consistency with a locally adopted GHG Reduction Plan:** If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project's geographic area (i.e., city or county), project-level and cumulative GHG emissions are less than significant.

- **Tier 3. Numerical Screening Threshold:** If GHG emissions are less than the numerical screening-level threshold, project-level and cumulative GHG emissions are less than significant.

  For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, SCAQMD requires an assessment of GHG emissions. The 10,000 MT of CO_2e per year (MT CO_2e/yr) threshold for industrial uses would be recommended for use by all lead agencies. Under Option 1, separate screening thresholds are proposed for residential projects (3,500 MT CO_2e/yr), commercial projects (1,400 MT CO_2e/yr), and mixed-use projects (3,000 MT CO_2e/yr).

Under Option 2, a single numerical screening-level threshold of 3,000 MT CO_2e/yr would be used for all non-industrial projects.

- **Tier 4. Performance Standards:** If emissions exceed the numerical screening threshold, a more detailed review of the project's GHG emissions is warranted. SCAQMD has proposed an efficiency target for projects that exceed the bright-line threshold. The current recommended approach is per capita efficiency targets. SCAQMD is not recommending use of a percent emissions reduction target. Instead, SCAQMD proposes a 2020 efficiency target of 4.8 MT CO_2e/yr per service population (for project-level analyses and 6.6 MT CO_2e/yr per service population for plan-level projects (e.g., program-level projects such as general plans). The GHG efficiency metric divides annualized GHG emissions by the service population, which is the sum of residents and employees, per the following equation:

  Rate of Emission: GHG Emissions (MT CO_2e/yr) ÷ Service Population

  The efficiency evaluation consists of comparing the project's efficiency metric to efficiency targets. Efficiency targets represent the maximum quantity of emissions each resident and employee in the State of California could emit in various years based on emissions levels necessary to achieve the statewide GHG emissions reduction goals. A project that results in a lower rate of emissions would be more efficient than a project with a higher rate of emissions, based on the same service population. The metric considers GHG reduction measures integrated into a project's design and operation (or through mitigation). The per capita efficiency targets are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for the CARB's 2008 Scoping Plan.

  Relative to the 2035 target date, this target date was selected to be consistent with the GHG reduction target date of SB 375. Overall, GHG reductions by the SB 375 target date of 2035 would be approximately 40 percent. This 40 percent reduction was applied to the 2020 targets, resulting in an efficiency threshold for plans of 4.1 MT CO_2e/yr and an efficiency threshold at the project level of 3.0 MT CO_2e/yr.

For the purpose of this analysis, the proposed project will be compared to the SCAQMD screening-level Tier 3 Numerical Screening Threshold of 3,000 MT CO_2e/yr for all land use type projects. Because it is not yet known whether full buildout at The Market Place, including the 900 additional housing units allowed under the proposed Housing Overlay Zone and the remaining commercial buildout capacity, would occur, this analysis does not compare the project's emissions to the service population threshold. In addition, the proposed project is also evaluated for compliance with the 2022 Scoping Plan and the 2024–2050 RTP/SCS.

IMPACTS ANALYSIS

This section identifies the air quality, energy, and GHG emissions impacts associated with implementation of the proposed project.

AIR QUALITY IMPACTS

Air pollutant emissions associated with the project would occur over the short term from construction activities and over the long term from operational activities associated with the proposed land uses.

Consistency with Applicable Air Quality Plans

A consistency determination plays an essential role in local agency project review by linking local planning and unique individual projects to the air quality plans. A consistency determination fulfills the CEQA goal of fully informing local agency decision-makers of the environmental costs of the project under consideration at a stage early enough to ensure that air quality concerns are addressed. Only new or amended General Plan elements, Specific Plans, and significantly unique projects need to undergo a consistency review due to the air quality plan strategy being based on projections from local General Plans.

Consistency with the 2022 AQMP would be achieved if the project is consistent with the goals, objectives, and assumptions in this plan to achieve the federal and State air quality standards. Per SCAQMD's *CEQA Air Quality Handbook*, there are two main indicators of a project's consistency with the AQMP:

- **Indicator 1:** Whether the project would result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of the ambient air quality standards or emission reductions in the AQMP.

- **Indicator 2:** Whether the project would exceed the assumptions in the AQMP. The AQMP strategy is, in part, based on projections from local general plans.

Indicator 1: As demonstrated below, the regional emissions generated by construction and operation of the proposed project would be less than the SCAQMD emissions thresholds. As such, the proposed project would not be consistent with Indicator 1.

Indicator 2: The *CEQA Air Quality Handbook* indicates that consistency with AQMP growth assumptions must be analyzed for new or amended General Plan elements, Specific Plans, and significant projects. Significant projects include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and offshore drilling facilities.

The proposed project includes a GPA to amend the City's existing General Plan to create a Housing Overlay Zone. The proposed project would not directly result in physical development but upon

approval of the Housing Overlay Zone, the project site could accommodate 900 units. As such, this analysis evaluates whether the project would exceed the 2022 AQMP's assumptions.

With respect to determining the proposed project's consistency with AQMP growth assumptions, the projections in the AQMP for achieving air quality goals are based on assumptions in SCAG's 2024–2050 RTP/SCS regarding population, housing, and growth trends. According to SCAG's 2024–2050 RTP/SCS, in 2019, the City's population was 80,400 residents and the City had 27,000 households and 51,700 jobs. Households are forecast to increase by approximately 6,800 households by 2035 and 7,000 households by 2050 and employment are forecast to increase by approximately 14,600 jobs by 2035 and 19,600 jobs by 2050.[45]

As identified in the Project Description, the City's 2021–2029 Housing Element identifies several adequate sites that are able to accommodate the development of up to 900 additional housing units for the City to meet its estimated housing growth needs identified in the SCAG's RHNA allocation. Of the Housing Element inventory sites, The Market Place (the project site) was identified as necessary for rezoning under Housing Element Program 1.1f to allow for high density residential/mixed use development. The proposed project would accommodate up to 900 housing units to help the City meet its RHNA allocation.

The development of 900 housing units would result in approximately 2,592 additional residents based on the estimated 2.88 persons per household[46] in Tustin. Future development implemented in accordance with the proposed Housing Overlay Zone would accommodate planned regional housing growth included in the SCAG RHNA and would be required to adhere to the General Plan. Therefore, since the purpose of the proposed project is to accommodate planned regional housing growth included in the SCAG RHNA, the proposed project would not exceed the growth assumptions in the SCAG's 2024–2050 RTP/SCS or the AQMP.

In addition, the proposed project would not include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and offshore drilling facilities; therefore, it is unlikely that the proposed project would interfere with SCAQMD's goals for improving air quality in the region. The proposed project would not conflict with the 2022 AQMP and, as such, would not jeopardize attainment of the CAAQS and NAAQS in the area under the jurisdiction of the SCAQMD. The proposed project is therefore considered consistent with Indicator 2.

Summary: Based on the discussion above, the proposed project would not conflict or obstruct implementation of applicable air quality plans under Indicator 1 because the proposed project would result in pollutant emissions below the SCAQMD's thresholds. As such, based on the

45 Southern California Association of Governments (SCAG). 2024. *Connect SoCal 2024 Demographics & Growth Forecast.* Website: https://scag.ca.gov/sites/main/files/file-attachments/23-2987-tr-demographics-growth-forecast-final-040424.pdf?1712261839 (accessed May 2024).

46 State of California, Department of Finance. 2023. *E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change*. May.

consistency analysis presented above, the proposed project would be consistent with the regional AQMP.

Criteria Pollutant Analysis

The Basin is designated as non-attainment for O_3 and $PM_{2.5}$ for federal standards and non-attainment for O_3, PM_{10}, and $PM_{2.5}$ for State standards. The SCAQMD's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of AAQS. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the SCAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is unnecessary. The following analysis assesses the potential project-level construction- and operation-related air quality impacts.

Construction Emissions

It is important to note that the proposed project would not, in and of itself entitle, propose, or otherwise require the construction of new development. The proposed project would create a Housing Overlay Zone that would accommodate 900 units.

Construction activities associated with the construction of 900 additional housing units and remaining commercial buildout capacity that could occur with implementation of the project would be through the horizon year 2029, which would cause short-term emissions of criteria air pollutants. The primary source of emissions is the operation of construction equipment. Before development can take place, a project will be required to be analyzed for conformance with the General Plan, zoning requirements, and other applicable local and State requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits.

Construction activities would include demolition, site preparation, grading, building construction, architectural coating, and paving activities. Construction-related effects on air quality are typically greatest during the grading phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at construction sites. Unless properly controlled, vehicles leaving construction sites would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, whereas fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The SCAQMD has established Rule 403 (Fugitive Dust), which would require the contractor to implement measures that would reduce the amount of particulate matter generated during the construction period.

In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NO_X, VOCs and some soot particulate ($PM_{2.5}$ and PM_{10}) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles idle in traffic. These emissions would be temporary in nature and limited to the immediate area surrounding the construction site.

Construction emissions were estimated for development envisioned under the proposed project using CalEEMod. As described in the Methodology section above, information regarding a specific development project is not yet known; however, for the purposes of this analysis, future development of the additional 900 units and remaining commercial buildout capacity associated with the proposed project could occur anytime between October 2024 and October 2029. Therefore, to be conservative, this analysis assumes a project construction schedule based on a start date of October 2024 and a default construction duration in CalEEMod. Table I lists the tentative schedule, and Table J lists the potential construction equipment to be used during project construction under each phase of construction. Construction-related emissions are presented in Table K. CalEEMod output sheets are included in Appendix A.

Table I: Tentative Project Construction Schedule

Phase Number	Phase Name	Phase Start Date	Phase End Date	Number of Days/Week	Number of Days
1	Demolition	10/7/2024	11/16/2024	5	30
2	Site Preparation	11/5/2024	11/19/2024	5	10
3	Grading	11/20/2024	1/1/2025	5	30
4	Building Construction	1/2/2025	2/26/2026	5	300
5	Paving	2/27/2026	3/27/2026	5	20
6	Architectural Coating	12/8/2025	4/25/2026	5	100

Source: Compiled by LSA assuming construction would start October 2024 with a default construction duration in CalEEMod and assuming architectural coating would overlap with building construction activities. This analysis is also assuming demolition of the surface parking lot would occur over a 30-day period (February 2024).
CalEEMod = California Emissions Estimator Model

Table J: Diesel Construction Equipment Utilized by Construction Phase

Construction Phase	Off-Road Equipment Type	Off-Road Equipment Unit Amount	Hours Used per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	1	8	33	0.73
	Excavators	3	8	36	0.38
	Rubber Tired Dozers	2	8	367	0.4
Site Preparation	Rubber Tired Dozers	3	8	367	0.4
	Tractors/Loaders/Backhoes	4	8	84	0.37
Grading	Excavators	2	8	36	0.38
	Graders	1	8	148	0.41
	Rubber Tired Dozers	1	8	367	0.4
	Scrapers	2	8	423	0.48
	Tractors/Loaders/Backhoes	2	8	84	0.37
Building Construction	Cranes	1	7	367	0.29
	Forklifts	3	8	82	0.2
	Generator Sets	1	8	14	0.74
	Tractors/Loaders/Backhoes	3	7	84	0.37
	Welders	1	8	46	0.45
Paving	Pavers	2	8	81	0.42
	Paving Equipment	2	8	89	0.36
	Rollers	2	8	36	0.38
Architectural Coating	Air Compressors	1	6	37	0.48

Source: Compiled by LSA using CalEEMod defaults (February 2024).
CalEEMod = California Emissions Estimator Model

Table K: Project Construction Emissions

Project Construction	Maximum Pollutant Emissions (lbs/day)					
	VOCs	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2024	2.2	86.5	57.3	0.2	27.6	9.2
2025	58.8	48.9	53.9	0.1	11.8	3.3
2026	58.7	26.0	52.5	<0.1	11.9	3.4
Maximum Daily Emissions	**58.8**	**86.5**	**57.3**	**0.2**	**27.6**	**9.2**
SCAQMD Thresholds	75.0	100.0	550.0	150.0	150.0	55.0
Exceeds?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Compiled by LSA (February 2024).
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOCs = volatile organic compounds

As shown in Table I, construction emissions associated with future development, as envisioned under the proposed project would not exceed the SCAQMD thresholds for VOCs, NO_X, CO, sulfur oxides (SO_X), $PM_{2.5,}$ or PM_{10} emissions. Future development projects would be required to comply with SCAQMD Rule 403: Fugitive Dust, which would further reduce construction-related emissions. Therefore, future construction of development projects consistent with the proposed project would not result in emissions that would result in a cumulatively considerable net increase of any criteria

pollutant for which the project is in nonattainment under an applicable federal or State ambient air quality standard.

Operational Air Quality Impacts

Operational activities associated with the 900 additional housing units and remaining commercial buildout capacity consistent with the buildout envisioned as part of the proposed project would result in long-term air pollutant emissions associated with mobile sources (e.g., vehicle trips), energy sources (e.g., natural gas), and area sources (e.g., architectural coatings and the use of landscape maintenance equipment). Before development can take place, a project will be required to be analyzed for conformance with the General Plan, zoning requirements, and other applicable local and State requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits.

PM_{10} emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways. Entrainment of PM_{10} occurs when vehicle tires pulverize small rocks and pavement and the vehicle wakes generate airborne dust. The contribution of tire and brake wear is small compared to the other PM emission processes. Gasoline-powered engines have small rates of particulate matter emissions compared with diesel-powered vehicles. The existing uses generate approximately 31,374 ADT and full buildout of development consistent with the proposed project would generate approximately 36,857 ADT.

Energy source emissions result from activities in buildings for which electricity and natural gas are used. The quantity of emissions is the product of usage intensity (i.e., the amount of natural gas) and the emission factor of the fuel source. Major sources of energy demand for the proposed project could include building mechanical systems, such as heating and air conditioning. The residential units would be constructed in compliance with the version of the Title 24 energy standards and the CALGreen Code in effect at the time building permit applications are submitted.

Typically, area source emissions consist of direct sources of air emissions located at the project site, including architectural coatings, consumer products, and the use of landscape maintenance equipment.

Long-term operation emissions associated with development consistent with the proposed project were calculated using CalEEMod. Model results are shown in Table L below. CalEEMod output sheets are included in Appendix A.

The results shown in Table L indicate that the net new emissions associated with the future development of the proposed project would not exceed the significance criteria for VOCs, NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$ emissions; thus, the proposed project would not have a significant effect on regional air quality. Therefore, operation of the project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Air Basin is nonattainment under an applicable federal or State ambient air quality standard.

Table L: Project Operational Emissions

Emission Type	Pollutant Emissions (lbs/day)					
	VOCs	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Existing Uses						
Existing Uses Mobile Sources	104.0	79.2	799.0	1.9	171.0	44.2
Existing Uses Area Sources	23.3	<0.1	32.5	<0.1	0.1	<0.1
Existing Uses Energy Sources	0.2	3.1	2.6	<0.1	0.2	0.2
Total Existing Uses Emissions	**127.5**	**82.3**	**834.1**	**1.9**	**171.3**	**44.4**
Full Buildout of the Project Site						
Project Buildout Mobile Sources	122.0	94.3	952.0	2.3	205.0	52.9
Project Buildout Area Sources	49.0	12.7	89.3	0.1	1.1	1.1
Project Buildout Energy Sources	0.3	6.1	4.1	<0.1	0.5	0.5
Total Project Buildout Emissions	**171.3**	**113.1**	**1,045.4**	**2.4**	**206.6**	**54.5**
Net New Emissions (Project Buildout – Existing Uses)	**43.8**	**50.8**	**211.3**	**0.5**	**35.3**	**10.1**
SCAQMD Thresholds	**55.0**	**55.0**	**550.0**	**150.0**	**150.0**	**55.0**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Compiled by LSA (February 2024).
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOCs = volatile organic compounds

Long-Term Microscale (CO Hot Spot) Analysis

Vehicular trips associated with the proposed project would contribute to congestion at intersections and along roadway segments in the project vicinity. Localized air quality impacts would occur when emissions from vehicular traffic increase as a result of the proposed project. The primary mobile-source pollutant of local concern is CO, a direct function of vehicle idling time and, thus, of traffic flow conditions. CO transport is extremely limited; under normal meteorological conditions, CO disperses rapidly with distance from the source. However, under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels, affecting local sensitive receptors (e.g., residents, schoolchildren, the elderly, and hospital patients). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. In areas with high ambient background CO concentrations, modeling is recommended to determine a project's effect on local CO levels.

An assessment of project-related impacts on localized ambient air quality requires that future ambient air quality levels be projected. Existing CO concentrations in the immediate project vicinity are not available. Ambient CO levels monitored at the Anaheim monitoring station, the closest station to the City of Tustin, showed a highest recorded 1-hour concentration of 2.4 ppm (the State standard is 20 ppm) and a highest 8-hour concentration of 1.7 ppm (the State standard is 9 ppm) during the past 3 years (Table G). The highest CO concentrations would normally occur during peak traffic hours; hence, CO impacts calculated under peak traffic conditions represent a worst-case analysis.

Full buildout of development consistent with the proposed project would generate 5,483 net new ADT in the immediate vicinity of the project site and would result in 458 net new AM peak-hour trips and in 469 net new PM peak-hour trips. The proposed project would not result in any operational deficiencies to the surrounding roadway system. The evaluation of the study area intersections shows that the addition of traffic associated with new residential development allowed under the proposed project's Housing Overlay Zone is not expected to create significant level of service changes under project build out. Therefore, project traffic would not create any significant adverse impacts to nearby intersections.

Therefore, given the extremely low level of CO concentrations in the City, and lack of traffic impacts at any intersections, project-related vehicles are not expected to contribute significantly or result in the CO concentrations exceeding the State or federal CO standards.

Health Risk on Nearby Sensitive Receptors

The SCAQMD recommends the evaluation of localized air quality impacts to sensitive receptors such as residential land uses in the immediate vicinity of the project site as a result of construction and operational activities. The thresholds are based on standards established by the SCAQMD in its Localized Significance Thresholds (LST) Methodology[47] and are measured against construction and operational emissions that occur on a specific project site. These emissions are primarily generated from heavy-duty construction equipment and demolition, grading, and trenching activities. Construction and operational activities associated with the construction of additional housing units and remaining commercial buildout capacity that could occur with implementation of the proposed project would have the potential to cause or contribute to significant localized air quality impacts to nearby residential land uses.

Construction and operation emissions associated with development consistent with the proposed project were compared to the LST screening tables in SRA 17, based on a 34-meter source-receptor distance.

By design, the localized impacts analysis only includes on-site emission sources; however, the CalEEMod outputs do not separate on-site and off-site emissions for mobile sources. For a worst-case scenario assessment, the emissions (detailed in Table N below) assume all area and energy source emissions would occur on site, and 5 percent of the project-related new mobile sources, which is an estimate of the amount of project-related on-site vehicle travel, would occur on site. Given that the majority of vehicle travel would occur off site and considering the total overall VMT and trip length included in CalEEMod, assuming that 5 percent of the project's VMT would occur on site is conservative.

The results of the LST analysis, summarized in Tables M and N, indicate that the proposed project would not result in an exceedance of the SCAQMD LSTs during project construction and operation.

[47] SCAQMD. 2021. Localized Significance Thresholds. Website: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/localized-significance-thresholds (accessed January 2024).

Table M: Project Localized Construction Emissions (lbs/day)

Source	NO_x	CO	PM_{10}	$PM_{2.5}$
On-Site Project Construction Emissions	48.8	35.3	13.9	2.7
Localized Significance Threshold	146.0	1,129.0	17.0	6.2
Exceeds Threshold?	**No**	**No**	**No**	**No**

Source: Compiled by LSA (February 2024).
CO= carbon monoxide
lbs/day = pounds per day
NO_x= nitrogen oxides
$PM_{2.5}$= particulate matter less than 2.5 microns in size
PM_{10}= particulate matter less than 10 microns in size

Table N: Project Localized Operational Emissions (lbs/day)

Source	NO_x	CO	PM_{10}	$PM_{2.5}$
On-Site Project Buildout Net New Emissions	16.5	66.0	3.0	1.8
Localized Significance Threshold	177.0	1,426.0	5.5	2.4
Exceeds Threshold?	**No**	**No**	**No**	**No**

Source: Compiled by LSA (February 2024).
CO= carbon monoxide
lbs/day = pounds per day
NO_x= nitrogen oxides
$PM_{2.5}$= particulate matter less than 2.5 microns in size
PM_{10}= particulate matter less than 10 microns in size

It should be noted that the amount of emissions from a project does not necessarily correspond to the concentrations of air pollutants. A dispersion modeling analysis would be necessary to calculate health risk from project implementation. However, since it is not possible to translate the amount of an unknown future specific project's emissions to a particular concentration, it is not possible to calculate the risk factor for a particular health effect at the time of this analysis.

Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Particulate matter can also lead to a variety of health effects in people. These include premature death of people with heart or lung disease, heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms. Regional emissions of criteria pollutants contribute to these known health effects. The SCAQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals and that they are not exposed to elevated concentrations of criteria pollutants in the Basin. To achieve the health-based standards established by the USEPA, the SCAQMD prepared an AQMP that details regional programs to attain the ambient air quality standards.

The analysis for the proposed project identifies that construction and operational emissions associated with development envisioned as part of the proposed project would be less than significant under the SCAQMD's thresholds for VOCs, NO_X, CO, SO_X, $PM_{2.5}$, or PM_{10} emissions. However, it should be noted that the SCAQMD's numeric regional mass daily thresholds does not necessarily correspond to a determination for health risk impacts to sensitive receptors. This is because the mass daily thresholds are in pounds per day emitted into the air, whereas health effects are determined based on the concentration of emissions in the air at a particular receptor (e.g., ppm by volume of air, or $\mu g/m^3$ of air). State and federal ambient air quality standards were developed to

protect the most susceptible population groups from adverse health effects and were established in terms of parts per million or micrograms per cubic meter for the applicable emissions.

However, the SCAQMD acknowledges that they have only been able to correlate potential health outcomes for very large emissions sources; specifically, 6,620 pounds per day (lbs/day) of NO_X, and 89,180 lbs/day of VOCs were expected to result in approximately 20 premature deaths per year and 89,947 school absences due to ozone.[48] As identified in Table K above, construction of the proposed project would generate a maximum of 86.5 lbs/day of NO_X and 58.8 lbs/day of VOCs and as shown in Table L, operation of the proposed project would generate a maximum of 50.8 lbs/day of NO_X and 43.8 lbs/day of VOCs. Therefore, it is not expected that any future development associated with the proposed project would generate 6,620 lbs/day of NO_X or 89,180 lbs/day of VOC emissions.

Therefore, emissions associated with the proposed project are not sufficiently high enough to correlate health effects on a Basin-wide level.

Current scientific, technological, and modeling limitations prevent the relation of expected adverse air quality impacts to likely health consequences. For this reason, this discussion explains why it is not feasible to provide such an analysis. However, once a specific project is proposed, it would still be required to conduct a site-specific localized impact analysis that evaluates potential project health impacts at a project level to immediately adjacent land uses.

In addition, the project would be required to comply with SCAQMD standard conditions, including Rule 403 (Fugitive Dust) to control fugitive dust and Rule 1113 (Architectural Coatings) to control VOC emissions from paint. Furthermore, any necessary mitigation would be imposed at the project level once such future projects are proposed.

Asbestos

Naturally occurring asbestos (NOA) refers to the asbestos mineral as a natural component of soils or rocks, as opposed to asbestos in commercial products or other processing operations. Ultramafic rocks may contain asbestos or asbestos-like materials. Naturally occurring asbestos can be released from rocks or soils by routine human activities, such as construction, mining, agriculture, or natural weathering processes. If NOA is disturbed and fibers are released into the air it may become a health risk from inhalation. According to the California Geological Survey, no such rock has been identified in the project vicinity[49]. When demolition is proposed during construction, the demolition of existing buildings may expose asbestos used in building materials. The construction of development projects envisioned under the proposed project would include the demolition of the existing surface parking; however, existing buildings on the project site would not be demolished as part of the project. Therefore, the potential risk for naturally occurring asbestos during project construction is small and would not be significant.

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48 Supreme Court of California. 2015. *Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno, Plaintiffs and Appellants, v. County of Fresno, Defendant and Despondent, and Friant Ranch, L.P., Real Part in Interest and Despondent.* April.

49 California Geological Survey. n.d. Areas with Potential for Naturally Occurring Asbestos. Website: https://www.arcgis.com/apps/webappviewer/index.html?id=da4b648958844134adc25ff002dbea1c (accessed February 2024).

Odors

During construction of future development envisioned under the proposed project, some odors may be present due to diesel exhaust. However, these odors would be temporary and limited to the construction period. The proposed project would not include any activities or operations that would generate objectionable odors and once operational, development envisioned under the proposed project would not be a source of odors. Therefore, the proposed project would not result in other emissions (such as those leading to odors) affecting a substantial number of people.

ENERGY IMPACTS

The following describes the potential impacts regarding energy resources that could result from implementation of the proposed project.

Energy Consumption

The proposed project would increase the demand for energy through day-to-day operations and fuel consumption associated with project construction. This section discusses energy use resulting from implementation of the proposed project and evaluates whether the proposed project would result in the wasteful, inefficient, or unnecessary consumption of energy resources or conflict with any applicable plans for renewable energy and energy efficiency.

Construction Energy Use

Construction activities associated with the construction of the 900 additional housing units and remaining commercial buildout capacity that could occur with implementation of the project would be through the horizon year 2029, which would cause fuel consumption associated with construction activities. The primary source of emissions is the operation of construction equipment. Before development can take place, a project will be required to be analyzed for conformance with the City's General Plan, zoning requirements, and other applicable local and State requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits.

Construction activities would include grading, site preparation, building construction, architectural coating, and paving activities. Construction activities require energy associated with the manufacture and transportation of building materials, grading activities, and building construction. Construction activities also typically require electricity to power construction-related equipment and do not involve the consumption of natural gas.

Transportation energy represents the largest energy use during construction and would be from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction worker vehicles that would use petroleum fuels (e.g., diesel fuel and/or gasoline). Therefore, the analysis of energy use during construction focuses on fuel consumption. Construction trucks and vendor trucks hauling materials to and from a site would be anticipated to use diesel fuel, whereas construction workers traveling to and from a site would be anticipated to use gasoline-powered vehicles. Fuel consumption from transportation uses depends on the type and number of trips, VMT, the fuel efficiency of the vehicles, and the travel mode.

Estimates of fuel consumption (diesel fuel and gasoline) from construction equipment, construction trucks, and construction worker vehicles were based on default construction equipment assumptions and trip estimates from CalEEMod and fuel efficiencies from EMFAC2021. Fuel consumption estimates are presented in Table O. CalEEMod output sheets are included in Appendix A, and detailed energy calculations are included in Appendix B.

Table O: Energy Consumption Estimates during Construction

Energy Type	Total Energy Consumption	Percentage of Increase Countywide
Diesel Fuel (total gallons)	152,695.5	0.10
Gasoline (total gallons)	284,229.4	0.02

Source: Compiled by LSA (February 2024).

As indicated in Table O, development envisioned under the proposed project would consume approximately 152,695.5 gallons of diesel fuel and approximately 284,229.4 gallons of gasoline during construction. Based on fuel consumption obtained from EMFAC2021, approximately 1.2 billion gallons of gasoline and approximately 157.1 million gallons of diesel will be consumed from vehicle trips in Orange County in 2024. Therefore, construction of future development as envisioned under the proposed project would increase the annual construction generated fuel use in Orange County approximately by approximately 0.10 percent for diesel fuel usage and by approximately 0.02 percent for gasoline fuel usage. As such, project construction would have a negligible effect on local and regional energy supplies. Furthermore, impacts related to energy use during construction would be temporary and relatively small in comparison to Orange County's overall use of the State's available energy resources. No unusual project characteristics would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or the State. In addition, construction activities are not anticipated to result in an inefficient use of energy as gasoline and diesel fuel would be supplied by construction contractors who would conserve the use of their supplies to minimize their costs on the project. The project would not cause or result in the need for additional energy facilities or an additional or expanded delivery system. For these reasons, fuel consumption during construction would not be inefficient, wasteful, or unnecessary.

Operational Energy Use

Operational activities associated with the 900 additional housing units and remaining commercial buildout capacity consistent with the buildout envisioned as part of the proposed project would result in energy demand associated with natural gas use, electricity consumption, and fuel used for vehicle trips. Energy consumption was estimated for the proposed project using default energy intensities by land use type in CalEEMod. In addition, the proposed project would also result in energy usage associated with gasoline and diesel fuel consumed by project-related vehicle trips. Trip generation rates for the proposed project were based on the project's trip generation estimates. The existing uses generate approximately 31,374 ADT and the proposed project would generate approximately 36,857 ADT. The amount of operational fuel use was estimated using CARB's EMFAC2021 model, which provided projections for typical daily fuel usage in Orange County.

Electricity, natural gas, and fuel usage estimates associated with the proposed project are shown in Table P.

Table P: Energy Consumption Estimates during Operation

Energy Type	Annual Energy Consumption
Existing Uses	
Electricity Consumption (kWh/year)	8,568,072
Natural Gas Consumption (therms/year)	117,062
Gasoline (gallons/year)	3,214,938.2
Diesel Fuel (gallons/year)	271,574.4
Full Buildout of the Project Site	
Electricity Consumption (kWh/year)	12,545,608
Natural Gas Consumption (therms/year)	232,051
Gasoline (gallons/year)	3,850,324.6
Diesel Fuel (gallons/year)	325,462.8
Net New Energy Usage (Project Buildout – Existing Uses)	
Electricity Consumption (kWh/year)	**3,977,536**
Natural Gas Consumption (therms/year)	**114,989**
Gasoline (gallons/year)	**635,386**
Diesel Fuel (gallons/year)	**53,888**

Source: Compiled by LSA (February 2024).
kWh = kilowatt-hours

As shown in Table P, the estimated potential increase in electricity demand associated with development consistent with the proposed project is 3,977,536 kWh per year. Total electricity consumption in Orange County in 2022 was 20,244 GWh (20,243,721,856 kWh). Therefore, operation of the proposed project would increase the annual electricity consumption in Orange County by approximately 0.02 percent.

Additionally, as shown in Table P, the estimated potential increase in natural gas demand associated with development consistent with the proposed project is 114,989 therms per year. Total natural gas consumption in Orange County in 2022 was 573 million therms (572,454,744 therms). Therefore, operation of the proposed project would increase the annual natural gas consumption in Orange County by approximately 0.02 percent.

Electrical and natural gas demand associated with future operations would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. Furthermore, the proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. All future development would be required to adhere to all federal, State, and local requirements for energy efficiency, including the latest Title 24 standards. Title 24 building energy efficiency standards establish minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting, which would reduce energy usage.

Construction of the 900 additional housing units and remaining commercial buildout capacity would also result in energy usage associated with gasoline and diesel fuel consumed by project-related vehicle trips. As shown in M, the increase in fuel use associated with the vehicle trips generated by

the proposed project is estimated at approximately 635,386 gallons of gasoline and 53,888 gallons of diesel fuel per year. Based on fuel consumption obtained from EMFAC2021, approximately 1.2 billion gallons of gasoline and approximately 157.1 million gallons of diesel will be consumed from vehicle trips in Orange County in 2024. Therefore, vehicle trips associated with the proposed project would increase the annual fuel use in Orange County by approximately 0.05 percent for gasoline fuel usage and approximately 0.03 percent for diesel fuel usage. Fuel consumption associated with vehicle trips generated by project operations would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

Although future development, as envisioned under the proposed project would result in an increase in demand for electricity, this increase would not require SCE to expand or construct infrastructure that could cause substantial environmental impacts because the project site is already served by utilities or directly adjacent to existing urban development. Similarly, natural gas infrastructure is not anticipated due to cumulative development. Transportation energy use would also increase; however, this transportation energy use would not represent a major amount of energy use when compared to the amount of existing development or to the total number of vehicle trips and VMT throughout Orange County and the region. As such, the buildout associated with the proposed project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation.

Conflict with Renewable Energy or Energy Efficiency Plans

In 2002, the Legislature passed SB 1389, which required the CEC to develop an integrated energy plan every 2 years for electricity, natural gas, and transportation fuels for the Integrated Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for ZEVs and their infrastructure needs, and encouragement of urban designs that reduce VMT and accommodate pedestrian and bicycle access.

The CEC's *2023 Integrated Energy Policy Report* provide the results of the CEC's assessments of a variety of energy issues facing California. As indicated above, energy usage on the project site during construction would be temporary in nature and would be relatively small in comparison to the overall use in the County. In addition, energy usage associated with operation of the proposed project would be relatively small in comparison to the overall use in Orange County, and the State's available energy resources. Therefore, energy impacts at the regional level would be negligible. Because California's energy conservation planning actions are conducted at a regional level, and because the proposed project's total impact on regional energy supplies would be minor, the proposed project would not conflict with or obstruct California's energy conservation plans as described in the CEC's Integrated Energy Policy Report. Additionally, as demonstrated above, the proposed project would not result in the inefficient, wasteful, and unnecessary consumption of energy.

GREENHOUSE GAS IMPACTS

This section describes the potential GHG impacts associated with implementation the proposed project.

Generation of Greenhouse Gas Emissions

This section describes the proposed project's construction- and operational-related GHG emissions and contribution to global climate change. The SCAQMD has not addressed emission thresholds for construction in its *CEQA Air Quality Handbook*; however, the SCAQMD requires quantification and disclosure. Thus, an evaluation of the project's impacts related to the release of GHG emissions for both construction and operational phases of the project is described below.

Short-Term Greenhouse Gas Emissions

Construction activities associated with the construction of the 900 additional housing units and remaining commercial buildout capacity would cause short-term GHG emissions. Construction activities with the proposed project would produce combustion emissions from various sources. During construction, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO_2, CH_4, and N_2O. Furthermore, CH_4 is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

As indicated above, the SCAQMD does not have an adopted threshold of significance for construction-related GHG emissions. However, lead agencies are required to quantify and disclose GHG emissions that would occur during construction. The SCAQMD then requires the construction GHG emissions to be amortized over the life of the project, defined by the SCAQMD as 30 years[50], added to the operational emissions, and compared to the applicable interim GHG significance threshold tier.

Using CalEEMod, it is estimated that development envisioned under the proposed project would generate approximately 2,433.0 MT CO_2e during construction of the project. When annualized over the 30-year life of the project, annual emissions would be 80.1 MT CO_2e.

Long-Term Greenhouse Gas Emissions

Operational activities associated with the 900 additional housing units and remaining commercial buildout capacity consistent with the buildout envisioned as part of the proposed project would result in long-term GHG emissions associated with mobile sources (e.g., vehicle trips), area sources (e.g., maintenance activities and landscaping), indirect emissions from sources associated with energy consumption, waste sources (land filling and waste disposal), and water sources (water supply and conveyance, treatment, and distribution). Mobile-source GHG emissions would include project-generated vehicle trips to and from the project. Area-source emissions would be associated with activities such as landscaping and maintenance on the project site. Energy source emissions

[50] The SCAQMD has identified the average operational lifespan of buildings to be 30 years. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf (accessed January 2024).

would be generated at off-site utility providers because of the increased electricity demand generated by the project. Waste source emissions generated by the proposed project include energy generated by land filling and other methods of disposal related to transporting and managing project-generated waste. In addition, water source emissions associated with the proposed project are generated by water supply and conveyance, water treatment, water distribution, and wastewater treatment.

Following guidance from the SCAQMD, GHG emissions were estimated using CalEEMod. Table Q shows the calculated GHG emissions for development consistent with the proposed project.

Table Q: Greenhouse Gas Emissions (MT/yr)

Emissions Source	Operational Emissions (MT/yr)			
	CO_2	CH_4	N_2O	CO_2e
Existing Uses				
Existing Uses Mobile Sources	30,816.0	1.7	1.3	31,311.0
Existing Uses Area Sources	15.2	<0.1	<0.1	15.2
Existing Uses Energy Sources	2,909.0	0.2	<0.1	2,919.0
Existing Uses Water Sources	135.0	2.2	0.1	207.0
Existing Uses Waste Sources	135.0	13.5	0.0	474.0
Total Existing Uses Emissions	**34,010.2**	**17.6**	**1.4**	**34,926.2**
Full Buildout of the Project Site				
Project Buildout Mobile Sources	36,885.0	2.0	1.6	37,475.0
Project Buildout Area Sources	214.0	<0.1	<0.1	214.0
Project Buildout Energy Sources	4,258.0	0.3	<0.1	4,273.0
Project Buildout Water Sources	208.0	3.5	0.1	320.0
Project Buildout Waste Sources	209.0	20.9	0.0	730.0
Project Buildout Emissions	**41,744.0**	**26.7**	**1.7**	**43,012.0**
Amortized Construction Emissions				81.1
Total Project Buildout Annual Emissions				**43,093.1**
Net New Emissions (Project Buildout – Existing Uses)				**8,166.9**
SCAQMD Threshold				3,000
Exceed?				Yes

Source: Compiled by LSA (February 2024).
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
MT/yr = metric tons per year
N_2O = nitrous oxide
SCAQMD = South Coast Air Quality Management District

As discussed above, according to SCAQMD, a project would have less than significant GHG emissions if it would result in operational-related GHG emissions of less than 3,000 MT CO_2e/yr. Based on the analysis results, full buildout of the development envisioned under the proposed project would result in a net increase of 8,166.9 MT CO_2e/yr, which would exceed the SCAQMD threshold of 3,000 MT CO_2e/yr.

However, before development can occur, once a specific development project is proposed, it would be required to be analyzed for conformance with the General Plan, zoning requirements, and other applicable local and State requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits. As demonstrated above, the likely scale and extent of build out

associated with future projects would likely exceed the SCAQMD thresholds. As such, implementation of Mitigation Measure GHG-1 would require a project-specific assessment of potential GHG impacts and implementation of feasible mitigation measures to reduce GHG emissions.

Mitigation Measure GHG-1 Prior to discretionary approval by the City of Tustin (City) for residential development projects subject to California Environmental Quality Act (CEQA) review, project applicants shall prepare and submit a technical assessment evaluating potential project-related greenhouse gas (GHG) impacts to the City for review and approval. The evaluation shall be prepared in conformance with South Coast Air Quality Management District (SCAQMD) methodology. If project-related GHG emissions exceed applicable SCAQMD thresholds of significance and/or Statewide GHG reduction targets, the City shall require that applicants for new development projects incorporate mitigation measures to reduce GHG emissions. Mitigation measures could include, but are not limited, to energy efficiency measures, water conservation and efficiency measures, solid waste measures, and transportation and motor vehicles measures. The identified measures shall be included as part of the conditions of approval.

While Mitigation Measure GHG-1 would serve to reduce GHG emissions associated with buildout of the project, GHG emission impacts would remain significant and unavoidable because compliance with future efficiency targets cannot be assured.

Consistency with Greenhouse Gas Emissions Reduction Plans

An evaluation of the proposed project's consistency with the 2022 Scoping Plan and the 2024–2050 RTP/SCS is provided below.

2022 Scoping Plan

The following discussion evaluates the proposed project according to the goals of the 2022 Scoping Plan, EO B-30-15, AB 1279, SB 32, and AB 197.

EO B-30-15 added the immediate target of reducing GHG emissions to 40 percent below 1990 levels by 2030. CARB released a second update to the Scoping Plan, the 2017 Scoping Plan, to reflect the 2030 target set by EO B-30-15 and codified by SB 32. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in EO B-30-15. SB 32 builds on AB 32 and keeps us on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels. The companion bill to SB 32, AB 197, provides additional direction to the CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 intended to provide easier public access to air emissions data that are collected by CARB was posted in December 2016. AB 1279 establishes State policy to achieve net zero GHG emissions no later than 2045 and for

Statewide anthropogenic GHG emissions to be reduced to at least 85 percent below 1990 levels by 2045.

In addition, the 2022 Scoping Plan assesses progress toward the statutory 2030 target, while laying out a path to achieving carbon neutrality no later than 2045. The 2022 Scoping Plan focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

The 2022 Scoping Plan focuses on building clean energy production and distribution infrastructure for a carbon-neutral future, including transitioning existing energy production and transmission infrastructure to produce zero-carbon electricity and hydrogen, and utilizing biogas resulting from wildfire management or landfill and dairy operations, among other substitutes. The 2022 Scoping Plan states that in almost all sectors, electrification will play an important role. The 2022 Scoping Plan evaluates clean energy and technology options and the transition away from fossil fuels, including adding four times the solar and wind capacity by 2045 and about 1,700 times the amount of current hydrogen supply. As discussed in the 2022 Scoping Plan, EO N-79-20 requires that all new passenger vehicles sold in California will be zero-emission by 2035, and all other fleets will have transitioned to zero-emission as fully possible by 2045, which will reduce the percentage of fossil fuel combustion vehicles.

Energy efficient measures are intended to maximize energy efficiency building and appliance standards, pursue additional efficiency efforts including new technologies and new policy and implementation mechanisms, and pursue comparable investment in energy efficiency from all retail providers of electricity in California. In addition, these measures are designed to expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings. As identified above, buildout of the proposed project would be required to comply with the latest Title 24 and CALGreen Code standards regarding energy conservation and green building standards.. Therefore, the proposed project would comply with applicable energy measures.

Water conservation and efficiency measures are intended to continue efficiency programs and use cleaner energy sources to move and treat water. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions. As noted above, buildout associated with the proposed project would be required to comply with the latest Title 24 and CALGreen Code standards, which include a variety of different measures, including reduction of wastewater and water use. In addition, the project would be required to comply with the California Model Water Efficient Landscape Ordinance. Therefore, the proposed project would not conflict with any of the water conservation and efficiency measures.

The goal of transportation and motor vehicle measures is to develop regional GHG emissions reduction targets for passenger vehicles. Specific regional emission targets for transportation emissions would not directly apply to the proposed project. The second phase of Pavley standards will reduce GHG emissions from new cars by 34 percent from 2016 levels by 2025, resulting in a 3 percent decrease in average vehicle emissions for all vehicles by 2020. Vehicles traveling to the

project site would comply with the Pavley II (LEV III) Advanced Clean Cars Program. Therefore, the proposed project would not conflict with the identified transportation and motor vehicle measures.

2024–2050 Regional Transportation Plan/Sustainable Communities Strategy

SCAG's 2024–2050 RTP/SCS identifies that land use strategies that focus on new housing and job growth in areas served by high quality transit and other opportunity areas would be consistent with a land use development pattern that supports and complements the proposed transportation network. The core vision in the 2024–2050 RTP/SCS is to better manage the existing transportation system through design management strategies, integrate land use decisions and technological advancements, create complete streets that are safe to all roadway users, preserve the transportation system, and expand transit and foster development in transit oriented communities. The 2024–2050 RTP/SCS contains transportation projects to help more efficiently distribute population, housing, and employment growth, as well as forecast development that is generally consistent with regional-level general plan data. The forecasted development pattern, when integrated with the financially constrained transportation investments identified in the 2024–2050 RTP/SCS, would reach the GHG emissions reduction target set by CARB, including the regional target of reducing GHG emissions from autos and light-duty trucks by 19 percent by 2035 (compared to 2005 levels). The 2024–2050 RTP/SCS does not require that local General Plans, Specific Plans, or zoning be consistent with the 2024–2050 RTP/SCS but provides incentives for consistency for governments and developers.

The objectives of the 2024–2050 RTP/SCS are to create a region with: transit as a backbone of the transportation system; more Complete Streets where people and safety are prioritized; policies that encourage emerging technologies and mobility innovations that support rather than hamper regional goals; more housing, jobs, and mobility options closer together in Priority Development Areas to preserve natural lands and open spaces; more housing to address the existing housing need as defined by the RHNA; safe and fluid movement of goods, with a commitment to the broad deployment of zero- and near-zero emission technologies.

With respect to determining the proposed project's consistency with AQMP growth assumptions, the projections in the AQMP for achieving air quality goals are based on assumptions in SCAG's 2024–2050 RTP/SCS regarding population, housing, and growth trends. According to SCAG's 2024–2050 RTP/SCS, in 2019, the City's population was 80,400 residents and the City had 27,000 households and 51,700 jobs. Households are forecast to increase by approximately 6,800 households by 2035 and 7,000 households by 2050 and employment are forecast to increase by approximately 14,600 jobs by 2035 and 19,600 jobs by 2050.[51]

As identified in the Project Description, the City's 2021–2029 Housing Element identifies several adequate sites that are able to accommodate the development of up to 900 additional housing units for the City to meet its estimated housing growth needs identified in the SCAG's RHNA allocation. Of the Housing Element inventory sites, The Market Place (the project site) was identified as necessary for rezoning under Housing Element Program 1.1f to allow for high density residential/mixed use

[51] SCAG. 2024. *Connect SoCal 2024 Demographics & Growth Forecast.* Website: https://scag.ca.gov/sites/main/files/file-attachments/23-2987-tr-demographics-growth-forecast-final-040424.pdf?1712261839 (accessed May 2024).

development. The proposed project would accommodate up to 900 housing units to help the City meet its RHNA allocation.

The development of 900 housing units would result in approximately 2,592 additional residents based on the estimated 2.88 persons per household[52] average in Tustin. Future development implemented in accordance with the proposed Housing Overlay Zone would accommodate planned regional housing growth included in the SCAG RHNA and would be required to adhere to the City's General Plan. Therefore, since the purpose of the proposed project is to accommodate planned regional housing growth included in the SCAG RHNA, the proposed project would not exceed the growth assumptions in the SCAG's 2024–2050 RTP/SCS or the AQMP. Based on the nature of the proposed project, it is anticipated that implementation of the proposed project would not interfere with SCAG's ability to implement the regional strategies outlined in the 2024–2050 RTP/SCS.

Implementing SCAG's 2024–2050 RTP/SCS will greatly reduce the regional GHG emissions from transportation, helping to achieve statewide emissions reduction targets. The proposed project would not interfere with SCAG's ability to achieve the region's GHG reduction target of 19 percent below 2005 per capita emissions levels by 2035. As identified above, the proposed project would help the City meet its RHNA allocation, which is consistent with SCAG's objectives to provide more housing in Priority Development Areas to preserve natural lands and open spaces and to address the existing housing need as defined by the RHNA. As such, the proposed project would be consistent with SCAG's 2024–2050 RTP/SCS.

Although the proposed project would be consistent with the identified measures and goals from the 2022 Scoping Plan and 2024–2050 RTP/SCS, the proposed project would result in a significant and unavoidable impact for GHG emissions based on SCAQMD thresholds. As such, the proposed project would not comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in the 2022 Scoping Plan, EO B-30-15, and AB 197 and would not be consistent with applicable State plans and programs designed to reduce GHG emissions. Therefore, the proposed project would conflict with applicable plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs.

CUMULATIVE IMPACTS

This section presents information regarding potential cumulative impacts associated with the proposed project. As defined in the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area. Below is a list of cumulative projects; however, because of the lack of available emissions data for the cumulative projects, cumulative emissions were not evaluated quantitatively. Table R lists the cumulative projects and provides a brief description and the distances from the project site.

[52] State of California, Department of Finance. 2023. *E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change*. May.

Table R: Cumulative Projects List

Project	Project Address	Project Description	Distance from Project Site
City of Santa Ana Projects			
Warner/Redhill (The Bowery)	2300 Red Hill Avenue, Santa Ana, CA	Demolition of three industrial buildings (approximately 154,096 sq ft) and construction of a mixed-use development with 1,100 multi-family residential units and approximately 80,000 sq ft of commercial space.	2.43 miles (12,830 feet)
PacifiCenter New Building	1700 St. Andrew Place, Santa Ana, CA	Demolition of an office building (approximately 171,330 sq ft) and construction of three separate industrial buildings totaling 161,500 sq ft and comprising of a combination of warehouse, manufacturing, and office uses.	2.70 miles (14,255 feet)
Bristol Office Plaza New Building	1400 St. Gertrude Place, Santa Ana, CA	Construction of a new single-story commercial building totaling 7,000 sq ft, surface parking, and landscape/open space area. The commercial building would be used for professional/medical offices and include a pharmacy.	5.09 miles (26,875 feet)
Anchor Stone Christian Church	2938 Daimler Street, Santa Ana, CA	Convert existing 3,843 sq ft of office space to a church.	3.32 miles (17,530 feet)
Park 55 Development	1221 Dyer Road, Santa Ana, CA	Demolish two industrial buildings (approximately 157,000 sq ft) and construct 3 new industrial buildings. Building one would be 69,300 sq ft, building two would be 47,300 sq ft, and building three would be 59,400 sq ft.	3.47 miles (18,320 feet)
City of Tustin Projects			
Tustin Legacy Specific Plan Amendment	Portion of Neighborhood D South Tustin, CA	A total of 2,211 additional dwelling units within the Tustin Legacy Specific Plan.	1.68 miles
The Landing at Tustin Legacy	Portion of Neighborhood D South Tustin, CA	114 three-story detached homes, 117 three-story triplex townhomes, and 176 stacked flats and townhomes.	1.68 miles
ATEP - Goddard Preschool	1629 Victory Road, Tustin, CA	New construction of 14,689 sq ft preschool (26 staff, 220 kids).	1.94 miles
ATEP - Saddleback Buildings	1634 Valencia Avenue, Tustin, CA	Two new educational buildings: 20,950 sq ft culinary arts and 36,700 sq ft auto tech.	1.88 miles
ATEP - Advantech NA Campus	Red Hill Avenue and Victory Road, Tustin, CA	New 6-story, 108,942 sq ft headquarters office building and 2-story, 78,837 sq ft warehouse facility on an approximately 10-acre property.	2.20 miles
ATEP - Legacy Medical Plaza	Red Hill Avenue and Victory Road, Tustin, CA	Two-story medical office building of approximately 50,000 sq ft.	2.20 miles
The Hill Mixed Use Project	13751 and 13841 Red Hill Avenue, Tustin, CA	New mixed-use project, including 137 residential rental units and 7,000 sq ft of retail space.	1.18 miles
Farmers and Merchants Bank	13612 Newport Avenue, Tustin, CA	Demolition of an existing 5,485 sq ft restaurant to construct a new 6,315 sq ft bank.	1.65 miles
City Ventures	14042 Newport Avenue, Tustin, CA	New construction of 42 residential units (including 7 live/work) on a vacant parcel.	1.65 miles
Warner Corporate Plaza	1371 Warner Avenue, Tustin, CA	Extensive renovation of existing 11-building business park, and includes approximately 19,000	2.38 miles

Table R: Cumulative Projects List

Project	Project Address	Project Description	Distance from Project Site
		sq ft of additions to office buildings and various site improvements.	
Centurion Plaza Redevelopment	15661 Red Hill Avenue, Tustin, CA	Redevelopment of site with two new industrial warehouse buildings (142,690 sq ft total).	2.20 miles
New industrial buildings	1100 Valencia and 1101 Bell, Tustin, CA	Redevelopment of site with two new industrial buildings (133,940 sq ft and 177,830 sq ft).	2.42 miles
Panatoni 2 Industrial Building	14321 and 14351 Myford, Tustin, CA	Redevelopment of site with new 148,437 sq ft industrial building.	0.43 mile
Conceptual Industrial Redevelopment	14511 Myford, Tustin, CA	Addition to existing industrial warehouse (43,579 sq ft existing, 103,480 sq ft proposed).	0.60 mile
City of Irvine Projects			
184-unit apartment building	2602 McGaw Avenue, Irvine, CA	Project is 75-foot tall, 7-story residential building comprised of 5 levels of residential units on top of 2 levels of above-ground parking structure, including 24,430 sq ft single-story office/warehouse building (7,932 sq ft of office and 16,498 sq ft of industrial) would be demolished to allow for the residential development.	3.30 miles
New childcare facility associated with Westcliff University	2941 Alton Parkway, Irvine, CA	The project would include a new childcare facility associated with Westcliff University, including a 3,441 sq ft athletics office, 4,634 sq ft athletics therapy, and 14,292 sq ft preschool, totaling 22,367 sq ft.	3.00 miles

Source: EPD Solutions, Inc. (February 2024).

Cumulative Air Quality Impacts

The cumulative impact area for air quality related to the proposed project is the South Coast Air Basin. Each project in the Basin is required to comply with SCAQMD rules and regulations and is subject to independent review. Future development that may take place with implementation of the project would contribute criteria pollutants to the area during project construction and operation.

The Basin is currently designated as a nonattainment area for the federal O_3 standard and $PM_{2.5}$ standard and as a nonattainment area for the State O_3, PM_{10}, and $PM_{2.5}$ standard. Thus, the Basin has not met the federal and State standards for these air pollutants. As identified above, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

Air pollution is inherently a cumulative type of impact measured across an air basin. The Air Quality Impacts section above includes an analysis of the proposed project's contribution to cumulative air impacts. As demonstrated above, construction emissions associated with the proposed project would not exceed the SCAQMD thresholds for VOCs, NO_X, CO, SO_X, $PM_{2.5,}$ or PM_{10} emissions. Additionally, operational impacts from criteria pollutant emissions would also not exceed SCAQMD thresholds. Therefore, air quality emissions associated with future development that may occur under the proposed project would not result in cumulatively considerable impact.

Cumulative Energy Impacts

The geographic area for cumulative analysis of electricity is that of the SCE service area, while the geographic area for cumulative analysis of natural gas service is that of the SoCalGas service area. Construction of the additional 900 housing units and remaining commercial buildout capacity associated with the proposed project would result in an increased services demand in electricity and natural gas. Although the proposed project would result in an increase in demand for electricity, this increase would not require SCE to expand or construct infrastructure that could cause substantial environmental impacts. As discussed previously, total electricity consumption in the SCE service area in 2022 was 85,870 GWh. By 2030, consumption is anticipated to increase by 12,000 GWh for the low-demand scenario and by 22,000 GWh for the high-demand scenario.[53] While this forecast represents a large increase in electricity consumption, the proposed project's share of cumulative consumption would be negligible. The proposed project, in combination with cumulative development, is well within SCE's system-wide net annual increase in electricity supplies over the 2018 to 2030 period, and there are sufficient planned electricity supplies in the region for estimated net increases in energy demands.

Similarly, additional natural gas infrastructure is not anticipated due to cumulative development. Total natural gas consumption in the SoCalGas service area in 2022 was 5,026 million therms. Between 2018 and 2030, total natural gas consumption in the SoCalGas service area is forecast to remain steady for the low- and mid-demand scenarios and to increase by approximately 650 million therms in the high-demand scenario due to intense energy efficiency efforts.[54] The proposed project's share of cumulative consumption of natural gas in the SoCalGas service area would be negligible. It is anticipated that SoCalGas would be able to meet the natural gas demand of cumulative development without additional facilities. In addition, both SCE and SoCalGas demand forecasts include the growth contemplated by the proposed project and the other cumulative development within their respective service areas. Increased energy efficiency to comply with building energy efficiency standards would reduce energy consumption on a per-square-foot basis. Furthermore, utility companies are required to increase their renewable energy sources to meet the Renewable Portfolio Standards mandate of 60 percent renewable supplies by 2030. SCE and

53 CEC. 2018. *California Energy Demand, 2018–2030 Revised Forecast*. Publication Number: CEC-200-2018-002-CMF. February. Website: https://efiling.energy.ca.gov/getdocument.aspx?tn=223244 (accessed February 2024).

54 CEC. 2018. *California Energy Demand, 2018–2030 Revised Forecast.* Publication Number: CEC-200-2018-002-CMF. February. Website: https://efiling.energy.ca.gov/getdocument.aspx?tn=223244 (accessed February 2024).

SoCalGas plan to continue to provide reliable service to their customers and upgrade their distribution systems as necessary to meet future demand.

Transportation energy use would also increase; however, this transportation energy use would not represent a major amount of energy use compared to the amount of existing development and to the total number of vehicle trips and VMT throughout Orange County and the region. The proposed project and cumulative development are required to comply with various federal and State government legislation to improve energy efficiency in buildings, equipment, and appliances, and reduce VMT.

As such, the proposed project would not result in an inefficient, wasteful, and unnecessary consumption of energy. Therefore, the proposed project's contribution to impacts related to the inefficient, wasteful, and unnecessary consumption of energy would not be cumulatively considerable.

Cumulative Greenhouse Gas Impacts

GHG impacts are by their nature cumulative impacts. Localized impacts of climate change are the result of the cumulative impact of global emissions. The combined benefits of reductions achieved by all levels of government help to slow or reverse the growth in GHG emissions. In the absence of comprehensive international agreements on appropriate levels of reductions achieved by each country, another measure of cumulative contribution is required. This serves to define the State's share of the reductions regardless of the activities or lack of activities of other areas of the U.S. or the world. Therefore, a cumulative threshold based on consistency with State targets and actions to reduce GHGs is an appropriate standard of comparison for significance determinations.

As previously stated, GHG emissions associated with the buildout under the proposed project would exceed the SCAQMD threshold of 3,000 MT CO_2e/yr. Since GHG is a global issue, it is unlikely that the proposed project would generate enough GHG emissions to influence GHG emissions on its own; however, because project-related CO_2e emissions would exceed the SCAQMD's threshold, the proposed project would have a significant contribution to cumulatively considerable GHG emission impacts.

CONCLUSION

Based on the analysis presented above, construction and operation of the proposed project would not result in the generation of criteria air pollutants that would exceed SCAQMD thresholds of significance. Compliance with SCAQMD Rule 403 would further reduce construction dust impacts. In addition, the proposed project is not expected to produce significant emissions that would affect nearby sensitive receptors. The project would also not result in other emissions (such as those leading to odors) affecting a substantial number of people. In addition, the proposed project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation and would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Operation of the proposed project would generate GHG emissions that would have a significant effect on the environment and would therefore not be consistent with the 2024–2050 RTP/SCS or the goals of the 2022 Scoping Plan.

APPENDIX A

CALEEMOD OUTPUT SHEETS

The Market Place - Proposed Project (Construction) Custom Report

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1.1. Basic Project Information

Data Field	Value
Project Name	The Market Place - Proposed Project (Construction)
Construction Start Date	10/7/2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	2.20
Location	2961 El Camino Real, Tustin, CA 92782, USA
County	Orange
City	Tustin
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5935
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.21

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Apartments Mid Rise	900	Dwelling Unit	18.0	864,000	0.00	—	2,682	—

High Turnover (Sit Down Restaurant)	13.0	1000sqft	0.20	13,032	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	55.8	24.4	52.5	0.05	0.71	9.38	10.1	0.66	2.23	2.90	—	14,208	14,208	0.37	0.76	14,487
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	58.8	86.5	57.3	0.19	2.11	25.5	27.6	1.94	7.22	9.16	—	25,952	25,952	1.70	2.77	26,820
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	12.8	17.8	35.3	0.03	0.51	6.76	7.27	0.48	1.61	2.09	—	9,995	9,995	0.28	0.55	10,178
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.33	3.25	6.44	0.01	0.09	1.23	1.33	0.09	0.29	0.38	—	1,655	1,655	0.05	0.09	1,685

2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.03	24.4	52.5	0.05	0.71	9.38	10.1	0.66	2.23	2.90	—	14,208	14,208	0.37	0.76	14,487
2026	55.8	1.49	7.85	< 0.005	0.07	1.71	1.77	0.06	0.40	0.46	—	1,835	1,835	0.03	0.06	1,861
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.24	86.5	57.3	0.19	2.11	25.5	27.6	1.94	7.22	9.16	—	25,952	25,952	1.70	2.77	26,820
2025	58.8	48.9	53.9	0.06	1.36	11.1	11.8	1.23	2.64	3.30	—	15,440	15,440	0.41	0.83	15,698
2026	58.7	26.0	52.5	0.05	0.78	11.1	11.9	0.72	2.64	3.36	—	15,335	15,335	0.39	0.83	15,592
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.24	8.96	6.11	0.02	0.22	1.98	2.20	0.20	0.50	0.70	—	2,394	2,394	0.15	0.23	2,468
2025	4.74	17.8	35.3	0.03	0.51	6.76	7.27	0.48	1.61	2.09	—	9,995	9,995	0.28	0.55	10,178
2026	12.8	3.80	7.43	0.01	0.13	1.44	1.56	0.12	0.34	0.46	—	2,016	2,016	0.05	0.10	2,050
2027	—	—	—	—	—	—	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.04	1.64	1.11	< 0.005	0.04	0.36	0.40	0.04	0.09	0.13	—	396	396	0.02	0.04	409
2025	0.87	3.25	6.44	0.01	0.09	1.23	1.33	0.09	0.29	0.38	—	1,655	1,655	0.05	0.09	1,685
2026	2.33	0.69	1.36	< 0.005	0.02	0.26	0.29	0.02	0.06	0.08	—	334	334	0.01	0.02	339
2027	—	—	—	—	—	—	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.72	24.9	18.2	0.03	0.79	—	0.79	0.71	—	0.71	—	3,425	3,425	0.14	0.03	3,437
Demolition	—	—	—	—	—	13.1	13.1	—	1.98	1.98	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	2.05	1.49	< 0.005	0.06	—	0.06	0.06	—	0.06	—	282	282	0.01	< 0.005	282
Demolition	—	—	—	—	—	1.08	1.08	—	0.16	0.16	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.37	0.27	< 0.005	0.01	—	0.01	0.01	—	0.01	—	46.6	46.6	< 0.005	< 0.005	46.8
Demolition	—	—	—	—	—	0.20	0.20	—	0.03	0.03	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.07	0.78	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	193	193	< 0.005	0.01	196
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Hauling	0.33	21.6	9.17	0.11	0.21	4.29	4.50	0.21	1.20	1.41	—	16,812	16,812	1.34	2.68	17,645
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.1	16.1	< 0.005	< 0.005	16.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	1.79	0.75	0.01	0.02	0.35	0.37	0.02	0.10	0.12	—	1,382	1,382	0.11	0.22	1,451
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.67	2.67	< 0.005	< 0.005	2.70
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.33	0.14	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	229	229	0.02	0.04	240

3.3. Site Preparation (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	39.9	28.3	0.05	1.12	—	1.12	1.02	—	1.02	—	5,296	5,296	0.21	0.04	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	1.09	0.78	< 0.005	0.03	—	0.03	0.03	—	0.03	—	145	145	0.01	< 0.005	146
Dust From Material Movement	—	—	—	—	—	0.21	0.21	—	0.11	0.11	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.20	0.14	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	24.1
Dust From Material Movement	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.08	0.91	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	226	226	< 0.005	0.01	228
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.27	6.27	< 0.005	< 0.005	6.35
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.04	1.04	< 0.005	< 0.005	1.05

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.33	48.8	35.3	0.06	1.36	—	1.36	1.23	—	1.23	—	6,598	6,598	0.27	0.05	6,621
Dust From Material Movement	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	4.01	2.91	0.01	0.11	—	0.11	0.10	—	0.10	—	542	542	0.02	< 0.005	544
Dust From Material Movement	—	—	—	—	—	0.30	0.30	—	0.12	0.12	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.73	0.53	< 0.005	0.02	—	0.02	0.02	—	0.02	—	89.8	89.8	< 0.005	< 0.005	90.1

Dust From Material Movement	—	—	—	—	—	0.05	0.05	—	0.02	0.02	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.09	1.04	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	258	258	< 0.005	0.01	261
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	21.5	21.5	< 0.005	< 0.005	21.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.56	3.56	< 0.005	< 0.005	3.61
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.7. Grading (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.33	48.8	35.3	0.06	1.36	—	1.36	1.23	—	1.23	—	6,599	6,599	0.27	0.05	6,622
Dust From Material Movement	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.10	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.9	12.9	< 0.005	< 0.005	13.0
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.14	2.14	< 0.005	< 0.005	2.15
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.08	0.97	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	253	253	< 0.005	0.01	256
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.50	0.50	< 0.005	< 0.005	0.51
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 0.005	0.08
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	18.9	14.3	0.02	0.69	—	0.69	0.64	—	0.64	—	2,398	2,398	0.10	0.02	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.62	18.9	14.3	0.02	0.69	—	0.69	0.64	—	0.64	—	2,398	2,398	0.10	0.02	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	13.4	10.2	0.02	0.49	—	0.49	0.46	—	0.46	—	1,708	1,708	0.07	0.01	1,714
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	2.45	1.86	< 0.005	0.09	—	0.09	0.08	—	0.08	—	283	283	0.01	< 0.005	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.32	2.27	36.6	0.00	0.00	8.54	8.54	0.00	2.00	2.00	—	8,675	8,675	0.10	0.31	8,802
Vendor	0.09	3.26	1.62	0.02	0.02	0.84	0.86	0.02	0.23	0.25	—	3,135	3,135	0.18	0.44	3,278
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.31	2.58	31.6	0.00	0.00	8.54	8.54	0.00	2.00	2.00	—	8,255	8,255	0.12	0.31	8,351
Vendor	0.08	3.38	1.66	0.02	0.02	0.84	0.86	0.02	0.23	0.25	—	3,137	3,137	0.18	0.44	3,271
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.62	1.83	23.6	0.00	0.00	6.08	6.08	0.00	1.42	1.42	—	5,961	5,961	0.08	0.22	6,039
Vendor	0.06	2.43	1.17	0.02	0.02	0.60	0.61	0.02	0.17	0.18	—	2,234	2,234	0.13	0.31	2,332

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.30	0.33	4.30	0.00	0.00	1.11	1.11	0.00	0.26	0.26	—	987	987	0.01	0.04	1,000
Vendor	0.01	0.44	0.21	< 0.005	< 0.005	0.11	0.11	< 0.005	0.03	0.03	—	370	370	0.02	0.05	386
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	18.9	14.3	0.02	0.69	—	0.69	0.64	—	0.64	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	2.11	1.60	< 0.005	0.08	—	0.08	0.07	—	0.07	—	267	267	0.01	< 0.005	268
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.38	0.29	< 0.005	0.01	—	0.01	0.01	—	0.01	—	44.3	44.3	< 0.005	< 0.005	44.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.20	2.28	29.7	0.00	0.00	8.54	8.54	0.00	2.00	2.00	—	8,098	8,098	0.12	0.31	8,194
Vendor	0.06	3.27	1.61	0.02	0.02	0.84	0.86	0.02	0.23	0.25	—	3,086	3,086	0.15	0.44	3,220
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.25	3.44	0.00	0.00	0.95	0.95	0.00	0.22	0.22	—	916	916	0.01	0.03	928
Vendor	0.01	0.37	0.18	< 0.005	< 0.005	0.09	0.10	< 0.005	0.03	0.03	—	344	344	0.02	0.05	359
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.05	0.63	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	152	152	< 0.005	0.01	154
Vendor	< 0.005	0.07	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	57.0	57.0	< 0.005	0.01	59.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.13. Paving (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.50	13.3	10.6	0.01	0.58	—	0.58	0.54	—	0.54	—	1,511	1,511	0.06	0.01	1,516
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.73	0.58	< 0.005	0.03	—	0.03	0.03	—	0.03	—	82.8	82.8	< 0.005	< 0.005	83.1
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	13.7	13.7	< 0.005	< 0.005	13.8
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.68	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	186	186	< 0.005	0.01	188
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.3	10.3	< 0.005	< 0.005	10.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.71	1.71	< 0.005	< 0.005	1.73
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.15. Architectural Coating (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	55.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	2.60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.47	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.46	0.52	6.33	0.00	0.00	1.71	1.71	0.00	0.40	0.40	—	1,651	1,651	0.02	0.06	1,670
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.31	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	78.6	78.6	< 0.005	< 0.005	79.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.0	13.0	< 0.005	< 0.005	13.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.17. Architectural Coating (2026) - Unmitigated

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

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

Off-Road Equipment	0.05	1.09	0.96	< 0.005	0.07	—	0.07	0.06	—	0.06	—	134	134	0.01	< 0.005	134
Architectural Coatings	55.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	1.09	0.96	< 0.005	0.07	—	0.07	0.06	—	0.06	—	134	134	0.01	< 0.005	134
Architectural Coatings	55.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.24	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	29.8	29.8	< 0.005	< 0.005	29.9
Architectural Coatings	12.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.93	4.93	< 0.005	< 0.005	4.95
Architectural Coatings	2.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.44	0.40	6.89	0.00	0.00	1.71	1.71	0.00	0.40	0.40	—	1,702	1,702	0.02	0.06	1,727
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.44	0.46	5.94	0.00	0.00	1.71	1.71	0.00	0.40	0.40	—	1,620	1,620	0.02	0.06	1,639
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.10	1.38	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	366	366	0.01	0.01	371
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.25	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	60.6	60.6	< 0.005	< 0.005	61.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	10/7/2024	11/16/2024	5.00	30.0	—
Site Preparation	Site Preparation	11/5/2024	11/19/2024	5.00	10.0	—
Grading	Grading	11/20/2024	1/1/2025	5.00	30.0	—
Building Construction	Building Construction	1/2/2025	2/26/2026	5.00	300	—
Paving	Paving	2/27/2026	3/27/2026	5.00	20.0	—
Architectural Coating	Architectural Coating	12/8/2025	4/24/2026	5.00	100	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Rubber Tired Dozers	Diesel	Tier 2	2.00	8.00	367	0.40
Demolition	Excavators	Diesel	Tier 2	3.00	8.00	36.0	0.38
Demolition	Concrete/Industrial Saws	Diesel	Tier 2	1.00	8.00	33.0	0.73
Site Preparation	Rubber Tired Dozers	Diesel	Tier 2	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 2	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Tier 2	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Tier 2	2.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 2	2.00	8.00	84.0	0.37
Grading	Scrapers	Diesel	Tier 2	2.00	8.00	423	0.48
Grading	Rubber Tired Dozers	Diesel	Tier 2	1.00	8.00	367	0.40

Building Construction	Forklifts	Diesel	Tier 2	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Tier 2	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Tier 2	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Tier 2	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 2	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Tier 2	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 2	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Tier 2	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Tier 2	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	237	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT

Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	653	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	98.3	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	131	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%
Sweep paved roads once per month	9%	9%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	1,749,600	583,200	19,548	6,516	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	28,423	—
Site Preparation	—	—	15.0	0.00	—
Grading	—	—	90.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%
High Turnover (Sit Down Restaurant)	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O

2024	0.00	532	0.03	< 0.005
2025	0.00	532	0.03	< 0.005
2026	0.00	532	0.03	< 0.005
2027	0.00	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

8. User Changes to Default Data

Screen	Justification

Construction: Construction Phases	Project construction could occur anytime between October 2024 and October 2029. Therefore, to be conservative, this analysis assumes a project construction schedule based on a start date of October 2024 and a default construction duration in CalEEMod and assuming architectural coating would overlap with building construction activities. The demolition phase was also extended due to the the extent of demolition activities (18 acres of existing parking lot).
Land Use	The project site could accommodate 900 units over approximately 18 acres of developable land within the existing 76.9-acre site.
Construction: Off-Road Equipment	Assuming the use of Tier 2 construction equipment.

The Market Place - Proposed Project (Operational) Custom Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	The Market Place - Proposed Project (Operational)
Operational Year	2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	2.20
Location	2961 El Camino Real, Tustin, CA 92782, USA
County	Orange
City	Tustin
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5935
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.21

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Apartments Mid Rise	900	Dwelling Unit	18.0	864,000	0.00	—	2,682	—

High Turnover (Sit Down Restaurant)	70.5	1000sqft	5.30	70,488	0.00	—	—	—
Health Club	23.7	1000sqft	1.80	23,662	0.00	—	—	—
Regional Shopping Center	662	1000sqft	51.5	661,528	0.00	—	—	—
General Office Building	4.56	1000sqft	0.30	4,559	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	171	106	1,046	2.37	3.01	203	206	2.89	51.6	54.5	1,464	272,410	273,874	160	9.82	281,866
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	160	113	903	2.28	2.93	203	206	2.83	51.6	54.4	1,464	263,278	264,742	161	10.3	271,970
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	165	103	975	2.23	2.03	203	205	1.92	51.5	53.5	1,464	250,853	252,316	161	10.3	259,915
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	30.2	18.7	178	0.41	0.37	37.1	37.4	0.35	9.41	9.75	242	41,531	41,774	26.6	1.70	43,032

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	122	86.6	952	2.25	1.43	203	205	1.33	51.6	52.9	—	229,254	229,254	11.3	9.13	233,195
Area	49.0	13.5	89.3	0.09	1.11	—	1.11	1.09	—	1.09	0.00	16,380	16,380	0.31	0.03	16,398
Energy	0.34	6.07	4.05	0.04	0.47	—	0.47	0.47	—	0.47	—	25,720	25,720	1.79	0.15	25,810
Water	—	—	—	—	—	—	—	—	—	—	204	1,055	1,259	21.0	0.50	1,934
Waste	—	—	—	—	—	—	—	—	—	—	1,260	0.00	1,260	126	0.00	4,409
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	120
Total	171	106	1,046	2.37	3.01	203	206	2.89	51.6	54.5	1,464	272,410	273,874	160	9.82	281,866
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	121	94.3	894	2.16	1.43	203	205	1.33	51.6	52.9	—	220,395	220,395	11.9	9.59	223,573
Area	38.9	12.7	5.40	0.08	1.03	—	1.03	1.03	—	1.03	0.00	16,108	16,108	0.30	0.03	16,124
Energy	0.34	6.07	4.05	0.04	0.47	—	0.47	0.47	—	0.47	—	25,720	25,720	1.79	0.15	25,810
Water	—	—	—	—	—	—	—	—	—	—	204	1,055	1,259	21.0	0.50	1,934
Waste	—	—	—	—	—	—	—	—	—	—	1,260	0.00	1,260	126	0.00	4,409
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	120
Total	160	113	903	2.28	2.93	203	206	2.83	51.6	54.4	1,464	263,278	264,742	161	10.3	271,970
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	120	95.2	914	2.18	1.43	203	204	1.33	51.5	52.9	—	222,787	222,787	11.8	9.61	226,350
Area	45.1	1.41	57.8	0.01	0.13	—	0.13	0.11	—	0.11	0.00	1,290	1,290	0.03	< 0.005	1,292
Energy	0.34	6.07	4.05	0.04	0.47	—	0.47	0.47	—	0.47	—	25,720	25,720	1.79	0.15	25,810
Water	—	—	—	—	—	—	—	—	—	—	204	1,055	1,259	21.0	0.50	1,934

Waste	—	—	—	—	—	—	—	—	—	—	1,260	0.00	1,260	126	0.00	4,409
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	120
Total	165	103	975	2.23	2.03	203	205	1.92	51.5	53.5	1,464	250,853	252,316	161	10.3	259,915
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	21.9	17.4	167	0.40	0.26	37.1	37.3	0.24	9.41	9.65	—	36,885	36,885	1.95	1.59	37,475
Area	8.24	0.26	10.6	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	214	214	< 0.005	< 0.005	214
Energy	0.06	1.11	0.74	0.01	0.09	—	0.09	0.09	—	0.09	—	4,258	4,258	0.30	0.03	4,273
Water	—	—	—	—	—	—	—	—	—	—	33.7	175	208	3.47	0.08	320
Waste	—	—	—	—	—	—	—	—	—	—	209	0.00	209	20.9	0.00	730
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.8
Total	30.2	18.7	178	0.41	0.37	37.1	37.4	0.35	9.41	9.75	242	41,531	41,774	26.6	1.70	43,032

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	13.9	10.6	118	0.29	0.18	26.0	26.2	0.17	6.60	6.76	—	29,199	29,199	1.36	1.12	29,688
High Turnover (Sit Down Restaurant)	24.9	17.5	192	0.45	0.29	40.9	41.2	0.27	10.4	10.6	—	46,129	46,129	2.30	1.85	46,925

Health Club	2.25	1.58	17.4	0.04	0.03	3.69	3.72	0.02	0.94	0.96	—	4,163	4,163	0.21	0.17	4,235
Regional Shopping Center	80.8	56.8	623	1.46	0.93	132	133	0.87	33.6	34.5	—	149,461	149,461	7.45	5.98	152,041
General Office Building	0.16	0.11	1.26	< 0.005	< 0.005	0.27	0.27	< 0.005	0.07	0.07	—	302	302	0.02	0.01	307
Total	122	86.6	952	2.25	1.43	203	205	1.33	51.6	52.9	—	229,254	229,254	11.3	9.13	233,195
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	13.8	11.6	110	0.27	0.18	26.0	26.2	0.17	6.60	6.76	—	28,065	28,065	1.42	1.18	28,455
High Turnover (Sit Down Restaurant)	24.7	19.1	181	0.43	0.29	40.9	41.2	0.27	10.4	10.6	—	44,347	44,347	2.41	1.94	44,990
Health Club	2.23	1.72	16.3	0.04	0.03	3.69	3.72	0.02	0.94	0.96	—	4,002	4,002	0.22	0.17	4,060
Regional Shopping Center	79.9	61.8	586	1.41	0.93	132	133	0.87	33.6	34.5	—	143,690	143,690	7.82	6.28	145,773
General Office Building	0.16	0.12	1.18	< 0.005	< 0.005	0.27	0.27	< 0.005	0.07	0.07	—	290	290	0.02	0.01	294
Total	121	94.3	894	2.16	1.43	203	205	1.33	51.6	52.9	—	220,395	220,395	11.9	9.59	223,573
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	2.50	2.14	20.5	0.05	0.03	4.74	4.77	0.03	1.20	1.23	—	4,697	4,697	0.23	0.20	4,770
High Turnover (Sit Down Restaurant)	4.47	3.51	33.7	0.08	0.05	7.45	7.50	0.05	1.89	1.94	—	7,422	7,422	0.40	0.32	7,541

Health Club	0.40	0.32	3.04	0.01	< 0.005	0.67	0.68	< 0.005	0.17	0.18	—	670	670	0.04	0.03	681
Regional Shopping Center	14.5	11.4	109	0.26	0.17	24.1	24.3	0.16	6.13	6.29	—	24,047	24,047	1.28	1.04	24,434
General Office Building	0.03	0.02	0.22	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	48.5	48.5	< 0.005	< 0.005	49.3
Total	21.9	17.4	167	0.40	0.26	37.1	37.3	0.24	9.41	9.65	—	36,885	36,885	1.95	1.59	37,475

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	4,809	4,809	0.30	0.04	4,827
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	3,558	3,558	0.22	0.03	3,571
Health Club	—	—	—	—	—	—	—	—	—	—	—	331	331	0.02	< 0.005	332
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	9,469	9,469	0.59	0.07	9,505
General Office Building	—	—	—	—	—	—	—	—	—	—	—	118	118	0.01	< 0.005	119
Total	—	—	—	—	—	—	—	—	—	—	—	18,285	18,285	1.13	0.14	18,354

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	4,809	4,809	0.30	0.04	4,827
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	3,558	3,558	0.22	0.03	3,571
Health Club	—	—	—	—	—	—	—	—	—	—	—	331	331	0.02	< 0.005	332
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	9,469	9,469	0.59	0.07	9,505
General Office Building	—	—	—	—	—	—	—	—	—	—	—	118	118	0.01	< 0.005	119
Total	—	—	—	—	—	—	—	—	—	—	—	18,285	18,285	1.13	0.14	18,354
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	796	796	0.05	0.01	799
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	589	589	0.04	< 0.005	591
Health Club	—	—	—	—	—	—	—	—	—	—	—	54.8	54.8	< 0.005	< 0.005	55.0
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	1,568	1,568	0.10	0.01	1,574
General Office Building	—	—	—	—	—	—	—	—	—	—	—	19.6	19.6	< 0.005	< 0.005	19.7
Total	—	—	—	—	—	—	—	—	—	—	—	3,027	3,027	0.19	0.02	3,039

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.15	2.52	1.07	0.02	0.20	—	0.20	0.20	—	0.20	—	3,204	3,204	0.28	0.01	3,213
High Turnover (Sit Down Restaurant)	0.12	2.18	1.83	0.01	0.17	—	0.17	0.17	—	0.17	—	2,601	2,601	0.23	< 0.005	2,608
Health Club	0.01	0.27	0.23	< 0.005	0.02	—	0.02	0.02	—	0.02	—	325	325	0.03	< 0.005	325
Regional Shopping Center	0.06	1.06	0.89	0.01	0.08	—	0.08	0.08	—	0.08	—	1,269	1,269	0.11	< 0.005	1,273
General Office Building	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	37.0	37.0	< 0.005	< 0.005	37.1
Total	0.34	6.07	4.05	0.04	0.47	—	0.47	0.47	—	0.47	—	7,435	7,435	0.66	0.01	7,456
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.15	2.52	1.07	0.02	0.20	—	0.20	0.20	—	0.20	—	3,204	3,204	0.28	0.01	3,213
High Turnover (Sit Down Restaurant)	0.12	2.18	1.83	0.01	0.17	—	0.17	0.17	—	0.17	—	2,601	2,601	0.23	< 0.005	2,608
Health Club	0.01	0.27	0.23	< 0.005	0.02	—	0.02	0.02	—	0.02	—	325	325	0.03	< 0.005	325

Regional Shopping Center	0.06	1.06	0.89	0.01	0.08	—	0.08	0.08	—	0.08	—	1,269	1,269	0.11	< 0.005	1,273
General Office Building	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	37.0	37.0	< 0.005	< 0.005	37.1
Total	0.34	6.07	4.05	0.04	0.47	—	0.47	0.47	—	0.47	—	7,435	7,435	0.66	0.01	7,456
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.03	0.46	0.20	< 0.005	0.04	—	0.04	0.04	—	0.04	—	530	530	0.05	< 0.005	532
High Turnover (Sit Down Restaurant)	0.02	0.40	0.33	< 0.005	0.03	—	0.03	0.03	—	0.03	—	431	431	0.04	< 0.005	432
Health Club	< 0.005	0.05	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	53.7	53.7	< 0.005	< 0.005	53.9
Regional Shopping Center	0.01	0.19	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	210	210	0.02	< 0.005	211
General Office Building	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.13	6.13	< 0.005	< 0.005	6.15
Total	0.06	1.11	0.74	0.01	0.09	—	0.09	0.09	—	0.09	—	1,231	1,231	0.11	< 0.005	1,234

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

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

Hearths	0.74	12.7	5.40	0.08	1.03	—	1.03	1.03	—	1.03	0.00	16,108	16,108	0.30	0.03	16,124
Consumer Products	34.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	3.41	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	10.1	0.79	83.9	< 0.005	0.09	—	0.09	0.06	—	0.06	—	272	272	0.01	< 0.005	273
Total	49.0	13.5	89.3	0.09	1.11	—	1.11	1.09	—	1.09	0.00	16,380	16,380	0.31	0.03	16,398
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.74	12.7	5.40	0.08	1.03	—	1.03	1.03	—	1.03	0.00	16,108	16,108	0.30	0.03	16,124
Consumer Products	34.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	3.41	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	38.9	12.7	5.40	0.08	1.03	—	1.03	1.03	—	1.03	0.00	16,108	16,108	0.30	0.03	16,124
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.01	0.16	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	183	183	< 0.005	< 0.005	183
Consumer Products	6.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.62	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.26	0.10	10.5	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.9	30.9	< 0.005	< 0.005	31.0
Total	8.24	0.26	10.6	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	214	214	< 0.005	< 0.005	214

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	64.7	335	400	6.66	0.16	614
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	41.0	212	253	4.22	0.10	389
Health Club	—	—	—	—	—	—	—	—	—	—	2.68	13.9	16.6	0.28	0.01	25.4
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	93.9	486	580	9.66	0.23	891
General Office Building	—	—	—	—	—	—	—	—	—	—	1.55	8.04	9.59	0.16	< 0.005	14.7
Total	—	—	—	—	—	—	—	—	—	—	204	1,055	1,259	21.0	0.50	1,934
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	64.7	335	400	6.66	0.16	614
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	41.0	212	253	4.22	0.10	389

Health Club	—	—	—	—	—	—	—	—	—	—	2.68	13.9	16.6	0.28	0.01	25.4
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	93.9	486	580	9.66	0.23	891
General Office Building	—	—	—	—	—	—	—	—	—	—	1.55	8.04	9.59	0.16	< 0.005	14.7
Total	—	—	—	—	—	—	—	—	—	—	204	1,055	1,259	21.0	0.50	1,934
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	10.7	55.5	66.2	1.10	0.03	102
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	6.79	35.1	41.9	0.70	0.02	64.4
Health Club	—	—	—	—	—	—	—	—	—	—	0.44	2.30	2.74	0.05	< 0.005	4.21
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	15.5	80.5	96.0	1.60	0.04	147
General Office Building	—	—	—	—	—	—	—	—	—	—	0.26	1.33	1.59	0.03	< 0.005	2.44
Total	—	—	—	—	—	—	—	—	—	—	33.7	175	208	3.47	0.08	320

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	359	0.00	359	35.8	0.00	1,255
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	452	0.00	452	45.2	0.00	1,582
Health Club	—	—	—	—	—	—	—	—	—	—	72.7	0.00	72.7	7.26	0.00	254
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	374	0.00	374	37.4	0.00	1,310
General Office Building	—	—	—	—	—	—	—	—	—	—	2.29	0.00	2.29	0.23	0.00	7.99
Total	—	—	—	—	—	—	—	—	—	—	1,260	0.00	1,260	126	0.00	4,409
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	359	0.00	359	35.8	0.00	1,255
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	452	0.00	452	45.2	0.00	1,582
Health Club	—	—	—	—	—	—	—	—	—	—	72.7	0.00	72.7	7.26	0.00	254
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	374	0.00	374	37.4	0.00	1,310

General Office Building	—	—	—	—	—	—	—	—	—	—	2.29	0.00	2.29	0.23	0.00	7.99
Total	—	—	—	—	—	—	—	—	—	—	1,260	0.00	1,260	126	0.00	4,409
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	59.4	0.00	59.4	5.94	0.00	208
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	74.8	0.00	74.8	7.48	0.00	262
Health Club	—	—	—	—	—	—	—	—	—	—	12.0	0.00	12.0	1.20	0.00	42.1
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	62.0	0.00	62.0	6.19	0.00	217
General Office Building	—	—	—	—	—	—	—	—	—	—	0.38	0.00	0.38	0.04	0.00	1.32
Total	—	—	—	—	—	—	—	—	—	—	209	0.00	209	20.9	0.00	730

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.19

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	110
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.18
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	120
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.19
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	110
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.18
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	120
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.02

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.2
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.53
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.8

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	4,086	4,086	4,086	1,491,390	36,737	36,737	36,737	13,409,049
High Turnover (Sit Down Restaurant)	7,556	7,556	7,556	2,758,054	57,790	57,790	57,790	21,093,357
Health Club	682	682	682	248,908	5,215	5,215	5,215	1,903,624
Regional Shopping Center	24,483	24,483	24,483	8,936,350	187,245	187,245	187,245	68,344,416
General Office Building	49.4	49.4	49.4	18,038	378	378	378	137,954

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	765
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	90
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
1749600	583,200	1,140,356	380,119	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	3,299,251	532	0.0330	0.0040	9,996,159
High Turnover (Sit Down Restaurant)	2,441,022	532	0.0330	0.0040	8,115,397
Health Club	226,983	532	0.0330	0.0040	1,012,780
Regional Shopping Center	6,497,109	532	0.0330	0.0040	3,960,531
General Office Building	81,243	532	0.0330	0.0040	115,555

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	33,773,085	0.00
High Turnover (Sit Down Restaurant)	21,395,484	0.00
Health Club	1,399,445	0.00
Regional Shopping Center	49,001,047	0.00
General Office Building	810,288	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	666	—
High Turnover (Sit Down Restaurant)	839	—
Health Club	135	—
Regional Shopping Center	695	—
General Office Building	4.24	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Health Club	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Health Club	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Regional Shopping Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Regional Shopping Center	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

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

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

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

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A

Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

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

6.3. Adjusted Climate Risk Scores

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

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

8. User Changes to Default Data

Screen	Justification

Land Use	The project site is approximately 76.9 acres.
Operations: Vehicle Data	The proposed project would generate approximately 36,857 average daily trips.
Operations: Hearths	Assuming no wood burning hearths or wood stoves.

The Market Place - Existing Uses Custom Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	The Market Place - Existing Uses
Operational Year	2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	2.20
Location	2961 El Camino Real, Tustin, CA 92782, USA
County	Orange
City	Tustin
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5935
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.21

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
High Turnover (Sit Down Restaurant)	57.5	1000sqft	5.30	57,456	0.00	—	—	—

Health Club	23.7	1000sqft	1.80	23,662	0.00	—	—	—
Regional Shopping Center	662	1000sqft	51.5	661,528	0.00	—	—	—
General Office Building	4.56	1000sqft	0.30	4,559	0.00	—	—	—
Parking Lot	18.0	Acre	18.0	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	127	76.2	834	1.90	1.49	170	171	1.39	43.1	44.5	949	209,912	210,861	106	8.11	216,802
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	121	82.3	753	1.82	1.43	170	171	1.35	43.1	44.4	949	202,382	203,332	106	8.49	208,636
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	124	83.2	792	1.84	1.47	170	171	1.38	43.0	44.4	949	204,471	205,420	106	8.51	211,046
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	22.5	15.2	144	0.34	0.27	30.9	31.2	0.25	7.85	8.11	157	33,852	34,010	17.6	1.41	34,941

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	104	72.7	799	1.88	1.19	170	171	1.11	43.1	44.2	—	191,526	191,526	9.55	7.67	194,832
Area	23.3	0.27	32.5	< 0.005	0.06	—	0.06	0.04	—	0.04	—	134	134	0.01	< 0.005	134
Energy	0.17	3.14	2.64	0.02	0.24	—	0.24	0.24	—	0.24	—	17,571	17,571	1.19	0.11	17,633
Water	—	—	—	—	—	—	—	—	—	—	132	681	813	13.5	0.33	1,248
Waste	—	—	—	—	—	—	—	—	—	—	818	0.00	818	81.7	0.00	2,861
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	93.1
Total	127	76.2	834	1.90	1.49	170	171	1.39	43.1	44.5	949	209,912	210,861	106	8.11	216,802
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	102	79.2	751	1.80	1.19	170	171	1.11	43.1	44.2	—	184,130	184,130	10.0	8.05	186,800
Area	18.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.17	3.14	2.64	0.02	0.24	—	0.24	0.24	—	0.24	—	17,571	17,571	1.19	0.11	17,633
Water	—	—	—	—	—	—	—	—	—	—	132	681	813	13.5	0.33	1,248
Waste	—	—	—	—	—	—	—	—	—	—	818	0.00	818	81.7	0.00	2,861
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	93.1
Total	121	82.3	753	1.82	1.43	170	171	1.35	43.1	44.4	949	202,382	203,332	106	8.49	208,636
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	102	79.9	767	1.82	1.19	170	171	1.11	43.0	44.1	—	186,127	186,127	9.95	8.07	189,119
Area	21.7	0.19	22.3	< 0.005	0.04	—	0.04	0.03	—	0.03	—	91.5	91.5	< 0.005	< 0.005	91.9
Energy	0.17	3.14	2.64	0.02	0.24	—	0.24	0.24	—	0.24	—	17,571	17,571	1.19	0.11	17,633
Water	—	—	—	—	—	—	—	—	—	—	132	681	813	13.5	0.33	1,248

Waste	—	—	—	—	—	—	—	—	—	—	818	0.00	818	81.7	0.00	2,861
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	93.1
Total	124	83.2	792	1.84	1.47	170	171	1.38	43.0	44.4	949	204,471	205,420	106	8.51	211,046
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	18.6	14.6	140	0.33	0.22	30.9	31.2	0.20	7.85	8.06	—	30,816	30,816	1.65	1.34	31,311
Area	3.95	0.03	4.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	15.2	15.2	< 0.005	< 0.005	15.2
Energy	0.03	0.57	0.48	< 0.005	0.04	—	0.04	0.04	—	0.04	—	2,909	2,909	0.20	0.02	2,919
Water	—	—	—	—	—	—	—	—	—	—	21.8	113	135	2.24	0.05	207
Waste	—	—	—	—	—	—	—	—	—	—	135	0.00	135	13.5	0.00	474
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.4
Total	22.5	15.2	144	0.34	0.27	30.9	31.2	0.25	7.85	8.11	157	33,852	34,010	17.6	1.41	34,941

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	20.3	14.3	157	0.37	0.23	33.3	33.6	0.22	8.46	8.68	—	37,600	37,600	1.87	1.51	38,249
Health Club	2.25	1.58	17.4	0.04	0.03	3.69	3.72	0.02	0.94	0.96	—	4,163	4,163	0.21	0.17	4,235

Regional Shopping Center	80.8	56.8	623	1.46	0.93	132	133	0.87	33.6	34.5	—	149,461	149,461	7.45	5.98	152,041
General Office Building	0.16	0.11	1.26	< 0.005	< 0.005	0.27	0.27	< 0.005	0.07	0.07	—	302	302	0.02	0.01	307
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	104	72.7	799	1.88	1.19	170	171	1.11	43.1	44.2	—	191,526	191,526	9.55	7.67	194,832
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	20.1	15.5	147	0.35	0.23	33.3	33.6	0.22	8.46	8.68	—	36,148	36,148	1.97	1.58	36,672
Health Club	2.23	1.72	16.3	0.04	0.03	3.69	3.72	0.02	0.94	0.96	—	4,002	4,002	0.22	0.17	4,060
Regional Shopping Center	79.9	61.8	586	1.41	0.93	132	133	0.87	33.6	34.5	—	143,690	143,690	7.82	6.28	145,773
General Office Building	0.16	0.12	1.18	< 0.005	< 0.005	0.27	0.27	< 0.005	0.07	0.07	—	290	290	0.02	0.01	294
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	102	79.2	751	1.80	1.19	170	171	1.11	43.1	44.2	—	184,130	184,130	10.0	8.05	186,800
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	3.64	2.86	27.5	0.07	0.04	6.07	6.12	0.04	1.54	1.58	—	6,050	6,050	0.32	0.26	6,147
Health Club	0.40	0.32	3.04	0.01	< 0.005	0.67	0.68	< 0.005	0.17	0.18	—	670	670	0.04	0.03	681

Regional Shopping Center	14.5	11.4	109	0.26	0.17	24.1	24.3	0.16	6.13	6.29	—	24,047	24,047	1.28	1.04	24,434
General Office Building	0.03	0.02	0.22	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	48.5	48.5	< 0.005	< 0.005	49.3
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	18.6	14.6	140	0.33	0.22	30.9	31.2	0.20	7.85	8.06	—	30,816	30,816	1.65	1.34	31,311

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	2,900	2,900	0.18	0.02	2,911
Health Club	—	—	—	—	—	—	—	—	—	—	—	331	331	0.02	< 0.005	332
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	9,469	9,469	0.59	0.07	9,505
General Office Building	—	—	—	—	—	—	—	—	—	—	—	118	118	0.01	< 0.005	119
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	1,001	1,001	0.06	0.01	1,005
Total	—	—	—	—	—	—	—	—	—	—	—	13,820	13,820	0.86	0.10	13,872

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	2,900	2,900	0.18	0.02	2,911
Health Club	—	—	—	—	—	—	—	—	—	—	—	331	331	0.02	< 0.005	332
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	9,469	9,469	0.59	0.07	9,505
General Office Building	—	—	—	—	—	—	—	—	—	—	—	118	118	0.01	< 0.005	119
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	1,001	1,001	0.06	0.01	1,005
Total	—	—	—	—	—	—	—	—	—	—	—	13,820	13,820	0.86	0.10	13,872
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	480	480	0.03	< 0.005	482
Health Club	—	—	—	—	—	—	—	—	—	—	—	54.8	54.8	< 0.005	< 0.005	55.0
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	1,568	1,568	0.10	0.01	1,574
General Office Building	—	—	—	—	—	—	—	—	—	—	—	19.6	19.6	< 0.005	< 0.005	19.7
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	166	166	0.01	< 0.005	166
Total	—	—	—	—	—	—	—	—	—	—	—	2,288	2,288	0.14	0.02	2,297

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	0.10	1.78	1.49	0.01	0.14	—	0.14	0.14	—	0.14	—	2,120	2,120	0.19	< 0.005	2,126
Health Club	0.01	0.27	0.23	< 0.005	0.02	—	0.02	0.02	—	0.02	—	325	325	0.03	< 0.005	325
Regional Shopping Center	0.06	1.06	0.89	0.01	0.08	—	0.08	0.08	—	0.08	—	1,269	1,269	0.11	< 0.005	1,273
General Office Building	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	37.0	37.0	< 0.005	< 0.005	37.1
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	0.17	3.14	2.64	0.02	0.24	—	0.24	0.24	—	0.24	—	3,751	3,751	0.33	0.01	3,761
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	0.10	1.78	1.49	0.01	0.14	—	0.14	0.14	—	0.14	—	2,120	2,120	0.19	< 0.005	2,126
Health Club	0.01	0.27	0.23	< 0.005	0.02	—	0.02	0.02	—	0.02	—	325	325	0.03	< 0.005	325
Regional Shopping Center	0.06	1.06	0.89	0.01	0.08	—	0.08	0.08	—	0.08	—	1,269	1,269	0.11	< 0.005	1,273

General Office Building	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	37.0	37.0	< 0.005	< 0.005	37.1
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	0.17	3.14	2.64	0.02	0.24	—	0.24	0.24	—	0.24	—	3,751	3,751	0.33	0.01	3,761
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	0.02	0.32	0.27	< 0.005	0.02	—	0.02	0.02	—	0.02	—	351	351	0.03	< 0.005	352
Health Club	< 0.005	0.05	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	53.7	53.7	< 0.005	< 0.005	53.9
Regional Shopping Center	0.01	0.19	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	210	210	0.02	< 0.005	211
General Office Building	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.13	6.13	< 0.005	< 0.005	6.15
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	0.03	0.57	0.48	< 0.005	0.04	—	0.04	0.04	—	0.04	—	621	621	0.05	< 0.005	623

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	16.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectu Coatings	1.96	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscap e Equipmen t	5.33	0.27	32.5	< 0.005	0.06	—	0.06	0.04	—	0.04	—	134	134	0.01	< 0.005	134
Total	23.3	0.27	32.5	< 0.005	0.06	—	0.06	0.04	—	0.04	—	134	134	0.01	< 0.005	134
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	16.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectu ral Coatings	1.96	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	18.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	2.93	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectu ral Coatings	0.36	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscap e Equipmen t	0.67	0.03	4.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	15.2	15.2	< 0.005	< 0.005	15.2
Total	3.95	0.03	4.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	15.2	15.2	< 0.005	< 0.005	15.2

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	33.4	173	206	3.44	0.08	317
Health Club	—	—	—	—	—	—	—	—	—	—	2.68	13.9	16.6	0.28	0.01	25.4
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	93.9	486	580	9.66	0.23	891
General Office Building	—	—	—	—	—	—	—	—	—	—	1.55	8.04	9.59	0.16	< 0.005	14.7
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	132	681	813	13.5	0.33	1,248
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	33.4	173	206	3.44	0.08	317
Health Club	—	—	—	—	—	—	—	—	—	—	2.68	13.9	16.6	0.28	0.01	25.4
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	93.9	486	580	9.66	0.23	891
General Office Building	—	—	—	—	—	—	—	—	—	—	1.55	8.04	9.59	0.16	< 0.005	14.7
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	132	681	813	13.5	0.33	1,248

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	5.53	28.6	34.2	0.57	0.01	52.5
Health Club	—	—	—	—	—	—	—	—	—	—	0.44	2.30	2.74	0.05	< 0.005	4.21
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	15.5	80.5	96.0	1.60	0.04	147
General Office Building	—	—	—	—	—	—	—	—	—	—	0.26	1.33	1.59	0.03	< 0.005	2.44
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	21.8	113	135	2.24	0.05	207

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	368	0.00	368	36.8	0.00	1,289
Health Club	—	—	—	—	—	—	—	—	—	—	72.7	0.00	72.7	7.26	0.00	254
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	374	0.00	374	37.4	0.00	1,310

General Office Building	—	—	—	—	—	—	—	—	—	—	2.29	0.00	2.29	0.23	0.00	7.99
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	818	0.00	818	81.7	0.00	2,861
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	368	0.00	368	36.8	0.00	1,289
Health Club	—	—	—	—	—	—	—	—	—	—	72.7	0.00	72.7	7.26	0.00	254
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	374	0.00	374	37.4	0.00	1,310
General Office Building	—	—	—	—	—	—	—	—	—	—	2.29	0.00	2.29	0.23	0.00	7.99
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	818	0.00	818	81.7	0.00	2,861
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	61.0	0.00	61.0	6.10	0.00	213
Health Club	—	—	—	—	—	—	—	—	—	—	12.0	0.00	12.0	1.20	0.00	42.1
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	62.0	0.00	62.0	6.19	0.00	217

General Office Building	—	—	—	—	—	—	—	—	—	—	0.38	0.00	0.38	0.04	0.00	1.32
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	135	0.00	135	13.5	0.00	474

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	89.8
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.18
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	93.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	89.8
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.18
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	93.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.9
Health Club	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.53
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.4

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year

High Turnover (Sit Down Restaurant)	6,159	6,159	6,159	2,248,138	47,106	47,106	47,106	17,193,563
Health Club	682	682	682	248,908	5,215	5,215	5,215	1,903,624
Regional Shopping Center	24,483	24,483	24,483	8,936,350	187,245	187,245	187,245	68,344,416
General Office Building	49.4	49.4	49.4	18,038	378	378	378	137,954
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	1,120,808	373,603	47,045

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
High Turnover (Sit Down Restaurant)	1,989,720	532	0.0330	0.0040	6,615,002
Health Club	226,983	532	0.0330	0.0040	1,012,780
Regional Shopping Center	6,497,109	532	0.0330	0.0040	3,960,531
General Office Building	81,243	532	0.0330	0.0040	115,555
Parking Lot	686,854	532	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
High Turnover (Sit Down Restaurant)	17,439,833	0.00
Health Club	1,399,445	0.00
Regional Shopping Center	49,001,047	0.00
General Office Building	810,288	0.00
Parking Lot	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
High Turnover (Sit Down Restaurant)	684	—
Health Club	135	—
Regional Shopping Center	695	—
General Office Building	4.24	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Health Club	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Health Club	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Regional Shopping Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Regional Shopping Center	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

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

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

8. User Changes to Default Data

Screen	Justification
Land Use	The project site could accommodate 900 units over approximately 18 acres of developable land within the existing 76.9-acre site. The anticipated development over 18 acres would take place on underutilized asphalt parking lot areas.
Operations: Vehicle Data	The existing uses generate approximately 31,857 average daily trips.
Operations: Hearths	Assuming no wood burning hearths or wood stoves.

APPENDIX B

DETAILED ENERGY CALCULATIONS

Construction Off-Road Equipment										
Phase	**Off-Road Equipment Type**	**Amount**	**Usage Hour/Day**	**Total Usage Days**	**Total Usage Hours/Equipment**	**Horsepower**	**Load Factor**	**Total Usage Hours/ Equipment**	**Horsepower-Hour**	**Fuel Usage (gallons)**
Demolition	Concrete/Industrial Saws	1	8	30	240	33	0.73	240	5781.6	296.01792
	Excavators	3	8	30	720	36	0.38	720	9849.6	504.29952
	Rubber Tired Dozers	2	8	30	480	367	0.4	480	70464	3607.7568
Site Preparation	Rubber Tired Dozers	3	8	10	240	367	0.4	240	35232	1803.8784
	Tractors/Loaders/Backhoes	4	8	10	320	84	0.37	320	9945.6	509.21472
Grading	Excavators	2	8	30	480	36	0.38	480	6566.4	336.19968
	Graders	1	8	30	240	148	0.41	240	14563.2	745.63584
	Rubber Tired Dozers	1	8	30	240	367	0.4	240	35232	1803.8784
	Scrapers	2	8	30	480	423	0.48	480	97459.2	4989.91104
	Tractors/Loaders/Backhoes	2	8	30	480	84	0.37	480	14918.4	763.82208
Building Construction	Cranes	1	7	300	2100	367	0.29	2100	223503	11443.3536
	Forklifts	3	8	300	7200	82	0.2	7200	118080	6045.696
	Generator Sets	1	8	300	2400	14	0.74	2400	24864	1273.0368
	Tractors/Loaders/Backhoes	3	7	300	6300	84	0.37	6300	195804	10025.1648
	Welders	1	8	300	2400	46	0.45	2400	49680	2543.616
Paving	Pavers	2	8	20	320	81	0.42	320	10886.4	557.38368
	Paving Equipment	2	8	20	320	89	0.36	320	10252.8	524.94336
	Rollers	2	8	20	320	36	0.38	320	4377.6	224.13312
Architectural Coating	Air Compressors	1	6	100	600	37	0.48	600	10656	545.5872
									Total	**48543.52896** Diesel

Construction Truck and Construction Worker Vehicle Fuel Efficiency				
		EMFAC 2021 Outputs		
Vehicle Type	Vehicle Class	Fuel Consumption (1,000 gallons/day)	VMT (miles/ day)	Fuel Efficency (miles/gallon)
Construction Truck	MHDT	129.3	1,155,908.7	8.9
	HHDT	202.3	1,220,548.3	6.0
	HHDT/MHDT	-	-	7.5
Construction Worker Vehicle	LDA	1408.4	42,285,386.1	30.0
	LDT1	139.0	3,495,530.4	25.2
	LDT2	872.9	21,321,177.5	24.4
	Worker Mix	-	-	27.4

Notes:

[1] For construction trucks assumes 50 percent HHDT and 50 percent MHDT vehicles, consistent with assumptions in CalEEMod for hauling trucks. For construction worker vehicles assumes 50 percent LDA, 25 percent LDT1, and 25 percent LDT2 vehicles, consistent with assumptions in CalEEMod for worker vehicles.

[2] EMFAC2021 was run for Orange County for the construction year 2024. Data was aggregated over all vehicle model years and speed bins.

[3] The fuel efficiency was calculated by dividing the VMT (miles/day) by the fuel consumption (gallons/day).

Construction Vehicle Fuel Use - Diesel Vehicles						
Phase	Trip Type	Total Trips	Trip Length (miles)	Total VMT	Diesel Fuel Effiency (miles/gallon)	Fuel Usage (gallons/year)
Demolition	Hauling	14,220.0	10.2	145,044.0	6.0	24,040.3
Building Construction	Vendor	58,800.0	10.2	599,760.0	7.5	80,111.7
					Total	**104,152.0** Diesel

[1] Assumes 100 percent HHDT vehicles for haul trucks and 50 percent HHDT/50 percent MHDT vehicles for MHDT, consistent with assumptions in CalEEMod.

[2] EMFAC2021 was run for Orange County for the construction year 2024. Data was aggregated over all vehicle model years and speed bins.

[3] The fuel efficiency was calculated by dividing the VMT (miles/day) by the fuel consumption (gallons/day).

Construction Worker Vehicle Fuel Use - Gasoline Vehicles							
Phase	Total One-Way Trips/Day	Total Days	Total Trips	Trip Length (miles)	Total VMT	Gasoline Fuel Effiency (miles/gallon)	Fuel Usage (gallons/year)
Demolition	15	30	900	18.5	16,650	27.4	607.5
Site Preparation	18	10	360	18.5	6,660	27.4	243.0
Grading	20	30	1,200	18.5	22,200	27.4	810.0
Building Construction	653	300	391,800	18.5	7,248,300	27.4	264,477.9
Paving	15	20	600	18.5	11,100	27.4	405.0
Architectural Coating	131	100	26,200	18.5	484,700	27.4	17,685.9
						Total	**284,229.4** Gas

Total Construction Gasoline Usage	284,229.4
Total Construction Diesel Usage	152,695.5

Proposed Project Operational Trips			
Vehicle Class	CalEEMod	Total Project Trips	Total Trips per Vehicle Class
LDA	50.23%	36,857	18,513.3
LDT1	4.22%	36,857	1,555.4
LDT2	22.92%	36,857	8,447.6
MDV	14.42%	36,857	5,314.8
LHD1	2.71%	36,857	998.8
LHD2	0.69%	36,857	254.3
MHD	1.52%	36,857	560.2
HHD	0.54%	36,857	199.0
OBUS	0.06%	36,857	22.1
UBUS	0.10%	36,857	36.9
MCY	2.16%	36,857	796.1
SBUS	0.10%	36,857	36.9
MH	0.39%	36,857	143.7

Proposed Project Operational Trips – Fuel Efficiency						
Fuel	Vehicle Class	EMFAC2021 Outputs1				
		Fleet Mix (%)2	Fuel Consumption (1,000 gallons/day)	VMT (miles/day)	Fuel Efficiency3 (miles/gallon)	
Gas	LDA	52%	1408.4	42,285,386.1	30.0	15.5
	LDT1	4%	139.0	3,495,530.4	25.2	1.1
	LDT2	26%	872.9	21,321,177.5	24.4	6.4
	MDV	15%	635.4	12,620,485.4	19.9	3.1
	LHD1	2%	118.3	1,661,882.0	14.0	0.3
	MCY	0%	7.6	321,576.6	42.2	0.2
	MH	0%	12.0	58,495.6	4.9	0.0
	Fleet Mix	–	–	–	26.5	26.5
Diesel	LHD2	14%	22.4	391,527.7	17.5	2.5
	MHDT	42%	129.3	1,155,908.7	8.9	3.7
	HHDT	44%	202.3	1,220,548.3	6.0	2.7
	Fleet Mix	–	–	–	8.9	8.9

Notes:

[1] EMFAC2021 was run for Orange County for the year 2024. Data was aggregated over all vehicle model years and speed bins.

[2] Fleet mix is based on assumptions made in CalEEMod for the proposed project.

[3] The fuel efficiency was calculated by dividing the VMT (miles/day) by the fuel consumption (gallons/day).

Proposed Project Operational Trips – Fuel Usage						
Land Use	Total Annual VMT2 (miles/year)	Fuel Type	Portion of Fleet3 (%)	VMT by Fuel Type (miles/year)	Fleet Mix Efficiency4 (miles/gallon)	Fuel Usage (gallons/ year)
Apartments Mid Rise	13,409,049.00	Gas	97%	13,040,300.2	26.5	492,229.8
		Diesel	3%	368,748.8	8.9	41,607.5
High Turnover Restaurant	21,093,357.00	Gas	97%	20,513,289.7	26.5	774,311.3
		Diesel	3%	580,067.3	8.9	65,451.5
Health Club	1,903,624.00	Gas	97%	1,851,274.3	26.5	69,879.7
		Diesel	3%	52,349.7	8.9	5,906.8
Regional Shopping Center	68,344,416.00	Gas	97%	66,464,944.6	26.5	2,508,839.8
		Diesel	3%	1,879,471.4	8.9	212,068.8
General Office Building	137,954.00	Gas	97%	134,160.3	26.5	5,064.1
		Diesel	3%	3,793.7	8.9	428.1
					Total Gasoline/year	**3,850,324.6**
					Total Diesel/year	**325,462.8**

Notes:

[1] Calculated for year 2024 only. Future years will likely use less fuel due to more efficient cars.

[2] Total VMT is based on project's trip generation and trip lengths.

[3] Fleet distribution is based on EMFAC2021 output and CalEEMod assumptions.

[4] Fuel efficiency is based on fuel consumption and VMT data from EMFAC2021 for Orange County and total VMT.

Proposed Project Electricity Usage	
Electricity by Land Use	**kWh/year**
Apartments Mid Rise	3,299,251
High Turnover Restaurant	2,441,022
Health Club	226,983
Regional Shopping Center	6,497,109
General Office Building	81,243
Total	**12,545,608**

Proposed Project Natural Gas Usage			
Natural Gas by Land Use	**kBTU/year**	**BTU/year**	**therms/year**
Apartments Mid Rise	9,996,159	9,996,159,000	99,982
High Turnover Restaurant	8,115,397	8,115,397,000	81,170
Health Club	1,012,780	1,012,780,000	10,130
Regional Shopping Center	3,960,531	3,960,531,000	39,613
General Office Building	115,555	115,555,000	1,156
Total	**23,200,422**	**23,200,422,000**	**232,051**

Proposed Project Operational Trips			
Vehicle Class	CalEEMod	Total Project Trips	Total Trips per Vehicle Class
LDA	50.23%	36,857	18,513.3
LDT1	4.22%	36,857	1,555.4
LDT2	22.92%	36,857	8,447.6
MDV	14.42%	36,857	5,314.8
LHD1	2.71%	36,857	998.8
LHD2	0.69%	36,857	254.3
MHD	1.52%	36,857	560.2
HHD	0.54%	36,857	199.0
OBUS	0.06%	36,857	22.1
UBUS	0.10%	36,857	36.9
MCY	2.16%	36,857	796.1
SBUS	0.10%	36,857	36.9
MH	0.39%	36,857	143.7

Existing Uses Operational Trips – Fuel Efficiency						
Fuel	Vehicle Class	EMFAC2021 Outputs1				
		Fleet Mix (%)2	Fuel Consumption (1,000 gallons/day)	VMT (miles/day)	Fuel Efficiency3 (miles/gallon)	
Gas	LDA	52%	1408.4	42,285,386.1	30.0	15.5
	LDT1	4%	139.0	3,495,530.4	25.2	1.1
	LDT2	26%	872.9	21,321,177.5	24.4	6.4
	MDV	15%	635.4	12,620,485.4	19.9	3.1
	LHD1	2%	118.3	1,661,882.0	14.0	0.3
	MCY	0%	7.6	321,576.6	42.2	0.2
	MH	0%	12.0	58,495.6	4.9	0.0
	Fleet Mix	–	–	–	26.5	26.5
Diesel	LHD2	14%	22.4	391,527.7	17.5	2.5
	MHDT	42%	129.3	1,155,908.7	8.9	3.7
	HHDT	44%	202.3	1,220,548.3	6.0	2.7
	Fleet Mix	–	–	–	8.9	8.9

Notes:

[1] EMFAC2021 was run for Orange County for the year 2024. Data was aggregated over all vehicle model years and speed bins.

[2] Fleet mix is based on assumptions made in CalEEMod for the proposed project.

[3] The fuel efficiency was calculated by dividing the VMT (miles/day) by the fuel consumption (gallons/day).

Existing Uses Operational Trips – Fuel Usage						
Land Use	Total Annual VMT2 (miles/year)	Fuel Type	Portion of Fleet3 (%)	VMT by Fuel Type (miles/year)	Fleet Mix Efficiency4 (miles/gallon)	Fuel Usage (gallons/ year)
High Turnover Restaurant	17,193,563.00	Gas	97.3%	16,720,740.0	26.5	631,154.6
		Diesel	2.8%	472,823.0	8.9	53,350.7
Health Club	1,903,624.00	Gas	97.3%	1,851,274.3	26.5	69,879.7
		Diesel	2.8%	52,349.7	8.9	5,906.8
Regional Shopping Center	68,344,416.00	Gas	97.3%	66,464,944.6	26.5	2,508,839.8
		Diesel	2.8%	1,879,471.4	8.9	212,068.8
General Office Building	137,954.00	Gas	97.3%	134,160.3	26.5	5,064.1
		Diesel	2.8%	3,793.7	8.9	428.1
					Total Gasoline/year	**3,214,938.2**
					Total Diesel/year	**271,754.4**

Notes:

[1] Calculated for year 2024 only. Future years will likely use less fuel due to more efficient cars.

[2] Total VMT is based on project's trip generation and trip lengths.

[3] Fleet distribution is based on EMFAC2021 output and CalEEMod assumptions.

[4] Fuel efficiency is based on fuel consumption and VMT data from EMFAC2021 for Orange County and total VMT.

Existing Uses Electricity Usage	
Electricity by Land Use	**kWh/year**
High Turnover Restaurant	1,989,720
Health Club	226,983
Regional Shopping Center	6,497,109
General Office Building	81,243
Parking Lot	686,854
Total	**8,568,072**

Existing Uses Natural Gas Usage			
Natural Gas by Land Use	**kBTU/year**	**BTU/year**	**therms/year**
High Turnover Restaurant	6,615,002	6,615,002,000	66,163
Health Club	1,012,780	1,012,780,000	10,130
Regional Shopping Center	3,960,531	3,960,531,000	39,613
General Office Building	115,555	115,555,000	1,156
Total	**11,703,868**	**11,703,868,000**	**117,062**

Appendix C
Noise and Vibration Impact Analysis

Tustin Market Place Draft EIR

NOISE AND VIBRATION IMPACT ANALYSIS

THE MARKET PLACE PROJECT

CITY OF TUSTIN, CALIFORNIA

LSA

March 2024

NOISE AND VIBRATION IMPACT ANALYSIS

THE MARKET PLACE PROJECT

CITY OF TUSTIN, CALIFORNIA

Submitted to:

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Project No. ESL2201.75

March 2024

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LIST OF ABBREVIATIONS AND ACRONYMS

City	City of Tustin
CNEL	Community Noise Equivalent Level
County	County of Tustin
dBA	A-weighted decibel
EPA	United States Environmental Protection Agency
ft	feet
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
HVAC	heating, ventilation, and air conditioning
in/sec	inches per second
JWA	John Wayne Airport
L_{dn}	day-night average noise level
L_{eq}	equivalent continuous sound level
L_{max}	maximum instantaneous sound level
PPV	peak particle velocity
project	The Market Place Project
RMS	root-mean-square
sf	square feet
SPL	sound power level
VdB	vibration velocity decibels

INTRODUCTION

This noise and vibration impact analysis has been prepared to evaluate the potential noise and vibration impacts and reduction measures associated with The Market Place Project (project) in Tustin, California. This report is intended to satisfy the City of Tustin (City) requirement for a project-specific noise impact analysis by examining the impacts of the project site and evaluating noise reduction measures that the project may require.

PROJECT LOCATION

The 76.9-acre project site consists of Assessor's Parcel Numbers (APNs) 500-291-06, 500-291-07, 500-291-11, 500-291-12, and 500-291-25 and 500-312-03 and 500-312-10. The project site is generally bounded by Myford Road to the northwest, Bryan Avenue to the northeast, Jamboree Road to the southeast, and Interstate-5 (I-5, Santa Ana Freeway) to the southwest. The project location is shown in Figure 1.

The Market Place is currently developed with 747,205 square feet (sq ft) of commercial business uses, including 57,456 sq ft of restaurant use, 23,662 sq ft of community center use, 24,483 sq ft of retail use, 5,559 sq ft of office use, and surface parking lots. The site also includes ornamental landscaping along the perimeter and throughout the parking areas. See Figure 2.

The project site has a General Plan land use designation of Planned Community Commercial/ Business (PCCB) and a zoning designation of Planned Community Commercial (PC COM) with an overlay of SP 8 - East Tustin. The Market Place is also located within the East Tustin Specific Plan (ETSP). Within the ETSP, the site is currently designated as Mixed Use (MU) which is intended for development of planned retail commercial, office, and industrial/research and development land uses of an intensity compatible with neighboring residential and commercial land uses.

PROJECT DESCRIPTION

The City of Tustin prepared the 2021–2029 Housing Element of the General Plan in accordance with Government Code Section 65580 et seq. The City is required by State law to periodically update its Housing Element, a mandatory component of the City's General Plan. The update to the Housing Element covers the Sixth Cycle planning period from October 15, 2021, to October 15, 2029.

The Housing Element is the City's housing policy and planning document that identifies housing needs and constraints, and sets forth goals, policies, and programs that address the future housing needs for all income levels over an eight-year planning period that coincides with a Regional Housing Needs Allocation (RHNA). During the Housing Element process, the City assessed a number of properties and areas throughout the community that would be able to accommodate the City's assigned RHNA. Of the Housing Element inventory sites, The Market Place (the project site) was identified as necessary for rezoning under Housing Element Program 1.1f to allow for high density residential development.

Pursuant to Housing Element Program 1.1f, the City is proposing an overlay zone (overlay district) for the project site. To accommodate this, the proposed project would amend a portion of The Market Place to allow residential development, which requires a General Plan Amendment (GPA) for the project site and a Specific Plan Amendment (SPA) for seven parcels (APNs 500-291-06, -07, -11, -12, and -25 and 500-312-03 and -10). The Housing Element identifies the project site as having a

capacity of up to 900 housing units. The proposed Housing Overlay would allow for residential development with a maximum density of 50 dwelling units per acre (du/ac) over a maximum development area of 18 acres, which would allow up to 900 dwelling units within the project site. The anticipated development density was determined through the Housing Element process and is a conservative estimate based on development trends in nearby communities. The anticipated development does not rely on the demolition of any existing building, but rather focuses on areas used for surface parking. No development is proposed as part of this project.

Residential uses are currently not allowed on the project site. Upon approval of the Housing Overlay Zone, the project site could accommodate 900 units over approximately 18 acres of developable land within the existing 76.9-acre site. The anticipated development over 18 acres would take place on underutilized asphalt parking lot areas, and not require demolition of any existing buildings. Parking displaced as a result of redevelopment would be accommodated by vertical parking structures located within any future proposed development.

In addition, the project site is envisioned to function as a mixed-use site and a portion of the project site would remain as non-residential land use. The project site is assumed to be developed with an additional 13,032 sq ft of non-residential use.

Roadways and utilities may be required to support development of future residential construction within the project site. However, specific infrastructure improvements required to support residential development within The Market Place are not known at this time and will not be known until a development project is proposed.

The proposed project does not propose or approve any specific development projects. However, for the purposes of this analysis, future development of the additional 900 units and remaining commercial buildout capacity associated with the Housing Overlay Zone could occur anytime between October 2024 and October 2029. Construction activities for the residential units would include demolition of the surface parking lot, site preparation, grading, building construction, paving, and architectural coatings.

The existing uses generate approximately 31,374 average daily trips (ADT). With the buildout of the proposed housing units and remaining commercial buildout capacity, the proposed project would generate approximately 36,857 ADT, resulting in 5,483 net new ADT.

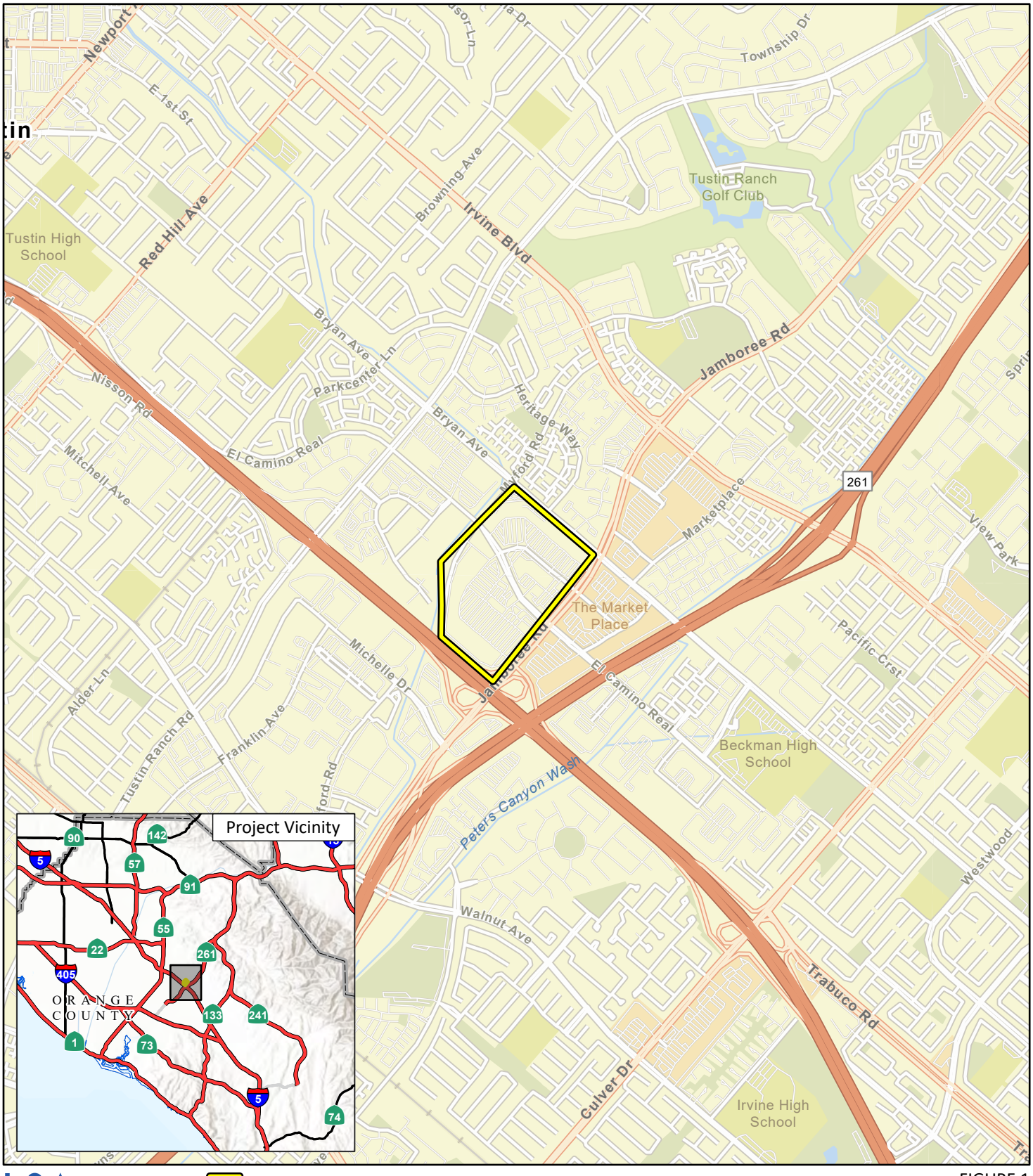
The residential units would be constructed in compliance with the version of the California Title 24 Energy Efficiency Standards (Title 24 energy standards) and the Title 24 California Green Building Standards Code (CALGreen Code) in effect at the time building permit applications are submitted.

EXISTING LAND USES IN THE PROJECT AREA

The project site is surrounded primarily by residential, commercial, and office uses. The areas adjacent to the project site include the following uses:

- **North:** Residential uses opposite of Bryan Avenue;
- **East:** Commercial uses opposite of Jamboree Road;
- **South:** Office uses opposite of the I-5 freeway;
- **West:** Commercial uses opposite of Myford Road.

The closest sensitive receptors to the project site are residential uses located approximately 110 feet northeast of the project's site boundary.



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FIGURE 1

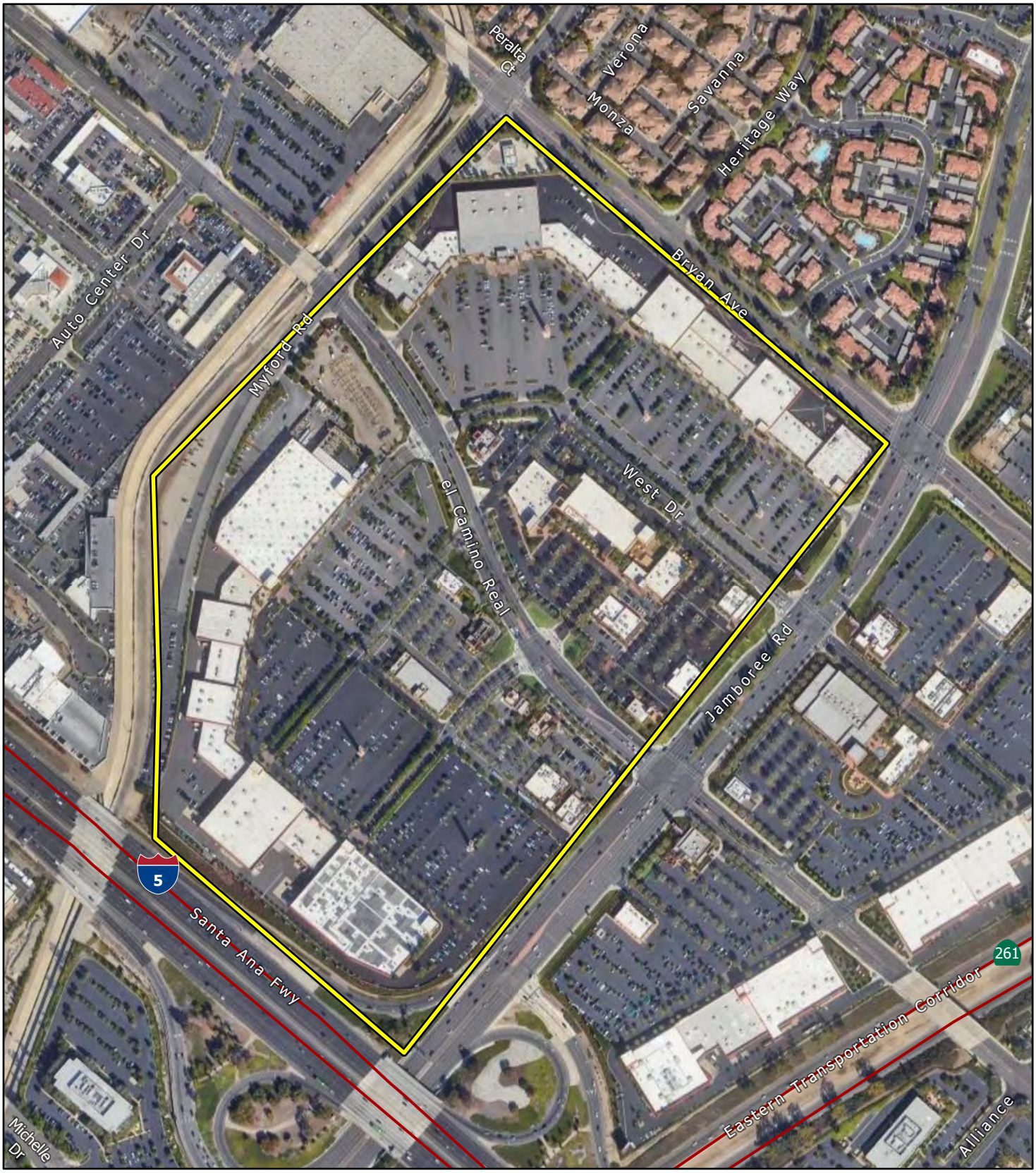
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SOURCE: Esri World Street Map (2024)

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The Market Place Project

Regional Project Location



LSA

Project Location

FIGURE 2

N

0 200 400

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The Market Place Project

Project Site

SOURCE: Google Maps (2023)

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NOISE AND VIBRATION FUNDAMENTALS

CHARACTERISTICS OF SOUND

Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, and sleep.

To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is generally an annoyance, while loudness can affect the ability to hear. Pitch is the number of complete vibrations, or cycles per second, of a sound wave, which results in the tone's range from high to low. Loudness is the strength of a sound, and it describes a noisy or quiet environment; it is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves combined with the reception characteristics of the human ear. Sound intensity is the average rate of sound energy transmitted through a unit area perpendicular to the direction in which the sound waves are traveling. This characteristic of sound can be precisely measured with instruments. The analysis of a project defines the noise environment of the project area in terms of sound intensity and its effect on adjacent sensitive land uses.

MEASUREMENT OF SOUND

Sound intensity is measured with the A-weighted decibel (dBA) scale to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound, similar to the human ear's de-emphasis of these frequencies. Decibels (dB), unlike the linear scale (e.g., inches or pounds), are measured on a logarithmic scale representing points on a sharply rising curve.

For example, 10 dB is 10 times more intense than 0 dB, 20 dB is 100 times more intense than 0 dB, and 30 dB is 1,000 times more intense than 0 dB. Thirty decibels (30 dB) represents 1,000 times as much acoustic energy as 0 dB. The decibel scale increases as the square of the change, representing the sound pressure energy. A sound as soft as human breathing is about 10 times greater than 0 dB. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. A 10 dB increase in sound level is perceived by the human ear as only a doubling of the sound's loudness. Ambient sounds generally range from 30 dB (very quiet) to 100 dB (very loud).

Sound levels are generated from a source, and their decibel level decreases as the distance from that source increases. Sound levels dissipate exponentially with distance from their noise sources. For a single point source, sound levels decrease approximately 6 dB for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by stationary equipment. If noise is produced by a line source (e.g., highway traffic or railroad operations), the sound decreases 3 dB for each doubling of distance in a hard site environment. Line source sound levels decrease 4.5 dB for each doubling of distance in a relatively flat environment with absorptive vegetation.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. The equivalent continuous sound level (L_{eq}) is the total sound energy of time-varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the L_{eq} and

Community Noise Equivalent Level (CNEL) or the day-night average noise level (L_{dn}) based on A-weighted decibels. CNEL is the time-weighted average noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and a 10 dBA weighting factor applied to noises occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale but without the adjustment for events occurring during the relaxation. CNEL and L_{dn} are within 1 dBA of each other and are normally interchangeable. The City uses the CNEL noise scale for long-term traffic noise impact assessment.

Other noise rating scales of importance when assessing the annoyance factor include the maximum instantaneous noise level (L_{max}), which is the highest sound level that occurs during a stated time period. The noise environments discussed in this analysis for short-term noise impacts are specified in terms of maximum levels denoted by L_{max}, which reflects peak operating conditions and addresses the annoying aspects of intermittent noise. It is often used together with another noise scale, or noise standards in terms of percentile noise levels, in noise ordinances for enforcement purposes. For example, the L_{10} noise level represents the noise level exceeded 10 percent of the time during a stated period. The L_{50} noise level represents the median noise level. Half the time the noise level exceeds this level, and half the time it is less than this level. The L_{90} noise level represents the noise level exceeded 90 percent of the time and is considered the background noise level during a monitoring period. For a relatively constant noise source, the L_{eq} and L_{50} are approximately the same.

Noise impacts can be described in three categories. The first category includes audible impacts, which are increases in noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3 dB or greater because this level has been found to be barely perceptible in exterior environments. The second category, potentially audible, refers to a change in the noise level between 1 dB and 3 dB. This range of noise levels has been found to be noticeable only in laboratory environments. The last category includes changes in noise levels of less than 1 dB, which are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant.

Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to sound levels higher than 85 dBA. Exposure to high sound levels affects the entire system, with prolonged sound exposure in excess of 75 dBA increasing body tensions, thereby affecting blood pressure and functions of the heart and the nervous system. In comparison, extended periods of sound exposure above 90 dBA would result in permanent cell damage. When the sound level reaches 120 dBA, a tickling sensation occurs in the human ear, even with short-term exposure. This level of sound is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation is replaced by a feeling of pain in the ear (i.e., the threshold of pain). A sound level of 160–165 dBA will result in dizziness or a loss of equilibrium. The ambient or background noise problem is widespread and generally more concentrated in urban areas than in outlying, less developed areas.

Table A lists definitions of acoustical terms, and Table B shows common sound levels and their sources.

Table A: Definitions of Acoustical Terms

Term	Definitions
Decibel, dB	A unit of sound measurement that denotes the ratio between two quantities that are proportional to power; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
Frequency, Hz	Of a function periodic in time, the number of times that the quantity repeats itself in 1 second (i.e., the number of cycles per second).
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. (All sound levels in this report are A-weighted unless reported otherwise.)
L_{01}, L_{10}, L_{50}, L_{90}	The fast A-weighted noise levels that are equaled or exceeded by a fluctuating sound level 1%, 10%, 50%, and 90% of a stated time period, respectively.
Equivalent Continuous Noise Level, L_{eq}	The level of a steady sound that, in a stated time period and at a stated location, has the same A-weighted sound energy as the time-varying sound.
Community Noise Equivalent Level, CNEL	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 5 dBA to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 dBA to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
Day/Night Noise Level, L_{dn}	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 dBA to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
L_{max}, L_{min}	The maximum and minimum A-weighted sound levels measured on a sound level meter, during a designated time interval, using fast time averaging.
Ambient Noise Level	The all-encompassing noise associated with a given environment at a specified time. Usually a composite of sound from many sources from many directions, near and far; no particular sound is dominant.
Intrusive	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, time of occurrence, and tonal or informational content, as well as the prevailing ambient noise level.

Sources: (1) Technical Noise Supplement (Caltrans 2013); (2) Transit Noise and Vibration Impact Assessment Manual (FTA 2018).
Caltrans = California Department of Transportation
FTA = Federal Transit Administration

Table B: Common Sound Levels and Their Noise Sources

Noise Source	A-Weighted Sound Level in Decibels	Noise Environments	Subjective Evaluations
Near Jet Engine	140	Deafening	128 times as loud
Civil Defense Siren	130	Threshold of Pain	64 times as loud
Hard Rock Band	120	Threshold of Feeling	32 times as loud
Accelerating Motorcycle at a Few Feet Away	110	Very Loud	16 times as loud
Pile Driver; Noisy Urban Street/Heavy City Traffic	100	Very Loud	8 times as loud
Ambulance Siren; Food Blender	95	Very Loud	—
Garbage Disposal	90	Very Loud	4 times as loud
Freight Cars; Living Room Music	85	Loud	—
Pneumatic Drill; Vacuum Cleaner	80	Loud	2 times as loud
Busy Restaurant	75	Moderately Loud	—
Near Freeway Auto Traffic	70	Moderately Loud	Reference level
Average Office	60	Quiet	One-half as loud
Suburban Street	55	Quiet	—
Light Traffic; Soft Radio Music in Apartment	50	Quiet	One-quarter as loud
Large Transformer	45	Quiet	—
Average Residence without Stereo Playing	40	Faint	One-eighth as loud
Soft Whisper	30	Faint	—
Rustling Leaves	20	Very Faint	—
Human Breathing	10	Very Faint	Threshold of Hearing
—	0	Very Faint	—

Source: Compiled by LSA (2021).

FUNDAMENTALS OF VIBRATION

Vibration refers to ground-borne noise and perceptible motion. Ground-borne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors, where the motion may not be discernible, but without the effects associated with the shaking of a building there is less adverse reaction. Vibration energy propagates from a source through intervening soil and rock layers to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by occupants as the motion of building surfaces, the rattling of items sitting on shelves or hanging on walls, or a low-frequency rumbling noise. The rumbling noise is caused by the vibration of walls, floors, and ceilings that radiate sound waves. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by 10 dB or less. This is an order of magnitude below the damage threshold for normal buildings.

Typical sources of ground-borne vibration are construction activities (e.g., blasting, pile-driving, and operating heavy-duty earthmoving equipment), steel-wheeled trains, and occasional traffic on rough roads. Problems with both ground-borne vibration and noise from these sources are usually localized to areas within approximately 100 ft from the vibration source, although there are examples of ground-borne vibration causing interference out to distances greater than 200 ft (FTA 2018). When roadways are smooth, vibration from traffic, even heavy trucks, is rarely perceptible. It is assumed for most projects that the roadway surface will be smooth enough that ground-borne vibration from street traffic will not exceed the impact criteria; however, construction of the project could result in ground-borne vibration that may be perceptible and annoying.

Ground-borne noise is not likely to be a problem because noise arriving via the normal airborne path will usually be greater than ground-borne noise.

Ground-borne vibration has the potential to disturb people and damage buildings. Although it is very rare for train-induced ground-borne vibration to cause even cosmetic building damage, it is not uncommon for construction processes such as blasting and pile-driving to cause vibration of sufficient amplitudes to damage nearby buildings (FTA 2018). Ground-borne vibration is usually measured in terms of vibration velocity, either the root-mean-square (RMS) velocity or peak particle velocity (PPV). The RMS is best for characterizing human response to building vibration, and PPV is used to characterize the potential for damage. Decibel notation acts to compress the range of numbers required to describe vibration. Vibration velocity level in decibels is defined as

$$L_v = 20 \log_{10} [V/V_{ref}]$$

where "L_v" is the vibration velocity in decibels (VdB), "V" is the RMS velocity amplitude, and "V_{ref}" is the reference velocity amplitude, or 1 x 10^{-6} inches/second (in/sec) used in the United States.

REGULATORY SETTING

APPLICABLE NOISE STANDARDS

The applicable noise standards governing the project site include the criteria in the City's Noise Element of the General Plan (Noise Element) and Section 8.24 of the City of Tustin Municipal Code (TMC).

California Code of Regulations

Interior noise levels for residential habitable rooms are regulated by Title 24 of the California Code of Regulations California Noise Insulation Standards. Title 24, Chapter 12, Section 1206.4, of the 2019 California Building Code requires that interior noise levels attributable to exterior sources not exceed 45 CNEL in any habitable room. A habitable room is a room used for living, sleeping, eating, or cooking. Bathrooms, closets, hallways, utility spaces, and similar areas are not considered habitable rooms for this regulation (Title 24 California Code of Regulations, Chapter 12, Section 1206.4).

City of Tustin

Noise Element of the General Plan

The City's General Plan Noise Element (City of Tustin 2012) has established exterior and interior noise standards as shown in Table C. These noise standards apply to approved land uses for which mitigation may be required to achieve the City's noise standards. As shown in Table C, the City has a noise standard of 65 dBA CNEL for exterior habitable areas and a 45 dBA CNEL noise standard for interior habitable areas for residential land uses.

Table C: City of Tustin Interior and Exterior Noise Standards

Land Use	Noise Standards[1]	
	Interior[2,3]	Exterior
Residential: Single-family, multifamily, duplex, mobile home	45 dBA CNEL	65 dBA CNEL[4]
Residential: Transient lodging, hotels, motels, nursing homes, hospitals	45 dBA CNEL	65 dBA CNEL[4]
Private offices, church sanctuaries, libraries, board rooms, conference rooms, theaters, auditoriums, concert halls, meeting rooms, etc.	45 dBA $L_{eq}(12)$	--
Schools	45 dBA $L_{eq}(12)$	67 dBA $L_{eq}(12)$[5]
General offices, reception, clerical, etc.	50 dBA $L_{eq}(12)$	-
Bank lobby, retail store, restaurant, typing pool, etc.	55 dBA $L_{eq}(12)$	-
Manufacturing, kitchen, warehousing, etc.	65 dBA $L_{eq}(12)$	-
Parks, playgrounds	-	65 dBA CNEL[5]
Golf courses, outdoor spectator sports, amusement parks	-	70 dBA CNEL

Source: Noise Element, Tustin General Plan (City of Tustin 2012).

[1] CNEL: Community Noise Equivalent Level. $L_{eq}(12)$: The A-weighted equivalent sound level averaged over a 12-hour period (usually the hours of operation).

[2] Noise standard with windows closed. Mechanical ventilation shall be provided per UBC requirements to provide a habitable environment.

[3] Indoor environment excluding bathrooms, toilets, closets, and corridors.

[4] Outdoor environment limited to rear yard of single-family homes, multifamily patios, and balconies (with a depth of 6 feet or more) and common recreation areas.

[5] Outdoor environment limited to playground areas, picnic areas, and other areas of frequent human use.

dBA = A-weighted decibels
UBC = Uniform Building Code

Municipal Code

Article 4, Chapter 6 of the City's Municipal Code (City of Tustin 2022) establishes the maximum permissible noise level that may intrude into a neighbor's property. The Noise Ordinance establishes noise level standards for various land use categories affected by stationary noise sources. Land use categories in the City are defined by five noise zones, as listed below. Table D provides the City's maximum noise standard based on the noise zone, the location of the noise (exterior/interior), and the time period.

Noise Zone 1: All residential properties
Noise Zone 2: All commercial properties
Noise Zone 3: All industrial properties
Noise Zone 4: All special properties such as hospitals, convalescent homes, public and institutional schools, libraries and churches
Noise Zone 5: All mixed-use properties.

Article 4, Chapter 6 of the City's Municipal Code limits the erection, demolition, alternation, repair, excavation, grading, paving or construction of any building or site to between the hours of 7:00 a.m. and 8:00 p.m. Monday through Friday and 9:00 a.m. and 5:00 p.m. on Saturdays. Construction is prohibited on Sundays and City-observed federal holidays. 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 Tustin shall not be operated on or adjacent to said sites outside of the approved hours for construction activity.

Table D: City of Tustin Maximum Noise Level Standards

Noise Zone	Exterior/ Interior	Time Period	L_{50} (30 mins)	L_{25} (15 mins)	L_8 (5 mins)	L_2 (1 min)	L_{max} (Anytime)
1	Exterior	7:00 AM to 10:00 PM	55	60	65	70	75
		10:00 PM to 7:00 AM	50	55	60	65	70
	Interior	7:00 AM to 10:00 PM	—	—	55	60	65
		10:00 PM to 7:00 AM	—	—	45	50	55
2	Exterior	Anytime	60	65	70	75	80
3	Exterior	Anytime	70	75	80	85	90
4	Exterior	Anytime	55	60	65	70	75
5	Exterior	Anytime	60	65	70	75	80

Source: Municipal Code (City of Tustin 2018).
Note: It shall be unlawful for any person at any location within the incorporated area of the City of Tustin to create any noise or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, when the foregoing causes the noise level, when measured on any other property to exceed. In the event the alleged offensive noise consists of impact noise, simple tone, speech, music, or any combination thereof, each of the above noise levels shall be reduced by 5 dBA. In the event the ambient noise level exceeds any of the first four noise limit categories, the cumulate period applicable to said category shall be increased to reflect said ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.
dBA = A-weighted decibels
L_{max} = maximum instantaneous noise level
min/mins = minute/minutes

In addition, construction activities may be permitted outside of those limitations in the case of urgent necessity or upon a finding that such approval will not adversely impact adjacent properties and the health, safety and welfare of the community if a temporary exception is granted in writing by the Building Official for private property or by the Director of Public Works for public properties or their authorized representatives. All temporary waiver requests shall be made in writing and shall include the specific times, dates, and locations requested and a description of the type of activity that is proposed. In granting a temporary exception, conditions may be imposed on construction activities to protect the health, safety and welfare of the community. Any approval granted may be summarily revoked by the Building Official or Director of Public Works at the sole discretion of each official.

Federal Transit Administration

Because the City does not have construction noise level limits, construction noise was assessed using criteria from the *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018). Table E shows the FTA's General Assessment Construction Noise Criteria based on the composite noise levels per construction phase.

Table E: General Assessment Construction Noise Criteria

Land Use	Daytime 1-hour L_{eq} (dBA)	Nighttime 1-hour L_{eq} (dBA)
Residential	90	80
Commercial	100	100
Industrial	100	100

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
dBA = A-weighted decibels
L_{eq} = equivalent continuous sound level

APPLICABLE VIBRATION STANDARDS

Federal Transit Administration

Vibration standards included in the Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment Manual* (2018) (FTA Manual) are used in this analysis for ground-borne vibration impacts on human annoyance. The criteria for environmental impact from ground-borne vibration and noise are based on the maximum levels for a single event. Table F provides the criteria for assessing the potential for interference or annoyance from vibration levels in a building.

Table F: Interpretation of Vibration Criteria for Detailed Analysis

Land Use	Max L_v (VdB)[1]	Description of Use
Workshop	90	Vibration that is distinctly felt. Appropriate for workshops and similar areas not as sensitive to vibration.
Office	84	Vibration that can be felt. Appropriate for offices and similar areas not as sensitive to vibration.
Residential Day	78	Vibration that is barely felt. Adequate for computer equipment and low-power optical microscopes (up to 20×).
Residential Night and Operating Rooms	72	Vibration is not felt, but ground-borne noise may be audible inside quiet rooms. Suitable for medium-power microscopes (100×) and other equipment of low sensitivity.

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
[1] As measured in 1/3-Octave bands of frequency over the frequency range 8 to 80 Hertz.
FTA = Federal Transit Administration
VdB = vibration velocity decibels
L_V = velocity in decibels
Max = maximum

Table G lists the potential vibration building damage criteria associated with construction activities, as suggested in the FTA Manual. FTA guidelines show that a vibration level of up to 0.5 in/sec in PPV is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster), and would not result in any construction vibration damage. For non-engineered timber and masonry buildings, the construction building vibration damage criterion is 0.2 in/sec in PPV.

Table G: Construction Vibration Damage Criteria

Building Category	PPV (in/sec)
Reinforced concrete, steel, or timber (no plaster)	0.50
Engineered concrete and masonry (no plaster)	0.30
Non-engineered timber and masonry buildings	0.20
Buildings extremely susceptible to vibration damage	0.12

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
FTA = Federal Transit Administration PPV = peak particle velocity
in/sec = inch/inches per second

OVERVIEW OF THE EXISTING NOISE ENVIRONMENT

The primary existing noise sources in the project area are transportation facilities such as I-5 freeway, Jamboree Road, Bryan Avenue and surrounding commercial and office uses.

AMBIENT NOISE MEASUREMENTS

Long-Term Noise Measurements

Long-term (24-hour) noise level measurements were conducted on January 23 and 24, 2024, using two (2) Larson Davis Spark 706RC Dosimeters. Table H provides a summary of the measured hourly noise levels and calculated CNEL level from the long-term noise level measurements. As shown in Table H, the calculated CNEL levels range from 67.2 dBA CNEL to 73.8 dBA CNEL. Hourly noise levels at surrounding sensitive uses are as low as 50.4 dBA L_{eq} during nighttime hours and 64.7 dBA L_{eq} during daytime hours. Long-term noise monitoring survey sheets are provided in Appendix A. Figure 3 shows the long-term monitoring locations.

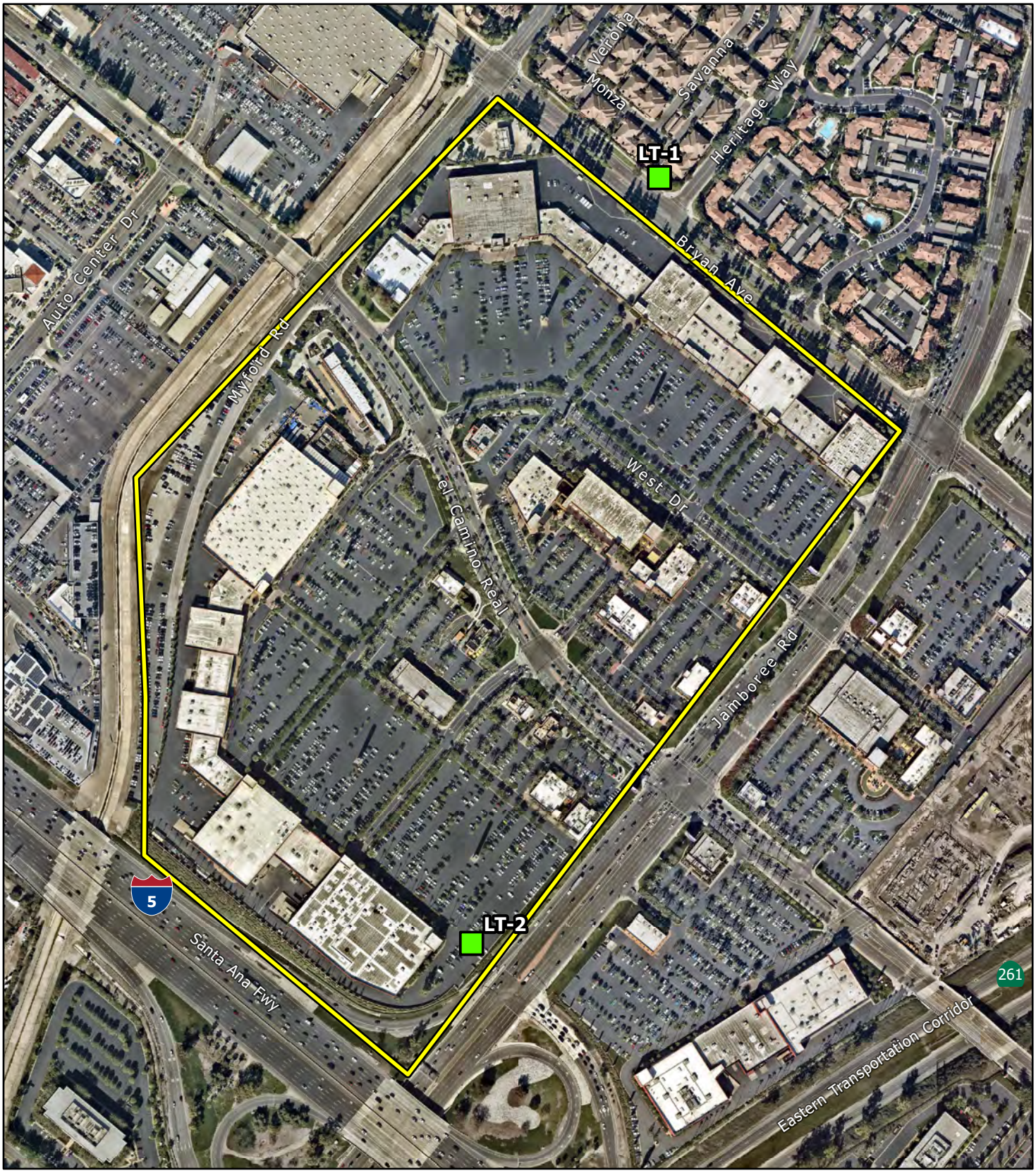
Table H: Long-Term 24-Hour Ambient Noise Monitoring Results

Location		Daytime Noise Levels[1] (dBA L_{eq})	Evening Noise Levels[2] (dBA L_{eq})	Nighttime Noise Levels[3] (dBA L_{eq})	Daily Noise Levels (dBA CNEL)
LT-1	2800 Monza, Tustin, CA 92782. Located in the Front yard of a multifamily residence on tree, approximately 70 feet away from the Bryan Avenue centerline.	64.7-68.4	61.9-65.4	50.4-62.3	67.2
LT-2	2982 El Camino Real, Tustin, CA 92782. Located northeast of a Best Buy entrance in the parking lot on a light pole, approximately 190 feet away from the Jamboree Road centerline.	65.8-68.8	69.4-70.1	62.4-69.2	73.8

Source: Compiled by LSA (2024).
Note: Noise measurements were conducted from January 23 and 24, 2024, starting at 11:00 a.m.
[1] Daytime Noise Levels = noise levels during the hours from 7:00 a.m. to 7:00 p.m.
[2] Evening Noise Levels = noise levels during the hours from 7:00 p.m. to 10:00 p.m.
[3] Nighttime Noise Levels = noise levels during the hours from 10:00 p.m. to 7:00 a.m.
dBA = A-weighted decibels
L_{eq} = equivalent continuous sound level
CNEL = Community Noise Equivalent Level

EXISTING AIRCRAFT NOISE

Aircraft flyovers may be audible on the project site due to aircraft activity in the vicinity. The nearest airport to the project is John Wayne Airport (JWA), a commercial airport 4.8 miles to the southwest. The project site is outside the 60 dBA CNEL noise contour of JWA based on the JWA Airport 2022 Annual Community Noise Equivalent Level Contours (County of Orange 2022). Additionally, there are no helipads or private airstrips within 2 miles from the project area. Due to the distance of the project site from the nearest airport, impacts related to aircraft operations are not further discussed in this analysis.



LSA

FIGURE 3

The Market Place Project

Noise Monitoring Locations

SOURCE: Nearmap (2/2024)

J:\ESL2201.75\GIS\Pro\The Market Place Project\The Market Place Project.aprx (2/21/2024)

PROJECT IMPACTS

SHORT-TERM CONSTRUCTION NOISE IMPACTS

Two types of short-term noise impacts could occur during the construction of the proposed project. First, construction crew commutes and the transport of construction equipment and materials to the site for the proposed project would incrementally increase noise levels on access roads leading to the site. Although there would be a relatively high single-event noise-exposure potential causing intermittent noise nuisance (passing trucks at 50 ft would generate up to 84 dBA L_{max}), the effect on longer-term ambient noise levels would be small when compared to existing daily traffic volumes on Jamboree Road. Because construction-related vehicle trips would not approach existing daily traffic volumes, traffic noise would not increase by 3 dBA CNEL. A noise level increase of less than 3 dBA would not be perceptible to the human ear in an outdoor environment. Therefore, short-term, construction-related impacts associated with worker commute and equipment transport to the project site would be less than significant.

The second type of short-term noise impact is related to noise generated during demolition, excavation, grading, and building erection on the project site. Construction is completed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on the site and, therefore, the noise levels surrounding the site as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. Table I lists typical construction equipment noise levels recommended for noise impact assessments, based on a distance of 50 ft between the equipment and a noise receptor, taken from the FHWA *Roadway Construction Noise Model* (FHWA 2006).

In addition to the reference maximum noise level, the usage factor provided in Table I is used to calculate the hourly noise level impact for each piece of equipment based on the following equation:

$$L_{eq}(equip) = E.L. + 10\log(U.F.) - 20\log\left(\frac{D}{50}\right)$$

where: $L_{eq}(equip)$ = L_{eq} at a receiver resulting from the operation of a single piece of equipment over a specified time period.

E.L. = noise emission level of the particular piece of equipment at a reference distance of 50 ft.

U.F. = usage factor that accounts for the fraction of time that the equipment is in use over the specified period of time.

D = distance from the receiver to the piece of equipment.

Table I: Typical Construction Equipment Noise Levels

Equipment Description	Acoustical Usage Factor (%)[1]	Maximum Noise Level (L_{max}) at 50 Feet[2]
Auger Drill Rig	20	84
Backhoes	40	80
Compactor (ground)	20	80
Compressor	40	80
Cranes	16	85
Dozers	40	85
Dump Trucks	40	84
Excavators	40	85
Flat Bed Trucks	40	84
Forklift	20	85
Front-end Loaders	40	80
Graders	40	85
Impact Pile Drivers	20	95
Jackhammers	20	85
Paver	50	77
Pickup Truck	40	55
Pneumatic Tools	50	85
Pumps	50	77
Rock Drills	20	85
Rollers	20	85
Scrapers	40	85
Tractors	40	84
Trencher	50	80
Welder	40	73

Source: FHWA Roadway Construction Noise Model User's Guide, Table 1 (FHWA 2006).
Note: Noise levels reported in this table are rounded to the nearest whole number.
[1] Usage factor is the percentage of time during a construction noise operation that a piece of construction equipment is operating at full power.
[2] Maximum noise levels were developed based on Specification 721.560 from the Central Artery/Tunnel program to be consistent with the City of Boston's Noise Code for the "Big Dig" project.
FHWA = Federal Highway Administration
L_{max} = maximum instantaneous sound level

Each piece of construction equipment operates as an individual point source. Using the following equation, a composite noise level can be calculated when multiple sources of noise operate simultaneously:

$$Leq\ (composite) = 10 * \log_{10}\left(\sum_{1}^{n} 10^{\frac{Ln}{10}}\right)$$

Using the equations from the methodology above, the reference information in Table I, and the construction equipment list provided, the composite noise level of each construction phase was calculated. The project construction composite noise levels at a distance of 50 ft would range from 74 dBA L_{eq} to 88 dBA L_{eq} with the highest noise levels occurring during the site preparation and grading phases.

Once composite noise levels are calculated, reference noise levels can then be adjusted for distance using the following equation:

$$Leq\ (at\ distance\ X) = Leq\ (at\ 50\ feet) - 20 * \log_{10}\left(\frac{X}{50}\right)$$

In general, this equation shows that doubling the distance would decrease noise levels by 6 dBA while halving the distance would increase noise levels by 6 dBA.

Table J shows the nearest sensitive uses to the project site, their distance from the center of construction activities, and composite noise levels expected during construction. These noise level projections do not take into account intervening topography or barriers. Construction equipment calculations are provided in Appendix B.

Table J: Potential Construction Noise Impacts at Nearest Receptor

Receptor (Location)	Composite Noise Level (dBA L_{eq}) at 50 feet[1]	Distance (feet)	Composite Noise Level (dBA L_{eq})
Commercial (East)	88	1,080	61
Commercial (West)		1,080	61
Residential (Northeast)		1,270	60
Office (South)		1,700	57

Source: Compiled by LSA (2024).
[1] The composite construction noise level represents the site preparation and grading phases which are expected to result in the greatest noise level as compared to other phases.
dBA L_{eq} = average A-weighted hourly noise level
ft = foot/feet

While construction noise will vary, it is expected that composite noise levels during construction at the nearest off-site sensitive uses to the northeast would reach 60 dBA L_{eq}. These predicted noise levels would only occur when all construction equipment is operating simultaneously; and therefore, are assuming to be rather conservative in nature. While construction-related short-term noise levels have the potential to be higher than existing ambient noise levels in the project area under existing conditions, the noise impacts would no longer occur once project construction is completed.

As stated above, noise impacts associated with construction activities are regulated by the City's noise ordinance. The proposed project will be required to comply with the construction hours specified in the City's Noise Ordinance, which states that construction activities are allowed between 7:00 a.m. and 8:00 p.m., Monday through Friday and 9:00 a.m. and 5:00 p.m. on Saturdays. Construction is prohibited on Sundays and City-observed federal holidays.

As it relates to off-site uses, construction-related noise impacts would remain below the 90 dBA L_{eq} and 100 dBA L_{eq} 1-hour construction noise level criteria as established by the FTA for residential and commercial land uses, respectively, for the average daily condition as modeled from the center of the project site and therefore would be considered less than significant. Best construction practices presented at the end of this analysis shall be implemented to minimize noise impacts to surrounding receptors.

SHORT-TERM CONSTRUCTION VIBRATION IMPACTS

This construction vibration impact analysis discusses the level of human annoyance using vibration levels in VdB and assesses the potential for building damages using vibration levels in PPV (in/sec).

This is because vibration levels calculated in RMS are best for characterizing human response to building vibration, while vibration level in PPV is best for characterizing potential for damage.

Table K shows the PPV and VdB values at 25 ft from the construction vibration source. As shown in Table K, bulldozers and other heavy-tracked construction equipment (expected to be used for this project) generate approximately 0.089 PPV in/sec or 87 VdB of ground-borne vibration when measured at 25 ft, based on the FTA Manual. The distance to the nearest buildings for vibration impact analysis is measured between the nearest off-site buildings and the project construction boundary (assuming the construction equipment would be used at or near the project setback line).

Table K: Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV/L_V at 25 ft	
	PPV (in/sec)	L_V (VdB)[1]
Pile Driver (Impact), Typical	0.644	104
Pile Driver (Sonic), Typical	0.170	93
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large Bulldozer[2]	**0.089**	**87**
Caisson Drilling	0.089	87
Loaded Trucks[2]	**0.076**	**86**
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
[1] RMS vibration velocity in decibels (VdB) is 1 µin/sec.
[2] Equipment shown in **bold** is expected to be used on site.
µin/sec = microinches per second
ft = foot/feet
FTA = Federal Transit Administration
in/sec = inch/inches per second
L_V = velocity in decibels
PPV = peak particle velocity
RMS = root-mean-square
VdB = vibration velocity decibels

The formulae for vibration transmission are provided below and Table L below provides a summary of off-site construction vibration levels.

$$L_vdB\ (D) = L_vdB\ (25\ ft) - 30\ Log\ (D/25)$$

$$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$$

As shown in Table F, above, the threshold at which vibration levels would result in annoyance would be 78 VdB for daytime residential uses. As shown in Table G, the FTA guidelines indicate that for a non-engineered timber and masonry building, the construction vibration damage criterion is 0.2 in/sec in PPV.

Table L: Potential Construction Vibration Annoyance Impacts at Nearest Receptor

Receptor (Location)	Reference Vibration Level (VdB) at 25 ft[1]	Distance (ft) [2]	Vibration Level (VdB)
Commercial (East)	87	1,080	38
Commercial (West)		1,080	38
Residential (Northeast)		1,270	36
Office (South)		1,700	32

Source: Compiled by LSA (2024).
[1] The reference vibration level is associated with a large bulldozer, which is expected to be representative of the heavy equipment used during construction.
[2] The reference distance is associated with the average condition, identified by the distance from the center of construction activities to surrounding uses.
ft = foot/feet
VdB = vibration velocity decibels

Table M: Potential Construction Vibration Damage Impacts at Nearest Receptor

Receptor (Location)	Reference Vibration Level (PPV) at 25 ft[1]	Distance (ft)[2]	Vibration Level (PPV)
Commercial (East)	0.089	220	0.003
Commercial (West)		130	0.008
Residential (Northeast)		110	0.01
Office (South)		700	0.001

Source: Compiled by LSA (2024).
[1] The reference vibration level is associated with a large bulldozer, which is expected to be representative of the heavy equipment used during construction.
[2] The reference distance is associated with the peak condition, identified by the distance from the perimeter of construction activities to surrounding structures.
ft = foot/feet
PPV = peak particle velocity

Based on the information provided in Table L, vibration levels are expected to approach 36 VdB at the closest residential uses located northeast of the project site, which is below the 78 VdB threshold for annoyance.

The closest structure to the project site is the residential uses to the northeast of site, approximately 110 ft from the limits of construction activity. Based on the information provided in Table M, it is expected that vibration levels generated by dump trucks and other large equipment that would operate near the property line would generate ground-borne vibration levels of up to 0.01 PPV (in/sec) at the closest structure to the project site. This vibration level would not exceed the 0.2 PPV (in/sec) threshold considered safe for non-engineered timber and masonry buildings. All other structures are further away and would experience lower vibration levels. Therefore, vibration impacts would be less than significant. Because construction activities are regulated by the City's Municipal Code, which states that construction, maintenance, or demolition activities are allowed between the hours of 7:00 a.m. to 8:00 p.m., Monday through Friday, and 9:00 a.m. to 5:00 p.m. on Saturdays and City-observed federal holidays, vibration impacts would not occur during the more sensitive nighttime hours.

LONG-TERM OFF-SITE TRAFFIC NOISE IMPACTS

The guidelines included in the FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77 108) were used to evaluate highway traffic-related noise conditions along roadway segments in the project vicinity. This model requires various parameters, including traffic volumes, vehicle mix, vehicle speed, and roadway geometry to compute typical equivalent noise levels during daytime, evening, and nighttime hours. The resultant noise levels are weighted and summed over 24-hour periods to determine the CNEL values. Table N provides the traffic noise levels for the opening year and future year with and without project scenarios. These noise levels represent the worst-case scenario, which assumes no shielding is provided between the traffic and the location where the noise contours are drawn.

The without and with project scenario traffic volumes were obtained from the Traffic Impact Analysis (EPD Solutions Inc. 2024). Appendix C provides the specific assumptions used in developing these noise levels and model printouts. Table N shows that the increase in project-related traffic noise would be no greater than 0.1 dBA. Noise level increases less than 3 dBA are not perceptible to the human ear in an outdoor environment. Therefore, traffic noise impacts from project-related traffic on off-site sensitive receptors would be less than significant, and no mitigation measures are required.

LONG-TERM TRAFFIC-RELATED VIBRATION IMPACTS

The proposed project would not generate vibration levels related to on-site operations. In addition, vibration levels generated from project-related traffic on the adjacent roadways are unusual for on-road vehicles because the rubber tires and suspension systems of on-road vehicles provide vibration isolation. Vibration levels generated from project-related traffic on the adjacent roadways would be less than significant and no mitigation measures are required.

LONG-TERM OFF-SITE STATIONARY NOISE IMPACTS

Adjacent off-site land uses would be potentially exposed to stationary-source noise impacts from sources which include on-site heating, ventilation, and air conditioning (HVAC) equipment, and truck deliveries and loading and unloading activities. It is expected that on-site stationary noise sources would meet the City of Tustin maximum noise level standards as presented previously in Table D.

Once proposed uses are determined and final site plans are available, a site specific noise study would be required to confirm the noise level exposure from stationary sources to off-site sensitive land uses and to identify any specific mitigation measures necessary to achieve an exterior noise level below the City's noise standards.

Table N: Traffic Noise Levels Without and With Proposed Project

Roadway Segment	Existing		Opening Year – No Project		Opening Year – With Project			Future Year – No Project		Future Year – With Project		
	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)
Tustin Ranch Rd between Irvine Blvd & Bryan Ave	28,675	66.7	30,627	67.0	30,901	67.0	0.0	34,810	67.5	35,084	67.6	0.1
Tustin Ranch Rd between Bryan Ave & El Camino Real	34,366	67.5	36,561	67.7	37,285	67.8	0.1	41,264	68.3	41,988	68.3	0.0
Tustin Ranch Rd between El Camino Real & I-5 NB Ramps	42,480	68.4	43,052	68.4	43,776	68.5	0.1	44,277	68.6	45,001	68.6	0.0
Tustin Ranch Rd between I-5 NB Ramps & I-5 SB Ramps	43,223	68.5	44,607	68.6	45,331	68.7	0.1	47,573	68.9	48,297	68.9	0.0
Tustin Ranch Rd between I-5 SB Ramps & Walnut Ave	41,988	68.3	44,250	68.6	44,974	68.6	0.0	49,097	69.0	49,821	69.1	0.1
Myford Rd between Irvine Blvd & Bryan Ave	7,319	62.1	8,243	62.6	8,353	62.7	0.1	10,222	63.5	10,332	63.6	0.1
Myford Rd between Bryan Ave & El Camino Real	6,763	61.7	7,275	62.1	7,275	62.1	0.0	8,371	62.7	8,371	62.7	0.0
Jamboree Rd between Irvine Blvd & Bryan Ave	38,890	68.0	39,139	68.0	39,211	68.0	0.0	39,671	68.1	39,743	68.1	0.0
Jamboree Rd between Bryan Ave & El Camino Real	52,907	69.3	53,005	69.4	53,097	69.4	0.0	53,215	69.4	53,307	69.4	0.0

Table N: Traffic Noise Levels Without and With Proposed Project

Roadway Segment	Existing		Opening Year – No Project		Opening Year – With Project			Future Year – No Project		Future Year – With Project		
	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)
Jamboree Rd between El Camino Real & I-5 NB Ramps	67,041	70.4	67,943	70.4	68,035	70.4	0.0	69,877	70.6	69,969	70.6	0.0
Jamboree Rd between I-5 NB Ramps & I-5 SB Ramps	62,509	70.1	63,350	70.1	63,442	70.1	0.0	65,154	70.2	65,246	70.3	0.1
Jamboree Rd between I-5 SB Ramps & Michelle Dr	66,502	70.3	67,397	70.4	67,715	70.4	0.0	69,316	70.5	69,634	70.5	0.0
Culver Dr between Irvine Blvd & Bryan Ave	39,362	65.1	41,442	65.3	41,442	65.3	0.0	45,898	65.8	45,898	65.8	0.0
Irvine Blvd between Tustin Ranch Rd & Myford Rd	29,413	67.0	30,561	67.1	30,585	67.2	0.1	33,021	67.5	33,045	67.5	0.0
Irvine Blvd between Myford Rd & Jamboree Rd	27,320	66.7	28,332	66.8	28,466	66.8	0.0	30,500	67.1	30,634	67.2	0.1
Irvine Blvd between Jamboree Rd & SR-261 SB Ramps	30,013	67.1	30,961	67.2	31,039	67.2	0.0	32,993	67.5	33,071	67.5	0.0
Irvine Blvd between SR-261 SB Ramps & SR-261 NB Ramps	29,591	67.0	30,283	67.1	30,322	67.1	0.0	31,764	67.3	31,803	67.3	0.0
Irvine Blvd between SR-261 NB Ramps & Culver Dr	30,598	67.2	31,219	67.2	31,219	67.2	0.0	32,549	67.4	32,549	67.4	0.0

Table N: Traffic Noise Levels Without and With Proposed Project

Roadway Segment	Existing		Opening Year – No Project		Opening Year – With Project			Future Year – No Project		Future Year – With Project		
	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	ADT	CNEL (dBA) 50 ft from Centerline of Nearest Lane	Increase from Baseline Conditions (dBA)
Bryan Ave between Tustin Ranch Rd & Myford Rd	16,837	60.6	17,005	60.6	17,481	60.7	0.1	17,364	60.7	17,840	60.8	0.1
Bryan Ave between Myford Rd & Jamboree Rd	17,537	60.7	17,742	60.8	18,108	60.9	0.1	18,181	60.9	18,547	61.0	0.1
Bryan Ave between Jamboree Rd & El Camino Real	20,581	61.4	20,829	61.5	21,171	61.5	0.0	21,360	61.6	21,702	61.7	0.1
Bryan Ave between El Camino Real & Culver Dr	17,497	60.7	17,733	60.8	18,075	60.9	0.1	18,237	60.9	18,579	61.0	0.1
El Camino Real between Tustin Ranch Rd & Myford Rd	19,677	61.5	20,039	61.6	20,039	61.6	0.0	20,815	61.7	20,815	61.7	0.0
El Camino Real between Myford Rd & Jamboree Rd	24,508	62.4	24,838	62.5	24,838	62.5	0.0	25,545	62.6	25,545	62.6	0.0
El Camino Real between Jamboree Rd & Bryan Ave	18,030	61.1	18,216	61.2	18,216	61.2	0.0	18,614	61.3	18,614	61.3	0.0

Source: Compiled by LSA (2024).
Note: Shaded cells indicate roadway segments adjacent to the project site.
ADT = average daily traffic
CNEL= Community Noise Equivalent Level
dBA = A-weighted decibels
ft = foot/feet

LAND USE COMPATIBILITY

The dominant source of noise in the project vicinity is traffic noise from roadways in the vicinity of the project.

EXTERIOR NOISE ASSESSMENT

Based on the monitoring results shown in Table H, the existing measured noise levels at the project site closest to Bryan Avenue, approximately 70 ft away from the Bryan Avenue centerline, is 67.2 dBA CNEL. Exterior living areas of residential units, which are either shared spaces, access points to the units, or balconies that are less than 6 ft deep, are not considered as exterior living areas. However, once site plans are available, a Final Acoustical Report would be required to confirm any proposed exterior noise sensitive areas would experience noise levels less than 65 dBA CNEL and to identify any noise reduction features to the exterior living areas, if necessary.

INTERIOR NOISE ASSESSMENT

As discussed above, the California Code of Regulations and the City's Noise Element state that an interior noise level standard of 45 dBA CNEL or less is required for all noise-sensitive rooms. Based on the expected future exterior noise levels closest to Jamboree Road approaching 74 dBA CNEL, a minimum noise reduction of 29 dBA would be required.

Based on reference information from transmission loss test reports for various Milgard windows (Milgard 2008), the necessary reduction can be achieved with standard building construction and upgraded windows with Sound Transmission Class (STC) ratings of 30–35, depending on the window-to-glass ratio, at the lots closest to Jamboree Road. For all other lots farther from Jamboree Road, standard building construction along with standard windows, typically in the STC 25–28 range, interior noise levels of 45 dBA CNEL or less would be achieved.

Once final plans are available to detail the exterior wall construction and a window manufacturer has been chosen, a Final Acoustical Report would be required to confirm the reduction capability of the exterior façades and to identify any specific upgrades necessary to achieve an interior noise level of 45 dBA CNEL or below.

BEST CONSTRUCTION PRACTICES AND DESIGN REQUIREMENTS

In addition to compliance with the City's Municipal Code allowed hours of construction of 7:00 a.m. to 8:00 p.m., Monday through Friday, and 9:00 a.m. to 5:00 p.m. on Saturdays and City-observed federal holidays, the following best construction practices would further minimize construction noise impacts:

- The project construction contractor shall equip all construction equipment, fixed or mobile, with properly operating and maintained noise mufflers consistent with manufacturer's standards.
- The project construction contractor shall locate staging areas away from off-site sensitive uses during the later phases of project development.
- The project construction contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site whenever feasible.

REFERENCES

City of Tustin. 2012. *General Plan Noise Element*.

———. 2023. *Municipal Code*. Website: https://library.municode.com/ca/tustin/codes/code_of_ordinances (accessed March 2024). November 27.

County of Orange. 2022. Community Noise Equivalent Level. Website: https://www.ocair.com/about/administration/access-noise/reports-resources/ (accessed March 2024).

EPD Solutions, Inc. 2024. *The Market Place Trip Generation*.

Federal Highway Administration (FHWA). 2006. *Roadway Construction Noise Model User's Guide.* January. Washington, D.C. Website: https://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm/rcnm.pdf (accessed March 2024).

Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual*. Office of Planning and Environment. Report No. 0123. September.

Milgard. 2008. Various Transmission Loss Reports.

APPENDIX A

NOISE MONITORING SHEETS

Noise Measurement Survey – 24 HR

Project Number: ESL2201.75
Project Name: The Marketplace

Test Personnel: Kevin Nguyendo
Equipment: Spark 706RC (SN:814)

Site Number: LT-1 Date: 1/23/24

Time: From 11:00 a.m. To 11:00 a.m.

Site Location: 2800 Monza, Tustin, CA 92782. Located in the Front yard of a multifamily residence on tree.

Primary Noise Sources: Traffic on Bryan Avenue and Heritage Way.

Comments: Approximately 6.5-foot-tall retaining wall.

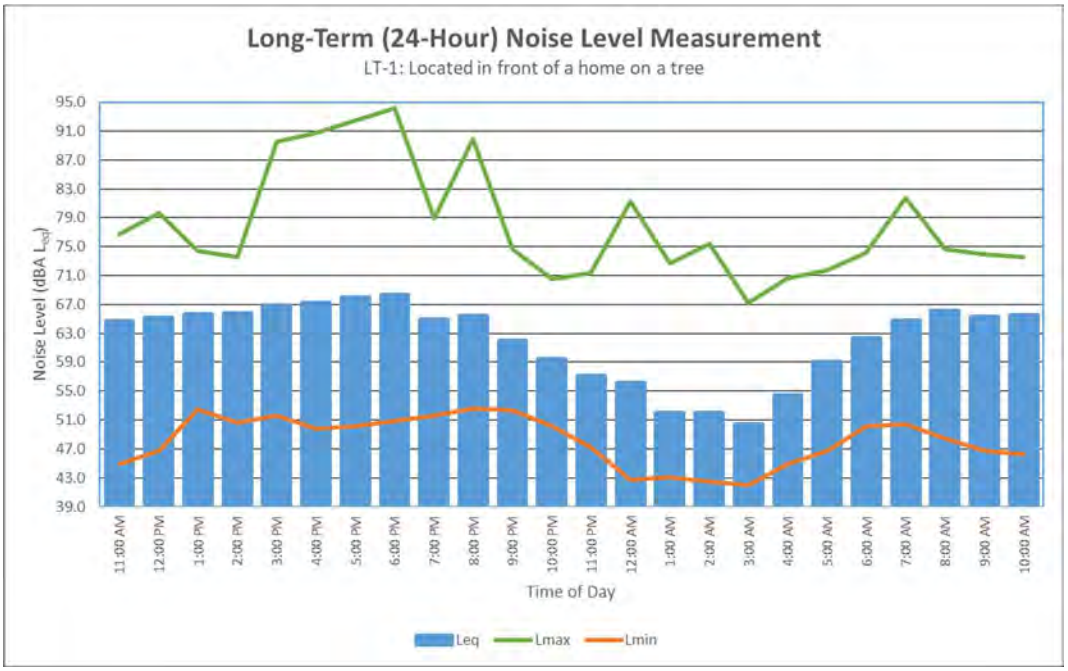
Photo:



Long-Term (24-Hour) Noise Level Measurement Results at LT-1

Start Time	Date	Noise Level (dBA)		
		L_{eq}	L_{max}	L_{min}
11:00 AM	1/23/24	64.7	76.7	44.9
12:00 PM	1/23/24	65.2	79.7	46.8
1:00 PM	1/23/24	65.6	74.4	52.5
2:00 PM	1/23/24	65.7	73.5	50.6
3:00 PM	1/23/24	66.8	89.5	51.6
4:00 PM	1/23/24	67.2	90.8	49.8
5:00 PM	1/23/24	68.0	92.5	50.2
6:00 PM	1/23/24	68.4	94.2	50.9
7:00 PM	1/23/24	64.9	78.9	51.6
8:00 PM	1/23/24	65.4	89.9	52.6
9:00 PM	1/23/24	61.9	74.7	52.4
10:00 PM	1/23/24	59.5	70.5	50.1
11:00 PM	1/23/24	57.2	71.4	47.2
12:00 AM	1/24/24	56.1	81.2	42.7
1:00 AM	1/24/24	52.0	72.7	43.1
2:00 AM	1/24/24	52.0	75.4	42.5
3:00 AM	1/24/24	50.4	67.2	42.0
4:00 AM	1/24/24	54.4	70.6	44.9
5:00 AM	1/24/24	59.0	71.7	46.8
6:00 AM	1/24/24	62.3	74.2	50.2
7:00 AM	1/24/24	64.7	81.7	50.4
8:00 AM	1/24/24	66.1	74.6	48.5
9:00 AM	1/24/24	65.3	73.9	46.8
10:00 AM	1/24/24	65.5	73.6	46.3

Source: Compiled by LSA Associates, Inc. (2024).
dBA = A-weighted decibel
L_{eq} = equivalent continuous sound level
L_{max} = maximum instantaneous noise level
L_{min} = minimum measured sound level



Noise Measurement Survey – 24 HR

Project Number: ESL2201.75
Project Name: The Marketplace

Test Personnel: Kevin Nguyendo
Equipment: Spark 706RC (SN:206)

Site Number: LT-2 Date: 1/24/24

Time: From 2:00 p.m. To 2:00 p.m.

Site Location: 2982 El Camino Real, Tustin, CA 92782. Located northeast of a Best Buy entrance in the parking lot on a light pole.

Primary Noise Sources: Intermittent parking lot activity noise. Traffic on Jamboree Road and I-5 freeway.

Comments:

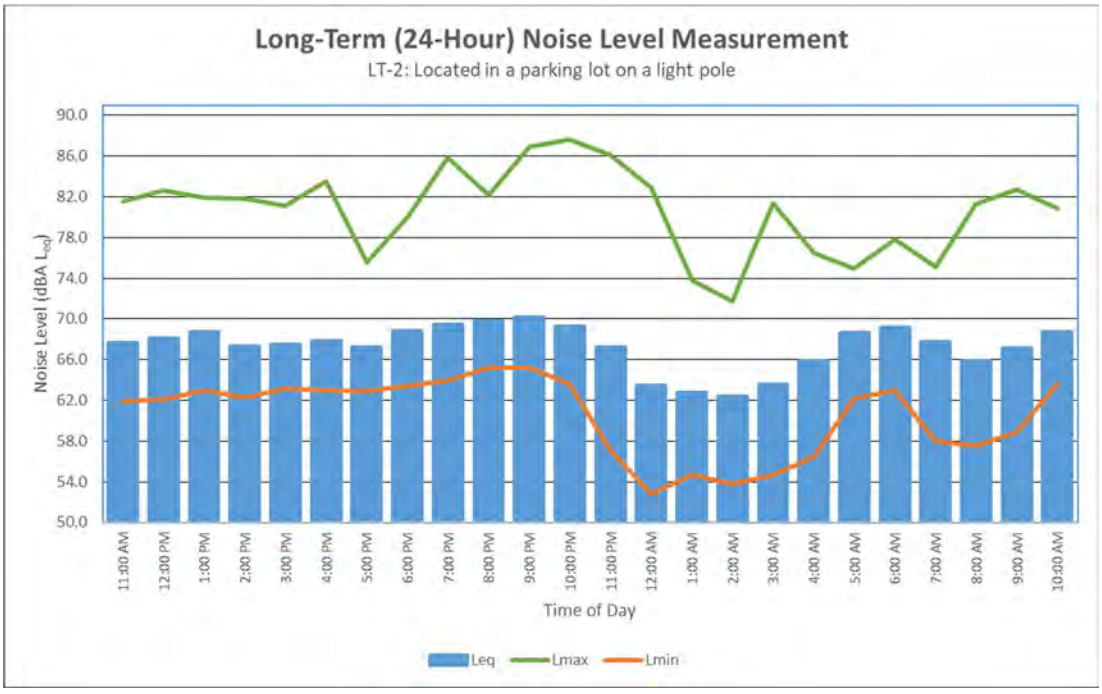
Photo:



Long-Term (24-Hour) Noise Level Measurement Results at LT-2

Start Time	Date	Noise Level (dBA)		
		L_{eq}	L_{max}	L_{min}
11:00 AM	1/23/24	67.6	81.5	61.9
12:00 PM	1/23/24	68.0	82.6	62.1
1:00 PM	1/23/24	68.7	81.9	63.0
2:00 PM	1/23/24	67.3	81.8	62.3
3:00 PM	1/23/24	67.5	81.1	63.2
4:00 PM	1/23/24	67.8	83.5	63.0
5:00 PM	1/23/24	67.2	75.6	62.9
6:00 PM	1/23/24	68.8	80.0	63.4
7:00 PM	1/23/24	69.4	85.8	64.0
8:00 PM	1/23/24	69.8	82.2	65.2
9:00 PM	1/23/24	70.1	86.9	65.2
10:00 PM	1/23/24	69.2	87.6	63.6
11:00 PM	1/23/24	67.1	86.1	57.1
12:00 AM	1/24/24	63.4	82.9	52.8
1:00 AM	1/24/24	62.7	73.8	54.7
2:00 AM	1/24/24	62.4	71.7	53.8
3:00 AM	1/24/24	63.5	81.4	54.7
4:00 AM	1/24/24	65.9	76.5	56.5
5:00 AM	1/24/24	68.6	74.9	62.2
6:00 AM	1/24/24	69.1	77.8	63.0
7:00 AM	1/24/24	67.7	75.1	58.0
8:00 AM	1/24/24	65.8	81.3	57.5
9:00 AM	1/24/24	67.1	82.7	58.9
10:00 AM	1/24/24	68.7	80.8	63.6

Source: Compiled by LSA Associates, Inc. (2024).
dBA = A-weighted decibel
L_{eq} = equivalent continuous sound level
L_{max} = maximum instantaneous noise level
L_{min} = minimum measured sound level



APPENDIX B

CONSTRUCTION NOISE LEVEL CALCULATIONS

Construction Calculations

Phase: Demolition

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Concrete Saw	1	90	20	50	0.5	90	83
Excavator	3	81	40	50	0.5	81	82
Dozer	2	82	40	50	0.5	82	81
					Combined at 50 feet	**91**	**87**
					Combined at Receptor 1080 feet	**59**	**61**
					Combined at Receptor 1270 feet	**58**	**60**
					Combined at Receptor 1700 feet	**55**	**57**

Phase: Site Preparation

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Dozer	3	82	40	50	0.5	82	83
Tractor	4	84	40	50	0.5	84	86
					Combined at 50 feet	**86**	**88**
					Combined at Receptor 1080 feet	**59**	**61**
					Combined at Receptor 1270 feet	**58**	**60**
					Combined at Receptor 1700 feet	**55**	**57**

Phase: Grading

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Excavator	2	81	40	50	0.5	81	80
Grader	1	85	40	50	0.5	85	81
Dozer	1	82	40	50	0.5	82	78
Scraper	2	84	40	50	0.5	84	83
Tractor	2	84	40	50	0.5	84	83
					Combined at 50 feet	**90**	**88**
					Combined at Receptor 1270 feet	**62**	**60**
					Combined at Receptor 1700 feet	**60**	**58**

Phase:Building Construstion

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Crane	1	81	16	50	0.5	81	73
Man Lift	3	75	20	50	0.5	75	73
Generator	1	81	50	50	0.5	81	78
Tractor	3	84	40	50	0.5	84	85
Welder / Torch	1	74	40	50	0.5	74	70
					Combined at 50 feet	**86**	**81**
					Combined at Receptor 1080 feet	**59**	**54**
					Combined at Receptor 1270 feet	**58**	**53**
					Combined at Receptor 1700 feet	**55**	**50**

Phase:Paving

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Paver	2	77	50	50	0.5	77	77
All Other Equipment > 5 HP	2	85	50	50	0.5	85	85
Roller	2	80	20	50	0.5	80	76
					Combined at 50 feet	**87**	**86**
					Combined at Receptor 1080 feet	**60**	**59**
					Combined at Receptor 1270 feet	**59**	**58**
					Combined at Receptor 1700 feet	**56**	**55**

Phase:Architectural Coating

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Compressor (air)	1	78	40	50	0.5	78	74
					Combined at 50 feet	**78**	**74**
					Combined at Receptor 1080 feet	**51**	**47**
					Combined at Receptor 1270 feet	**50**	**46**
					Combined at Receptor 1700 feet	**47**	**43**

Sources: RCNM

[1]- Percentage of time that a piece of equipment is operating at full power.
dBA – A-weighted Decibels
Lmax- Maximum Level
Leq- Equivalent Level

APPENDIX C

FHWA TRAFFIC NOISE MODEL PRINTOUTS

TABLE Existing -01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Tustin Ranch Rd between Irvine Blvd & Bryan Ave
NOTES: The Market Place Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 28675 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.68

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
86.4	138.9	272.3	573.4

TABLE Existing -02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Tustin Ranch Rd between Bryan Ave & El Camino Real
NOTES: The Market Place Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 34366 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.47

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
91.4	153.0	305.4	646.0

TABLE Existing -03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Tustin Ranch Rd between El Camino Real & I-5 NB Ramps
NOTES: The Market Place Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 42480 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.39

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
98.5	172.3	349.8	743.1

TABLE Existing -04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Tustin Ranch Rd between I-5 NB Ramps & I-5 SB Ramps
NOTES: The Market Place Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 43223 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.47

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
99.2	174.0	353.7	751.7

TABLE Existing -05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Tustin Ranch Rd between I-5 SB Ramps & Walnut Ave
NOTES: The Market Place Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 41988 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.34

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
98.1	171.1	347.2	737.4

TABLE Existing -06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Myford Rd between Irvine Blvd & Bryan Ave
NOTES: The Market Place Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7319 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.09

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	112.3	232.5

TABLE Existing -07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Myford Rd between Bryan Ave & El Camino Real
NOTES: The Market Place Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6763 SPEED (MPH): 40 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.75

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	107.1	220.8

TABLE Existing -08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Jamboree Rd between Irvine Blvd & Bryan Ave
NOTES: The Market Place Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 38890 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.01

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
95.4	163.9	330.5	701.0

TABLE Existing -09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Jamboree Rd between Bryan Ave & El Camino Real
NOTES: The Market Place Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 52907 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.34

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
107.6	195.8	403.1	859.4

TABLE Existing -10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Jamboree Rd between El Camino Real & I-5 NB Ramps
NOTES: The Market Place Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 67041 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.37

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
119.6	225.8	470.4	1005.6

TABLE Existing -11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Jamboree Rd between I-5 NB Ramps & I-5 SB Ramps
NOTES: The Market Place Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 62509 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.07

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
115.8	216.4	449.3	959.9

TABLE Existing -12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Jamboree Rd between I-5 SB Ramps & Michelle Dr
NOTES: The Market Place Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 66502 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.34

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
119.1	224.7	467.9	1000.2

TABLE Existing -13
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Culver Dr between Irvine Blvd & Bryan Ave
NOTES: The Market Place Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 39362 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 25 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.11

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	76.1	156.8	334.3

TABLE Existing -14
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Irvine Blvd between Tustin Ranch Rd & Myford Rd
NOTES: The Market Place Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 29413 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.98

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
83.4	138.6	275.7	582.7

TABLE Existing -15
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Irvine Blvd between Myford Rd & Jamboree Rd
NOTES: The Market Place Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 27320 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.66

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
81.5	133.2	263.1	555.0

TABLE Existing -16
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Irvine Blvd between Jamboree Rd & SR-261 SB Ramps
NOTES: The Market Place Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30013 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.07

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
84.0	140.1	279.2	590.5

TABLE Existing -17
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Irvine Blvd between SR-261 SB Ramps & SR-261 NB Ramps
NOTES: The Market Place Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 29591 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.01

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
83.6	139.0	276.7	585.0

TABLE Existing -18
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Irvine Blvd between SR-261 NB Ramps & Culver Dr
NOTES: The Market Place Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30598 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.15

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
84.5	141.6	282.7	598.1

TABLE Existing -19
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Bryan Ave between Tustin Ranch Rd & Myford Rd
NOTES: The Market Place Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 16837 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.55

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	96.4	193.2

TABLE Existing -20
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Bryan Ave between Myford Rd & Jamboree Rd
NOTES: The Market Place Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 17537 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.73

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	98.7	198.3

TABLE Existing -21
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Bryan Ave between Jamboree Rd & El Camino Real
NOTES: The Market Place Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 20581 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.43

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	108.0	219.8

TABLE Existing -22
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Bryan Ave between El Camino Real & Culver Dr
NOTES: The Market Place Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 17497 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.72

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	98.5	198.0

TABLE Existing -23
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: El Camino Real between Tustin Ranch Rd & Myford Rd
NOTES: The Market Place Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 19677 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.50

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	103.5	212.7

TABLE Existing -24
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: El Camino Real between Myford Rd & Jamboree Rd
NOTES: The Market Place Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 24508 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.45

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	0.0	63.0	118.1	245.4

TABLE Existing -25
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: El Camino Real between Jamboree Rd & Bryan Ave
NOTES: The Market Place Project - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 18030 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.12

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	0.0	0.0	98.3	201.0

TABLE Opening Year - No Project -01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Tustin Ranch Rd between Irvine Blvd & Bryan Ave
NOTES: The Market Place Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30627 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.97

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
88.1	143.8	283.9	598.8

TABLE Opening Year - No Project -02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Tustin Ranch Rd between Bryan Ave & El Camino Real
NOTES: The Market Place Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 36561 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.74

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
93.4	158.3	317.7	673.0

TABLE Opening Year - No Project -03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Tustin Ranch Rd between El Camino Real & I-5 NB Ramps
NOTES: The Market Place Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 43052 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.45

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
99.0	173.6	352.8	749.7

TABLE Opening Year - No Project -04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Tustin Ranch Rd between I-5 NB Ramps & I-5 SB Ramps
NOTES: The Market Place Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 44607 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.60

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
100.4	177.2	361.0	767.6

TABLE Opening Year - No Project -05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Tustin Ranch Rd between I-5 SB Ramps & Walnut Ave
NOTES: The Market Place Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 44250 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.57

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
100.1	176.4	359.1	763.5

TABLE Opening Year - No Project -06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Myford Rd between Irvine Blvd & Bryan Ave
NOTES: The Market Place Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8243 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.60

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	64.0	120.7	251.2

TABLE Opening Year - No Project -07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Myford Rd between Bryan Ave & El Camino Real
NOTES: The Market Place Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7275 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.06

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	111.9	231.6

TABLE Opening Year - No Project -08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Jamboree Rd between Irvine Blvd & Bryan Ave
NOTES: The Market Place Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 39139 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.03

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
95.6	164.5	331.8	704.0

TABLE Opening Year - No Project -09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Jamboree Rd between Bryan Ave & El Camino Real
NOTES: The Market Place Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 53005 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.35

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
107.7	196.0	403.6	860.5

TABLE Opening Year - No Project -10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Jamboree Rd between El Camino Real & I-5 NB Ramps
NOTES: The Market Place Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 67943 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.43

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
120.4	227.7	474.5	1014.5

TABLE Opening Year - No Project -11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Jamboree Rd between I-5 NB Ramps & I-5 SB Ramps
NOTES: The Market Place Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 63350 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.13

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
116.5	218.2	453.3	968.5

TABLE Opening Year - No Project -12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Jamboree Rd between I-5 SB Ramps & Michelle Dr
NOTES: The Market Place Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 67397 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.39

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
119.9	226.6	472.0	1009.1

TABLE Opening Year - No Project -13
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Culver Dr between Irvine Blvd & Bryan Ave
NOTES: The Market Place Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 41442 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 25 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.33

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	78.4	162.1	345.9

TABLE Opening Year - No Project -14
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Irvine Blvd between Tustin Ranch Rd & Myford Rd
NOTES: The Market Place Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30561 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.15

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
84.5	141.5	282.5	597.6

TABLE Opening Year - No Project -15
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Irvine Blvd between Myford Rd & Jamboree Rd
NOTES: The Market Place Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 28332 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.82

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
82.4	135.8	269.2	568.5

TABLE Opening Year - No Project -16
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Irvine Blvd between Jamboree Rd & SR-261 SB Ramps
NOTES: The Market Place Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30961 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.20

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
84.9	142.5	284.8	602.8

TABLE Opening Year - No Project -17
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Irvine Blvd between SR-261 SB Ramps & SR-261 NB Ramps
NOTES: The Market Place Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30283 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.11

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
84.2	140.8	280.8	594.0

TABLE Opening Year - No Project -18
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Irvine Blvd between SR-261 NB Ramps & Culver Dr
NOTES: The Market Place Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 31219 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.24

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
85.1	143.2	286.3	606.1

TABLE Opening Year - No Project -19
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Bryan Ave between Tustin Ranch Rd & Myford Rd
NOTES: The Market Place Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 17005 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.60

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	97.0	194.5

TABLE Opening Year - No Project -20
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Bryan Ave between Myford Rd & Jamboree Rd
NOTES: The Market Place Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 17742 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.78

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	99.3	199.8

TABLE Opening Year - No Project -21
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Bryan Ave between Jamboree Rd & El Camino Real
NOTES: The Market Place Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 20829 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.48

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	108.8	221.5

TABLE Opening Year - No Project -22
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Bryan Ave between El Camino Real & Culver Dr
NOTES: The Market Place Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 17733 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.78

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	99.3	199.7

TABLE Opening Year - No Project -23
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: El Camino Real between Tustin Ranch Rd & Myford Rd
NOTES: The Market Place Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 20039 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.57

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	104.6	215.3

TABLE Opening Year - No Project -24
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: El Camino Real between Myford Rd & Jamboree Rd
NOTES: The Market Place Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 24838 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.51

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	63.4	119.0	247.5

TABLE Opening Year - No Project -25
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: El Camino Real between Jamboree Rd & Bryan Ave
NOTES: The Market Place Project - Opening Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 18216 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.16

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	98.9	202.4

TABLE Opening Year - With Project -01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Tustin Ranch Rd between Irvine Blvd & Bryan Ave
NOTES: The Market Place Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30901 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.01

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
88.4	144.5	285.5	602.3

TABLE Opening Year - With Project -02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Tustin Ranch Rd between Bryan Ave & El Camino Real
NOTES: The Market Place Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 37285 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.82

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
94.0	160.1	321.7	681.7

TABLE Opening Year - With Project -03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Tustin Ranch Rd between El Camino Real & I-5 NB Ramps
NOTES: The Market Place Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 43776 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.52

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
99.7	175.3	356.6	758.1

TABLE Opening Year - With Project -04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Tustin Ranch Rd between I-5 NB Ramps & I-5 SB Ramps
NOTES: The Market Place Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 45331 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.67

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
101.0	178.8	364.7	775.8

TABLE Opening Year - With Project -05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Tustin Ranch Rd between I-5 SB Ramps & Walnut Ave
NOTES: The Market Place Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 44974 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.64

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
100.7	178.0	362.9	771.7

TABLE Opening Year - With Project -06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Myford Rd between Irvine Blvd & Bryan Ave
NOTES: The Market Place Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8353 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.66

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	64.4	121.6	253.4

TABLE Opening Year - With Project -07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Myford Rd between Bryan Ave & El Camino Real
NOTES: The Market Place Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7275 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.06

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	111.9	231.6

TABLE Opening Year - With Project -08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Jamboree Rd between Irvine Blvd & Bryan Ave
NOTES: The Market Place Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 39211 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.04

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
95.7	164.6	332.2	704.8

TABLE Opening Year - With Project -09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Jamboree Rd between Bryan Ave & El Camino Real
NOTES: The Market Place Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 53097 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.36

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
107.8	196.2	404.1	861.5

TABLE Opening Year - With Project -10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Jamboree Rd between El Camino Real & I-5 NB Ramps
NOTES: The Market Place Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 68035 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.44

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
120.4	227.9	474.9	1015.4

TABLE Opening Year - With Project -11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Jamboree Rd between I-5 NB Ramps & I-5 SB Ramps
NOTES: The Market Place Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 63442 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.13

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
116.6	218.4	453.7	969.4

TABLE Opening Year - With Project -12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Jamboree Rd between I-5 SB Ramps & Michelle Dr
NOTES: The Market Place Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 67715 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.41

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
120.2	227.2	473.5	1012.3

TABLE Opening Year - With Project -13
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Culver Dr between Irvine Blvd & Bryan Ave
NOTES: The Market Place Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 41442 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 25 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.33

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	78.4	162.1	345.9

TABLE Opening Year - With Project -14
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Irvine Blvd between Tustin Ranch Rd & Myford Rd
NOTES: The Market Place Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30585 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.15

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
84.5	141.6	282.6	597.9

TABLE Opening Year - With Project -15
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Irvine Blvd between Myford Rd & Jamboree Rd
NOTES: The Market Place Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 28466 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.84

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
82.6	136.2	270.0	570.3

TABLE Opening Year - With Project -16
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Irvine Blvd between Jamboree Rd & SR-261 SB Ramps
NOTES: The Market Place Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 31039 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.22

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
84.9	142.7	285.3	603.8

TABLE Opening Year - With Project -17
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Irvine Blvd between SR-261 SB Ramps & SR-261 NB Ramps
NOTES: The Market Place Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30322 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.11

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
84.3	140.9	281.1	594.5

TABLE Opening Year - With Project -18
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Irvine Blvd between SR-261 NB Ramps & Culver Dr
NOTES: The Market Place Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 31219 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.24

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
85.1	143.2	286.3	606.1

TABLE Opening Year - With Project -19
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Bryan Ave between Tustin Ranch Rd & Myford Rd
NOTES: The Market Place Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 17481 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.72

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	98.5	197.9

TABLE Opening Year - With Project -20
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Bryan Ave between Myford Rd & Jamboree Rd
NOTES: The Market Place Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 18108 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.87

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	100.4	202.4

TABLE Opening Year - With Project -21
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Bryan Ave between Jamboree Rd & El Camino Real
NOTES: The Market Place Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 21171 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.55

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	109.8	223.8

TABLE Opening Year - With Project -22
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Bryan Ave between El Camino Real & Culver Dr
NOTES: The Market Place Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 18075 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.86

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	100.3	202.2

TABLE Opening Year - With Project -23
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: El Camino Real between Tustin Ranch Rd & Myford Rd
NOTES: The Market Place Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 20039 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.57

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	104.6	215.3

TABLE Opening Year - With Project -24
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: El Camino Real between Myford Rd & Jamboree Rd
NOTES: The Market Place Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 24838 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.51

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	63.4	119.0	247.5

TABLE Opening Year - With Project -25
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: El Camino Real between Jamboree Rd & Bryan Ave
NOTES: The Market Place Project - Opening Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 18216 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.16

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	98.9	202.4

TABLE Future Year - No Project -01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Tustin Ranch Rd between Irvine Blvd & Bryan Ave
NOTES: The Market Place Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 34810 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.53

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
91.8	154.1	307.9	651.5

TABLE Future Year - No Project -02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Tustin Ranch Rd between Bryan Ave & El Camino Real
NOTES: The Market Place Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 41264 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.26

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
97.5	169.5	343.3	729.0

TABLE Future Year - No Project -03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Tustin Ranch Rd between El Camino Real & I-5 NB Ramps
NOTES: The Market Place Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 44277 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.57

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
100.1	176.4	359.2	763.8

TABLE Future Year - No Project -04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Tustin Ranch Rd between I-5 NB Ramps & I-5 SB Ramps
NOTES: The Market Place Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 47573 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.88

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
103.0	183.9	376.3	801.0

TABLE Future Year - No Project -05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Tustin Ranch Rd between I-5 SB Ramps & Walnut Ave
NOTES: The Market Place Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 49097 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.02

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
104.3	187.4	384.0	817.9

TABLE Future Year - No Project -06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Myford Rd between Irvine Blvd & Bryan Ave
NOTES: The Market Place Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10222 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.54

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	71.1	137.8	289.2

TABLE Future Year - No Project -07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Myford Rd between Bryan Ave & El Camino Real
NOTES: The Market Place Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8371 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.67

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	64.5	121.8	253.7

TABLE Future Year - No Project -08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Jamboree Rd between Irvine Blvd & Bryan Ave
NOTES: The Market Place Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 39671 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.09

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
96.1	165.7	334.7	710.3

TABLE Future Year - No Project -09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Jamboree Rd between Bryan Ave & El Camino Real
NOTES: The Market Place Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 53215 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.37

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
107.9	196.5	404.6	862.7

TABLE Future Year - No Project -10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Jamboree Rd between El Camino Real & I-5 NB Ramps
NOTES: The Market Place Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 69877 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.55

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
122.0	231.6	483.3	1033.6

TABLE Future Year - No Project -11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Jamboree Rd between I-5 NB Ramps & I-5 SB Ramps
NOTES: The Market Place Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 65154 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.25

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
118.0	221.9	461.7	986.7

TABLE Future Year - No Project -12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Jamboree Rd between I-5 SB Ramps & Michelle Dr
NOTES: The Market Place Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 69316 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.52

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
121.5	230.5	480.8	1028.1

TABLE Future Year - No Project -13
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Culver Dr between Irvine Blvd & Bryan Ave
NOTES: The Market Place Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 45898 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 25 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.77

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	83.4	173.3	370.2

TABLE Future Year - No Project -14
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Irvine Blvd between Tustin Ranch Rd & Myford Rd
NOTES: The Market Place Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 33021 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.48

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
86.7	147.7	296.8	628.9

TABLE Future Year - No Project -15
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Irvine Blvd between Myford Rd & Jamboree Rd
NOTES: The Market Place Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30500 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.14

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
84.4	141.3	282.1	596.8

TABLE Future Year - No Project -16
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Irvine Blvd between Jamboree Rd & SR-261 SB Ramps
NOTES: The Market Place Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 32993 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.48

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
86.7	147.6	296.6	628.6

TABLE Future Year - No Project -17
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Irvine Blvd between SR-261 SB Ramps & SR-261 NB Ramps
NOTES: The Market Place Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 31764 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.32

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
85.6	144.5	289.5	613.0

TABLE Future Year - No Project -18
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Irvine Blvd between SR-261 NB Ramps & Culver Dr
NOTES: The Market Place Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 32549 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.42

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
86.3	146.5	294.1	623.0

TABLE Future Year - No Project -19
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Bryan Ave between Tustin Ranch Rd & Myford Rd
NOTES: The Market Place Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 17364 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.69

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	98.1	197.1

TABLE Future Year - No Project -20
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Bryan Ave between Myford Rd & Jamboree Rd
NOTES: The Market Place Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 18181 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.89

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	100.7	203.0

TABLE Future Year - No Project -21
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Bryan Ave between Jamboree Rd & El Camino Real
NOTES: The Market Place Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 21360 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.59

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	110.4	225.1

TABLE Future Year - No Project -22
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Bryan Ave between El Camino Real & Culver Dr
NOTES: The Market Place Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 18237 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.90

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	100.8	203.4

TABLE Future Year - No Project -23
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: El Camino Real between Tustin Ranch Rd & Myford Rd
NOTES: The Market Place Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 20815 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.74

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	107.0	220.6

TABLE Future Year - No Project -24
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: El Camino Real between Myford Rd & Jamboree Rd
NOTES: The Market Place Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 25545 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.63

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	64.2	121.1	252.1

TABLE Future Year - No Project -25
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: El Camino Real between Jamboree Rd & Bryan Ave
NOTES: The Market Place Project - Future Year - No Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 18614 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.25

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	100.2	205.2

TABLE Future Year - With Project -01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Tustin Ranch Rd between Irvine Blvd & Bryan Ave
NOTES: The Market Place Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 35084 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.56

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
92.1	154.8	309.4	654.9

TABLE Future Year - With Project -02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Tustin Ranch Rd between Bryan Ave & El Camino Real
NOTES: The Market Place Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 41988 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.34

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
98.1	171.1	347.2	737.4

TABLE Future Year - With Project -03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Tustin Ranch Rd between El Camino Real & I-5 NB Ramps
NOTES: The Market Place Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 45001 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.64

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
100.7	178.1	363.0	772.0

TABLE Future Year - With Project -04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Tustin Ranch Rd between I-5 NB Ramps & I-5 SB Ramps
NOTES: The Market Place Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 48297 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.95

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
103.6	185.6	380.0	809.0

TABLE Future Year - With Project -05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Tustin Ranch Rd between I-5 SB Ramps & Walnut Ave
NOTES: The Market Place Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 49821 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.08

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
104.9	189.0	387.7	825.9

TABLE Future Year - With Project -06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Myford Rd between Irvine Blvd & Bryan Ave
NOTES: The Market Place Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10332 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.59

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	71.5	138.7	291.3

TABLE Future Year - With Project -07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Myford Rd between Bryan Ave & El Camino Real
NOTES: The Market Place Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8371 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.67

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	64.5	121.8	253.7

TABLE Future Year - With Project -08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Jamboree Rd between Irvine Blvd & Bryan Ave
NOTES: The Market Place Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 39743 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.10

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
96.1	165.9	335.1	711.1

TABLE Future Year - With Project -09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Jamboree Rd between Bryan Ave & El Camino Real
NOTES: The Market Place Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 53307 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.38

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
107.9	196.7	405.1	863.7

TABLE Future Year - With Project -10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Jamboree Rd between El Camino Real & I-5 NB Ramps
NOTES: The Market Place Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 69969 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.56

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
122.0	231.8	483.7	1034.5

TABLE Future Year - With Project -11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Jamboree Rd between I-5 NB Ramps & I-5 SB Ramps
NOTES: The Market Place Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 65246 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.25

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
118.1	222.1	462.1	987.6

TABLE Future Year - With Project -12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Jamboree Rd between I-5 SB Ramps & Michelle Dr
NOTES: The Market Place Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 69634 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 65 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.54

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
121.8	231.1	482.2	1031.2

TABLE Future Year - With Project -13
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Culver Dr between Irvine Blvd & Bryan Ave
NOTES: The Market Place Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 45898 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 25 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.77

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	83.4	173.3	370.2

TABLE Future Year - With Project -14
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Irvine Blvd between Tustin Ranch Rd & Myford Rd
NOTES: The Market Place Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 33045 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.49

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
86.8	147.7	296.9	629.2

TABLE Future Year - With Project -15
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Irvine Blvd between Myford Rd & Jamboree Rd
NOTES: The Market Place Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30634 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.16

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
84.6	141.7	282.9	598.5

TABLE Future Year - With Project -16
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Irvine Blvd between Jamboree Rd & SR-261 SB Ramps
NOTES: The Market Place Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 33071 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.49

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
86.8	147.8	297.1	629.6

TABLE Future Year - With Project -17
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Irvine Blvd between SR-261 SB Ramps & SR-261 NB Ramps
NOTES: The Market Place Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 31803 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.32

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
85.6	144.6	289.7	613.5

TABLE Future Year - With Project -18
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Irvine Blvd between SR-261 NB Ramps & Culver Dr
NOTES: The Market Place Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 32549 SPEED (MPH): 40 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 60 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.42

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
86.3	146.5	294.1	623.0

TABLE Future Year - With Project -19
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Bryan Ave between Tustin Ranch Rd & Myford Rd
NOTES: The Market Place Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 17840 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.81

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	99.6	200.5

TABLE Future Year - With Project -20
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Bryan Ave between Myford Rd & Jamboree Rd
NOTES: The Market Place Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 18547 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.97

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	101.8	205.6

TABLE Future Year - With Project -21
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Bryan Ave between Jamboree Rd & El Camino Real
NOTES: The Market Place Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 21702 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.66

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	111.4	227.5

TABLE Future Year - With Project -22
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: Bryan Ave between El Camino Real & Culver Dr
NOTES: The Market Place Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 18579 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 40 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.98

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	101.9	205.8

TABLE Future Year - With Project -23
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: El Camino Real between Tustin Ranch Rd & Myford Rd
NOTES: The Market Place Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 20815 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.74

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	107.0	220.6

TABLE Future Year - With Project -24
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: El Camino Real between Myford Rd & Jamboree Rd
NOTES: The Market Place Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 25545 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.63

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	64.2	121.1	252.1

TABLE Future Year - With Project -25
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 03/15/2024
ROADWAY SEGMENT: El Camino Real between Jamboree Rd & Bryan Ave
NOTES: The Market Place Project - Future Year - With Project

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 18614 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 35 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.25

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	100.2	205.2

Appendix D
Vehicle Miles Traveled Analysis

Tustin Market Place Draft EIR

Submitted on:	February 6, 2024
Revised on:	February 21, 2024, March 25, 2024, April 18, 2024, May 13, 2024
Prepared by:	Simon Lin, EIT, Abby Pal Meghan Macias, TE
To:	City of Tustin
Site:	The Tustin Market Place Rezone Project EPD Project Number 23-070
Subject:	Vehicle Miles Traveled (VMT) Analysis



This technical study evaluates the potential vehicle miles traveled (VMT) for the proposed Tustin Market Place Rezone Project (Project).

The Project is located in the Tustin Market Place (Site 18 in the Housing Element) within the East Tustin Specific Plan, on the north and south sides of El Camino Real between Myford Road & Jamboree Road. The gross existing site area is approximately 76.93 acres. The site is currently developed with a commercial center totaling approximately 747,165 SF. Based on the proposed overlay zone, an additional 900 residential units and a future commercial center totaling 13,032 square feet (SF) could be added to the existing land uses on site. The Project location is shown in Figure 1.

The VMT analysis presented in this document evaluates the VMT impacts of both the residential and commercial portions of the Project within the Tustin Market Place Housing Overlay Zone. Please note that this VMT analysis is based on the requirements of the *City of Tustin Vehicle Miles Traveled Analysis Guidelines*.

Project Trip Generation

The Project trip generation was calculated using trip rates from the Institute of Transportation Engineers, *Trip Generation 11th Edition*, 2021. Existing conditions (Baseline) were assessed using trip rates for Land Use Code 932 (High-Turnover Sit-Down Restaurant), 495 (Community Center), 820 (Retail), and 710 (Office). Based on the density of the proposed housing, trip rates for Land Use Code 221 (Multifamily Housing (Mid-Rise)) were used. The ITE rates used for the trip generation can be found in *Appendix A*. As shown in Table 1, the Project would generate approximately 5,483 daily trips including 458 trips during the AM peak hour and 469 trips during the PM peak hour.

Table 1: Project Trip Generation

	Land Use	ITE Code[1]	Unit[2]	ITE Daily Trip Rate/Unit	Project Size	Project ADTs	ITE AM Trip Rate/Unit	Project AM Trips	ITE PM Trip Rate/Unit	Project PM Trips
Existing Conditions (Baseline)	Restaurant	932	KSF	107.20	57.456	6,159	9.57	550	9.05	520
	Community Center	495	KSF	28.82	23.662	682	1.91	45	2.50	59
	Retail	820	KSF	37.01	661.528	24,483	0.84	556	3.40	2249
	Office	710	KSF	10.84	4.559	49	1.52	7	1.44	7
Existing Conditions (Baseline) TOTAL TRIPS						**31,374**		**1,158**		**2,835**
Proposed Housing Units + Remaining Buildout Capacity (Project)	Proposed Multi-Family Housing	221	DU	4.54	900	4,086	0.37	333	0.39	351
	Future Commercial Center (assumed restaurant)	932	KSF	107.20	13.032	1,397	9.57	125	9.05	118
Proposed Project TOTAL TRIPS						**5,483**		**458**		**469**
Existing Conditions + Proposed Housing Units + Remaining Buildout Capacity (Total)	Restaurant	932	KSF	107.20	70.488	7,556	9.57	675	9.05	638
	Community Center	495	KSF	28.82	23.662	682	1.91	45	2.50	59
	Proposed Multi-Family Housing	221	DU	4.54	900	4,086	0.37	333	0.39	351
	Retail	820	KSF	37.01	661.528	24,483	0.84	556	3.40	2249
	Office	710	KSF	10.84	4.559	49	1.52	7	1.44	7
Existing Conditions + Proposed Housing Units + Remaining Buildout Capacity (Total) TOTAL TRIPS						**36,857**		**1,616**		**3,304**

[1]Trip rates from the Institute of Transportation Engineers (ITE), Trip Generation Manual,11th Edition, 2021.

[2]KSF=Thousand Square Feet, DU= Dwelling Units

Background

Senate Bill (SB) 743 was signed by Governor Brown in 2013 and required the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to replace Level of Service (LOS) as the appropriate method for evaluating transportation impacts under CEQA. SB 743 specified that the new criteria should promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. The bill also specified that delay-based LOS could no longer be considered an indicator of a significant impact on the environment under CEQA. In response, the Natural Resources Agency amended the CEQA Guidelines to include new Section 15064.3 - Determining the Significance of Transportation Impacts. The section states that Vehicle Miles Traveled (VMT) is the most appropriate measure of a project's transportation impacts and provides lead agencies with the discretion to choose the most appropriate methodology and thresholds for evaluating VMT. Section 15064.3(c) states that the provisions of the section shall apply statewide beginning on July 1, 2020.

City of Tustin VMT Screening Criteria

The Project is located in the City of Tustin (City). The City's Guidelines provide the following screening thresholds to assess whether further VMT analysis is required. If a project meets one of the following criteria, then the VMT impact of the project would be considered less-than-significant and no further analysis of VMT would be required:

1. The project consists of 100% affordable housing.
2. The project is located within one half (½) mile of qualifying transit.
3. The project type has been identified as local serving land use.
4. The project is in a low VMT area.
5. The project generates less than 500 daily vehicle trips.

The applicability of each criterion to both portions of the Project is discussed below:

Screening Criteria 1 – Affordable Housing Screening: As per the City's guidelines, projects which consist of 100% affordable housing will have a less than significant impact on VMT.

The Project does not consist of 100% affordable housing and therefore would not satisfy the requirements of Screening criteria 1 - Affordable Housing Screening.

Screening Criteria 2 – High Quality Transit Screening: As per the City's guidelines, projects located within one half (½) mile of qualifying transit may be presumed to have a less than significant impact. Qualifying transit is defined as follows:

- **Major transit stop** means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. (Pub. Resources Code, § 21064.3)

- **High-quality transit corridor** means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. (Pub. Resources Code, § 21155).

The High-Quality Transit Area from the City's Guideline is shown in Figure 2. As shown in Figure 2, the Project is located approximately 1.5 miles away from qualifying transit, therefore, the project would not satisfy the requirements of Screening Criteria 2 – High Quality Transit screening.

Screening Criteria 3 - Project Type Screening: As per the City's guidelines, projects which propose local serving retail (retail projects less than 50,000 square feet) or other local serving uses would have a less than significant impact on VMT. The types of projects considered local serving include K-12 schools, local parks, day care centers, gas stations, libraries, fire stations, and other local serving civic uses.

This screening criteria would be discussed separately for the residential and commercial portion of the Project in sections below.

Screening Criteria 4 - Low VMT Area Screening: The City's guidelines include a screening threshold for projects located in a low VMT generating area. Low VMT generating area is defined as traffic analysis zones (TAZs) with a total daily VMT per capita or VMT per employee that is less than the base level for the city.

This screening criteria would be discussed separately for the residential and commercial portion of the Project in sections below.

Screening Criteria 5 - Generating less than 500 daily vehicle trips: As per the City's guidelines, projects which generate less than 500 daily vehicle trips would have a less than significant impact on VMT.

As shown in Table 1, the Project is forecasted to generate 5,483 daily trips, which is more than 500 daily vehicle trips. Therefore, the Project would not meet Screening Criteria 5.

The City of Tustin VMT screening form for the Project can be found in *Appendix B*.

Residential VMT Screening

Screening Criteria 3 - Project Type Screening:

Screening Criteria 3 would not apply to the residential portion of the Project.

Screening Criteria 4 - Low VMT Area Screening:

The Map of Low VMT Generating Area for VMT per capita from the City's Guideline is shown in Figure 3. As shown in Figure 3, the Project is not located in a low VMT area. Therefore, the residential portion of the Project would not satisfy the requirements of Screening Criteria 4 – Low-VMT Area Screening.

Because the residential portion of the Project would not meet any of the City's screening criteria, the residential portion of the Project's impact on VMT would not be considered less-than-significant and an analysis of VMT would be required.

Commercial VMT Screening

Screening Criteria 3 - Project Type Screening:

The project proposes locally serving retail use with an area of 13,032 SF, which is less than 50,000 square feet. Therefore, it would satisfy the requirements of Screening Criteria 3 - Project Type Screening.

Screening Criteria 4 - Low VMT Area Screening:

The Map of Low VMT Generating Area for VMT per employee from the City's Guideline is shown in Figure 4. As shown in Figure 4, the Project is located in a low VMT area. Therefore, the commercial portion of the Project would satisfy the requirements of Screening Criteria 4 – Low-VMT Area Screening.

The commercial portion of the Project would meet Screening Criteria 3 – Project Type Screening; and Screening Criteria 4 – Low-VMT Area Screening, and therefore the commercial portion of the Project's impact on VMT would be considered less-than-significant.

VMT Analysis Methodology

The City's guidelines require use of the Orange County Transportation Analysis Model 5.0 v.6.22.23 (OCTAM) for preparation of VMT analysis. The Project is located within one Model Traffic Analysis Zone (TAZ), TAZ 1126. The total population and employed population of the Project was calculated using the current household average occupancy in adjacent TAZs, since there are currently no existing households in TAZ 1126. The Project total households, population was entered into TAZ 1126. Employment growth in TAZ 1126 was already accounted for by the model.

The Model includes validated scenarios for 2016 and 2045. These scenarios have been validated using existing traffic counts. Data for years between 2016 and 2045 can be extrapolated using linear interpolation between the 2016 and 2045 Model output. The Model was run for the base year (2016) and future year (2045) without and with-project conditions (i.e. four full Model runs). As noted below under the discussion of significance thresholds, the City's significance threshold for residential projects is based on the project's home-based VMT (HB VMT) per capita.

Residential VMT Significance Threshold

The significance criteria from the City's guidelines are as follows:

The City of Tustin VMT Guidelines have relied upon the recommendations provided by OPR and modeling data provided by OCTA to establish the following VMT thresholds of significance for residential land use projects:

> Residential Projects: A significant transportation impact occurs if:

1. The project's base year home-based VMT per capita exceeds the OCTAM base model year citywide average VMT per capita for the City of Tustin.

2. The project's future year home-based VMT per capita exceeds the OCTAM base model year citywide average VMT per capita for the City of Tustin.

The metric utilized as the residential VMT threshold of significance for City of Tustin is the average city-wide VMT under 2016 Base Model Year, which has been calculated to be 15.0 HB VMT per capita. The OPR Technical Advisory recommends that a fifteen percent reduction in VMT below that of existing development may be a reasonable threshold. However, given that the City of Tustin is primarily located within a suburban setting, the amount of VMT reduction from an individual land use project is limited, and it is likely infeasible to achieve a 15% reduction below the citywide average for many areas in the City. However, by ensuring that land use development projects result in no net increase in VMT over the current base year citywide VMT averages, a sustained reduction in citywide VMT and GHG emissions will occur, the Project's impact on VMT would be considered less-than-significant.

Project Residential VMT Evaluation

The total HB VMT of TAZ 1126 was evaluated using the OCTAM VMT post-processor. To determine the Project's HB VMT per capita, the total HB VMT of TAZ 1126 is divided by the total residents of TAZ 1126. Tustin Citywide HB VMT per capita was obtained from the OCTAM base year model following a similar process. The VMT analysis results per the City's significance criteria are shown in Table 2.

As shown in the tables, the Project's HB VMT per capita would be lower than the OCTAM base model year citywide average HB VMT per capita for the City of Tustin under both base and future year conditions. The Project's HB VMT per capita would be 40.3% below the City's threshold under base conditions and 44.3% below the City's threshold under future conditions; therefore, the residential portion of the Project would result in a less than significant VMT impact.

Overall, the entire Project can be assumed to have a less than significant VMT impact.

If you have any questions, please feel free to contact me at techservices@epdsolutions.com or at (949) 794-1180.

Table 2: VMT Analysis of Project Impact per City Guidelines

	Base Year 2016	**Future Year 2045**
Project TAZ 1126 Zone Total Home-based VMT	24,500	22,877
TAZ 1126 Total Residents	2,745	2,745
Project TAZ 1126 HB VMT per capita	**8.9**	**8.3**
City of Tustin Baseline Home-based VMT	1,356,977	1,356,977
City of Tustin Baseline Total Residents	90,762	90,762
City of Tustin Baseline HB VMT per capita	**15.0**	**15.0**
% Above/Below Threshold	-40.3%	-44.3%
Impact?	**No**	**No**

Figure 1: Project Site Location

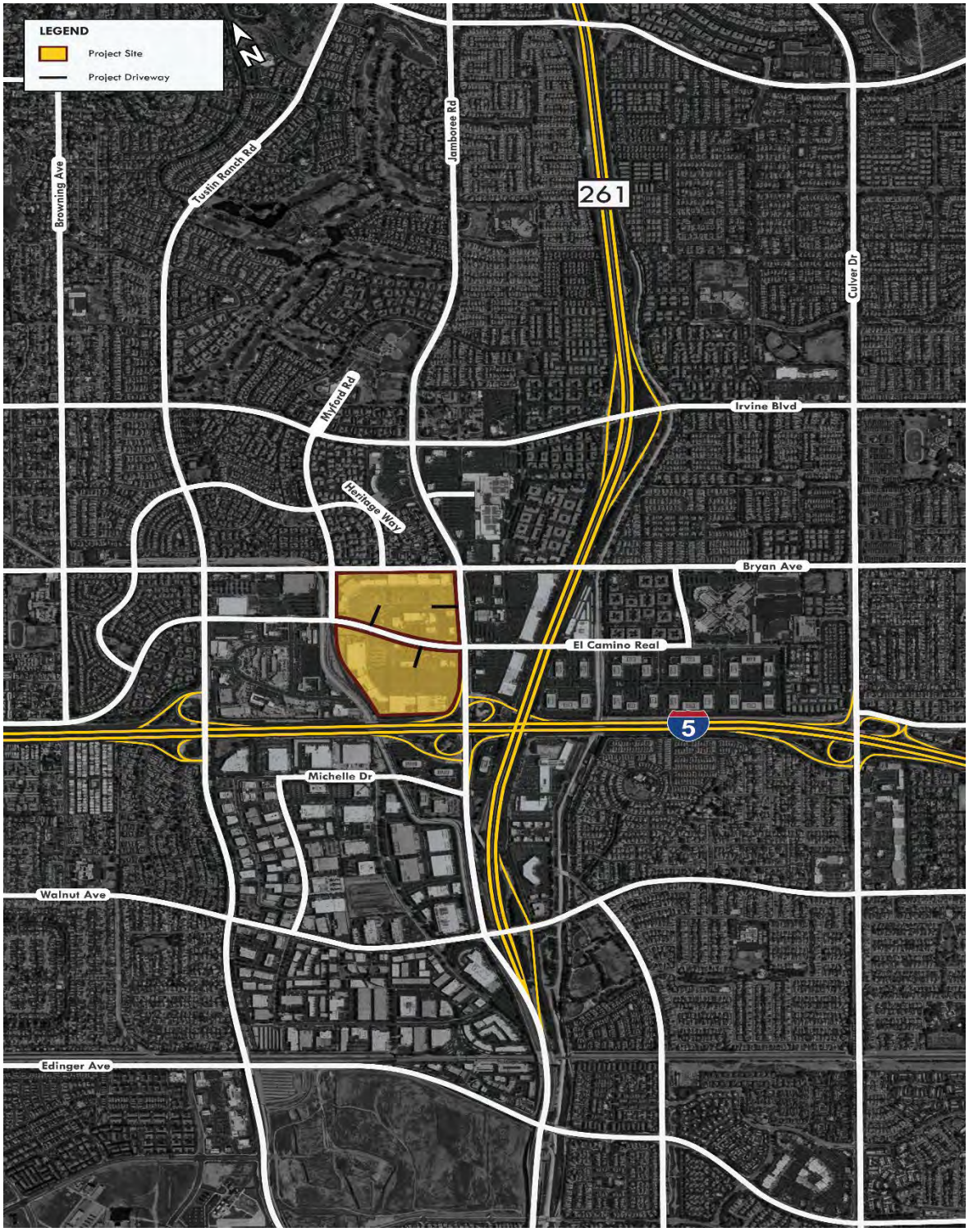


Figure 2: High-Quality Transit Area

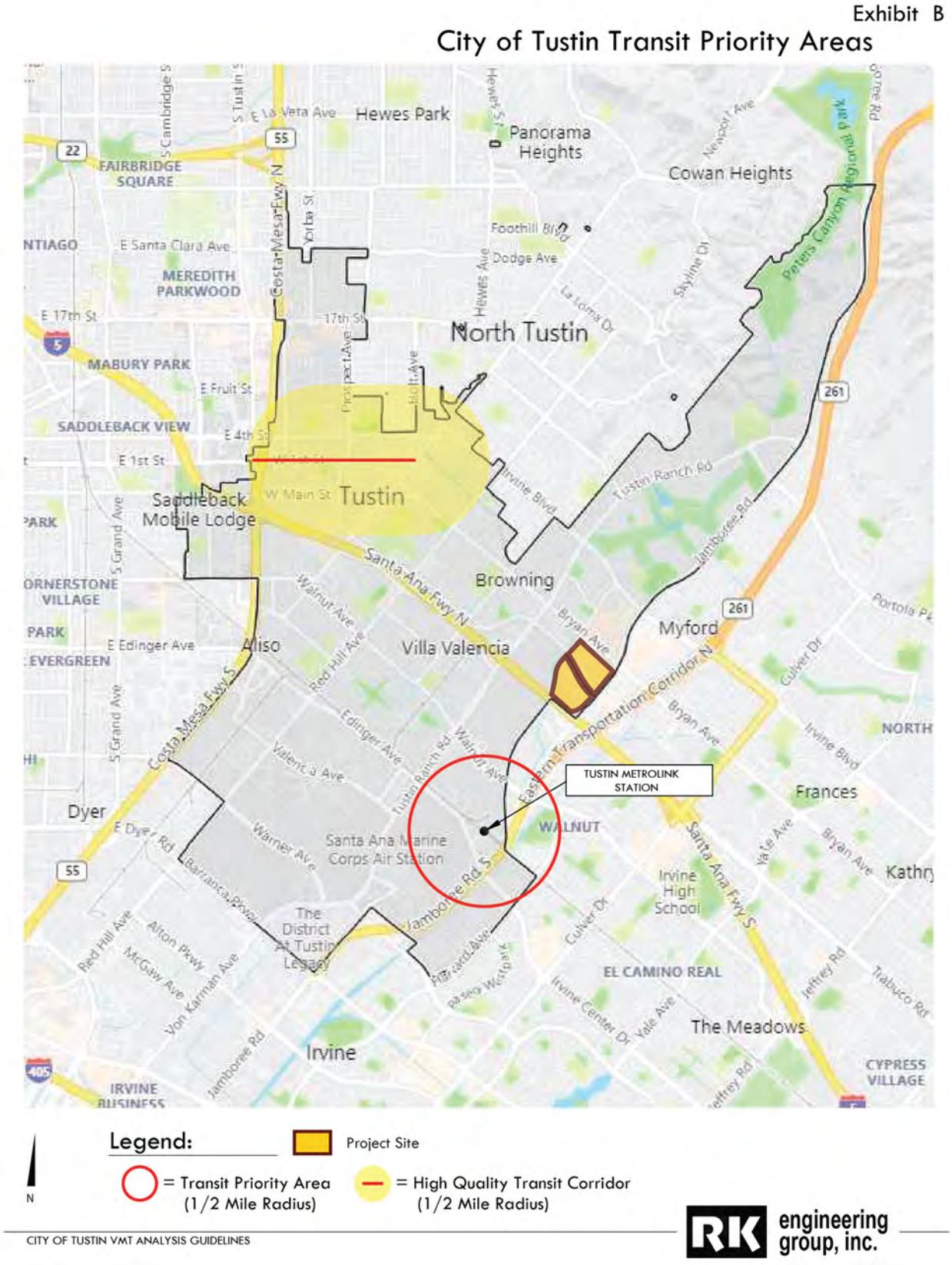


Figure 3: Low VMT Generating Area - VMT per capita

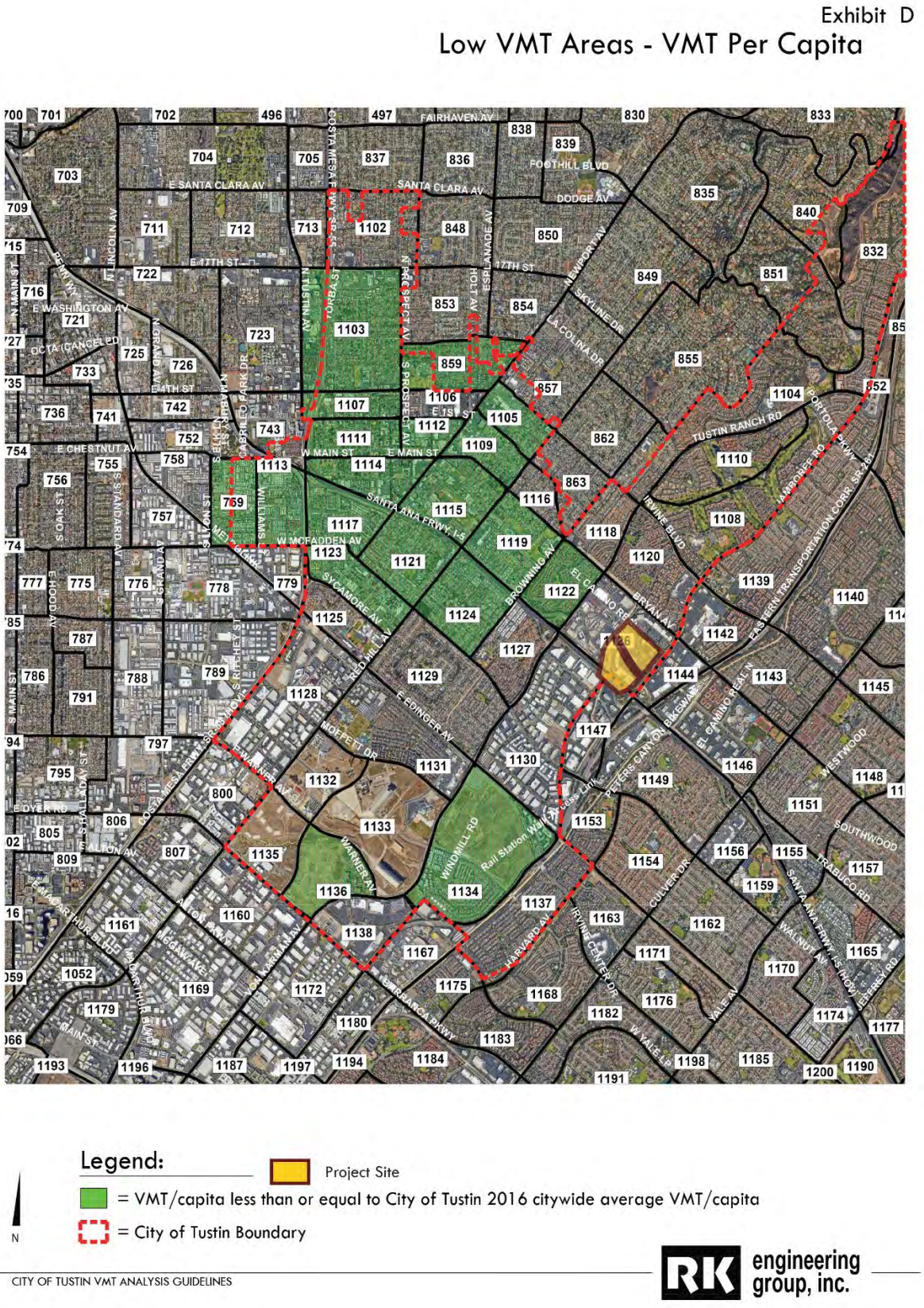
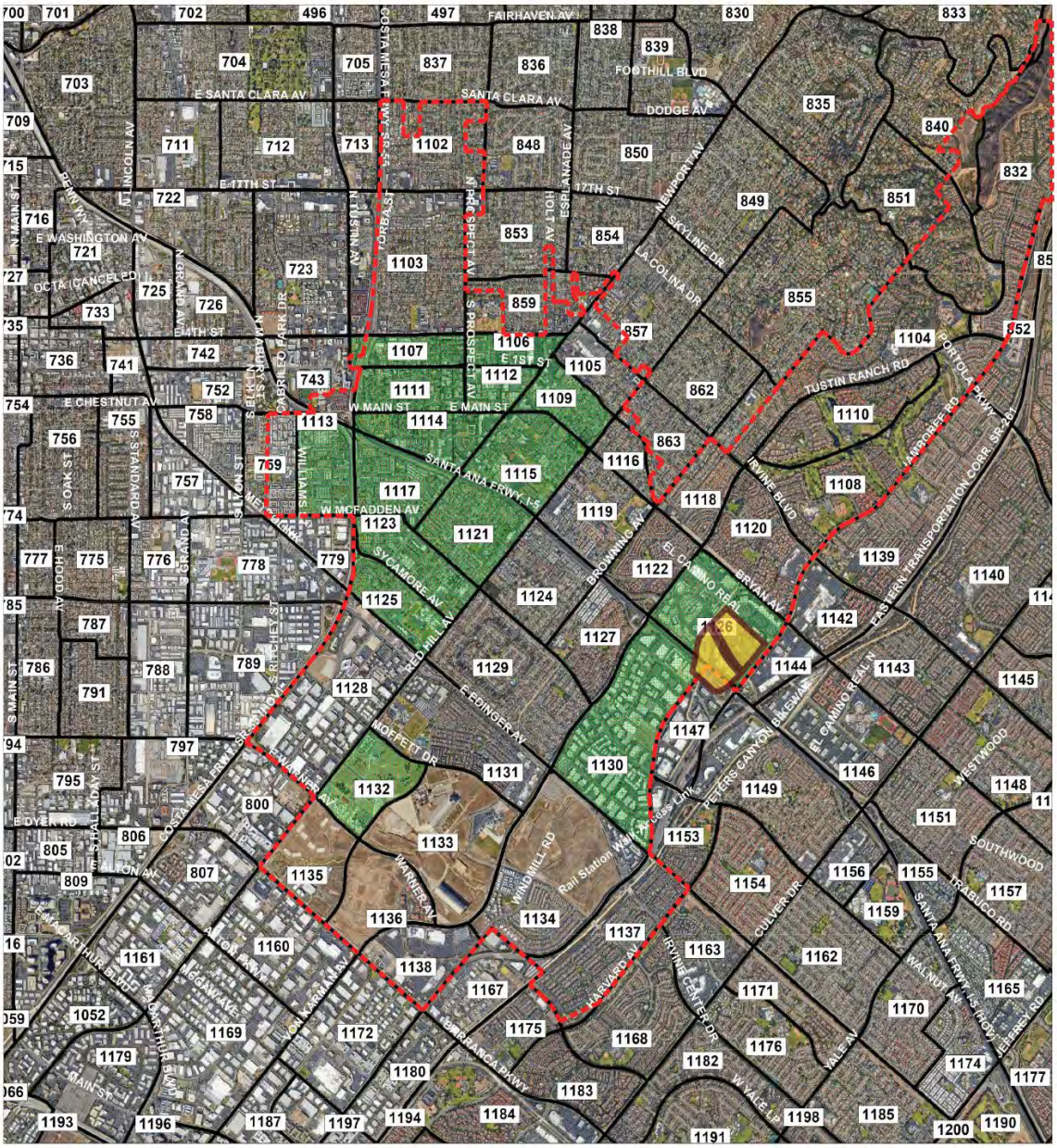


Figure 4: Low VMT Generating Area - VMT per employee

Exhibit E

Low VMT Areas - VMT Per Employee



APPENDIX A – ITE Trip Generation Rates

Land Use: 221
Multifamily Housing (Mid-Rise)

Description

Mid-rise multifamily housing includes apartments and condominiums located in a building that has between four and 10 floors of living space. Access to individual dwelling units is through an outside building entrance, a lobby, elevator, and a set of hallways.

Multifamily housing (low-rise) (Land Use 220), multifamily housing (high-rise) (Land Use 222), off-campus student apartment (mid-rise) (Land Use 226), and mid-rise residential with ground-floor commercial (Land Use 231) are related land uses.

Land Use Subcategory

Data are presented for two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is ½ mile or less.

Additional Data

For the six sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.5 residents per occupied dwelling unit.

For the five sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96 percent of the total dwelling units were occupied.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The sites were surveyed in the 1990s, the 2000s, the 2010s, and the 2020s in Alberta (CAN), California, District of Columbia, Florida, Georgia, Illinois, Maryland, Massachusetts, Minnesota, Montana, New Jersey, New York, Ontario (CAN), Oregon, Utah, and Virginia.

Source Numbers

168, 188, 204, 305, 306, 321, 818, 857, 862, 866, 901, 904, 910, 949, 951, 959, 963, 964, 966, 967, 969, 970, 1004, 1014, 1022, 1023, 1025, 1031, 1032, 1035, 1047, 1056, 1057, 1058, 1071, 1076

Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

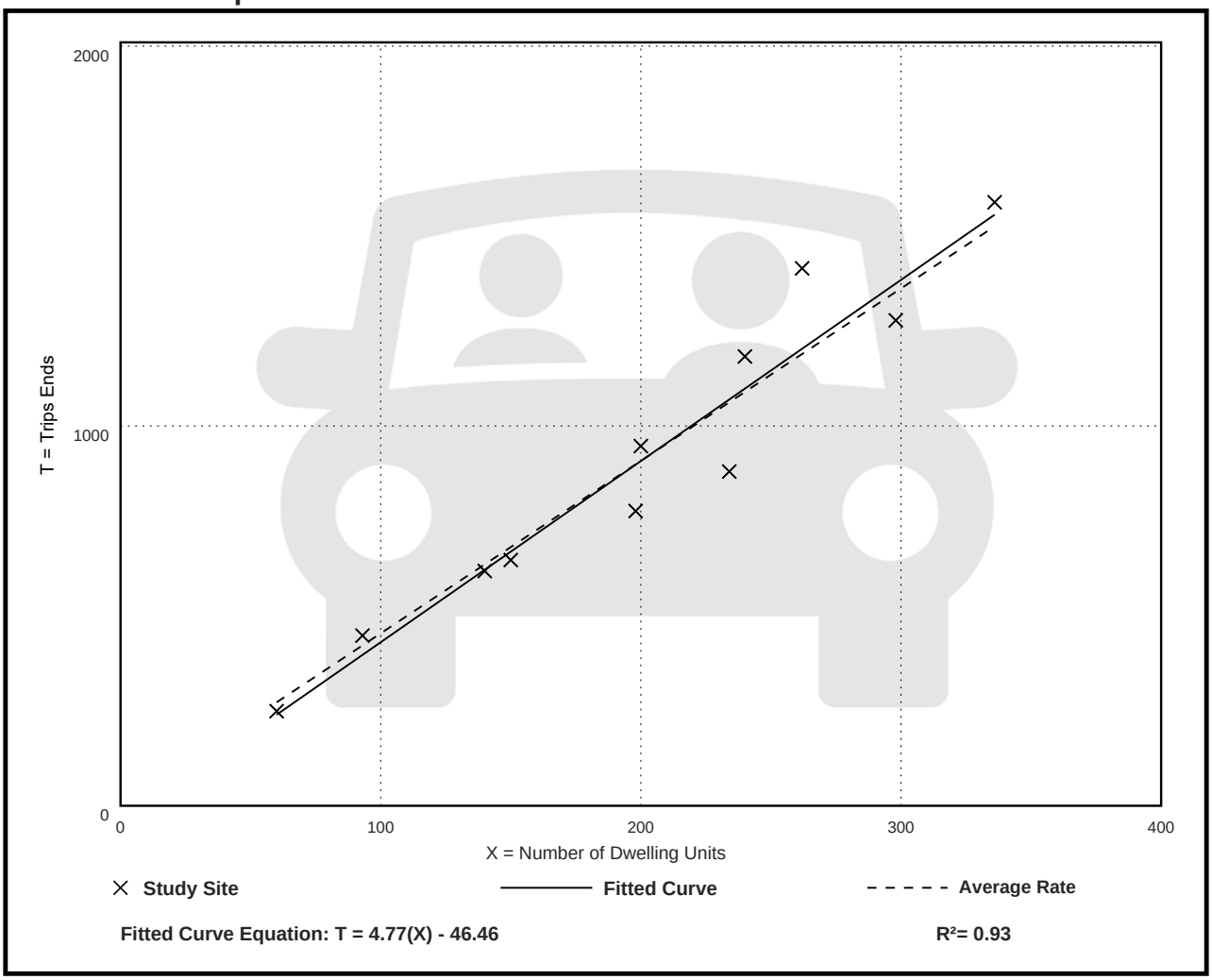
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 11
Avg. Num. of Dwelling Units: 201
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.54	3.76 - 5.40	0.51

Data Plot and Equation



Fitted Curve Equation: T = 4.77(X) - 46.46

R^2= 0.93

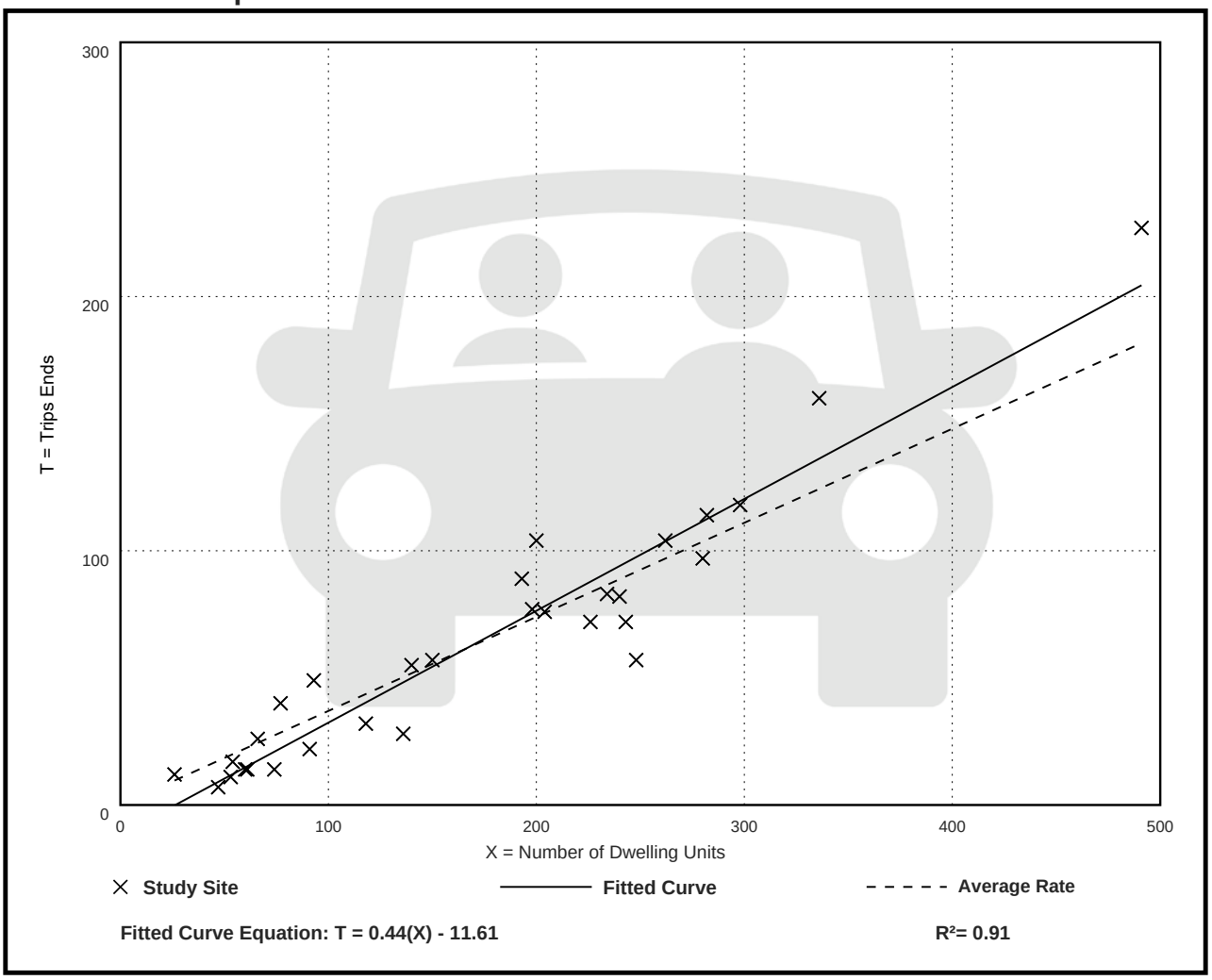
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 30
Avg. Num. of Dwelling Units: 173
Directional Distribution: 23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.37	0.15 - 0.53	0.09

Data Plot and Equation



Fitted Curve Equation: T = 0.44(X) - 11.61

R^2= 0.91

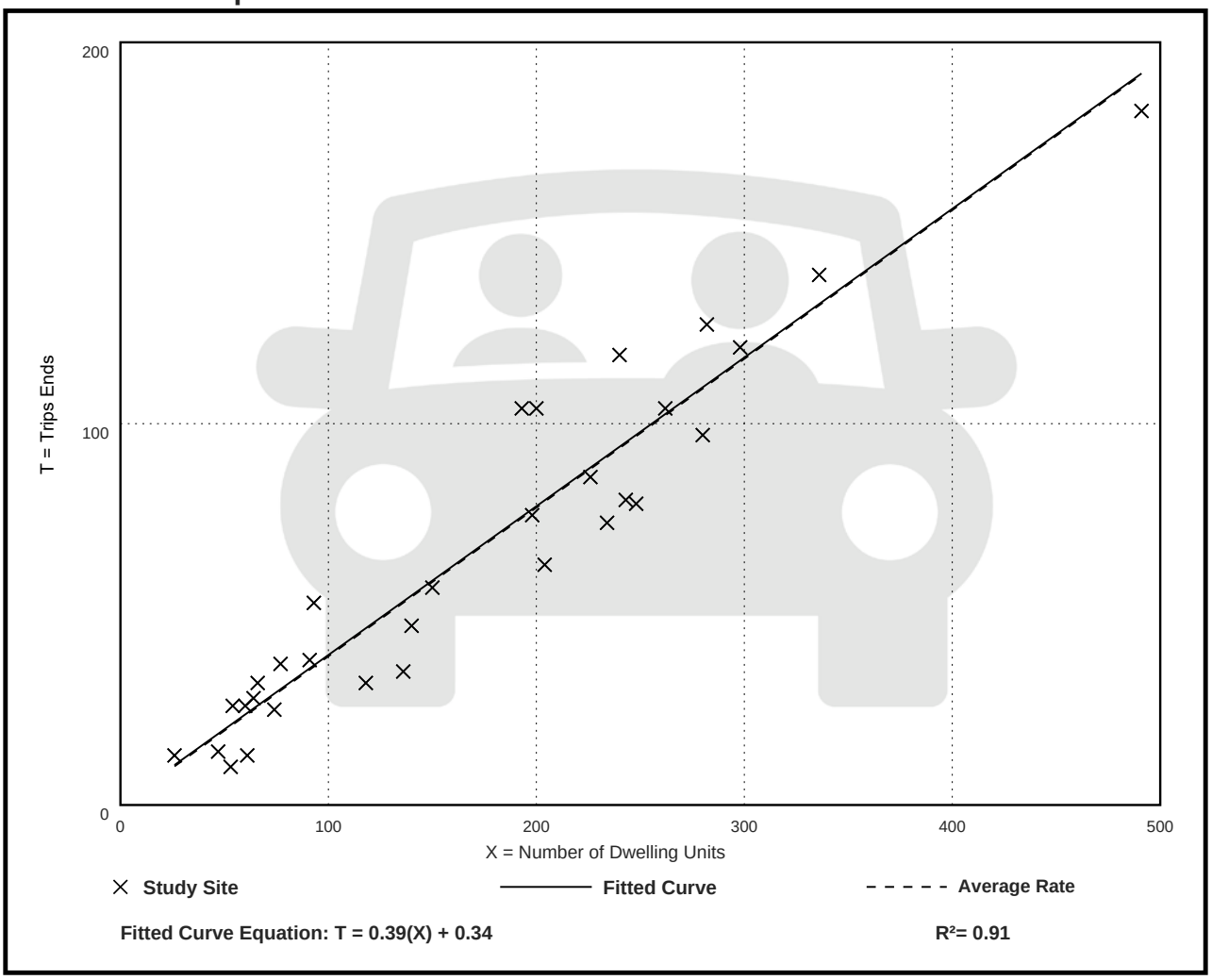
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 31
Avg. Num. of Dwelling Units: 169
Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.39	0.19 - 0.57	0.08

Data Plot and Equation



Land Use: 495
Recreational Community Center

Description

A recreational community center is a stand-alone public facility similar to and including YMCAs. These facilities often include classes and clubs for adults and children, a day care or nursery school, meeting rooms and other social facilities, swimming pools and whirlpools, saunas, tennis, racquetball, handball, pickle ball, basketball and volleyball courts; outdoor athletic fields/courts, exercise classes, weightlifting and gymnastics equipment, locker rooms, and a restaurant or snack bar. Public access is typically allowed and a membership fee may be charged. Racquet/tennis club (Land Use 491), health/fitness club (Land Use 492), and athletic club (Land Use 493) are related land uses.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, the 2000s, the 2010s, and the 2020s in Alberta (CAN), Arizona, Indiana, Minnesota, New Hampshire, New York, Oregon, Pennsylvania, Tennessee, and Utah.

Source Numbers

281, 410, 443, 571, 618, 705, 719, 850, 866, 971, 1055

Recreational Community Center
(495)

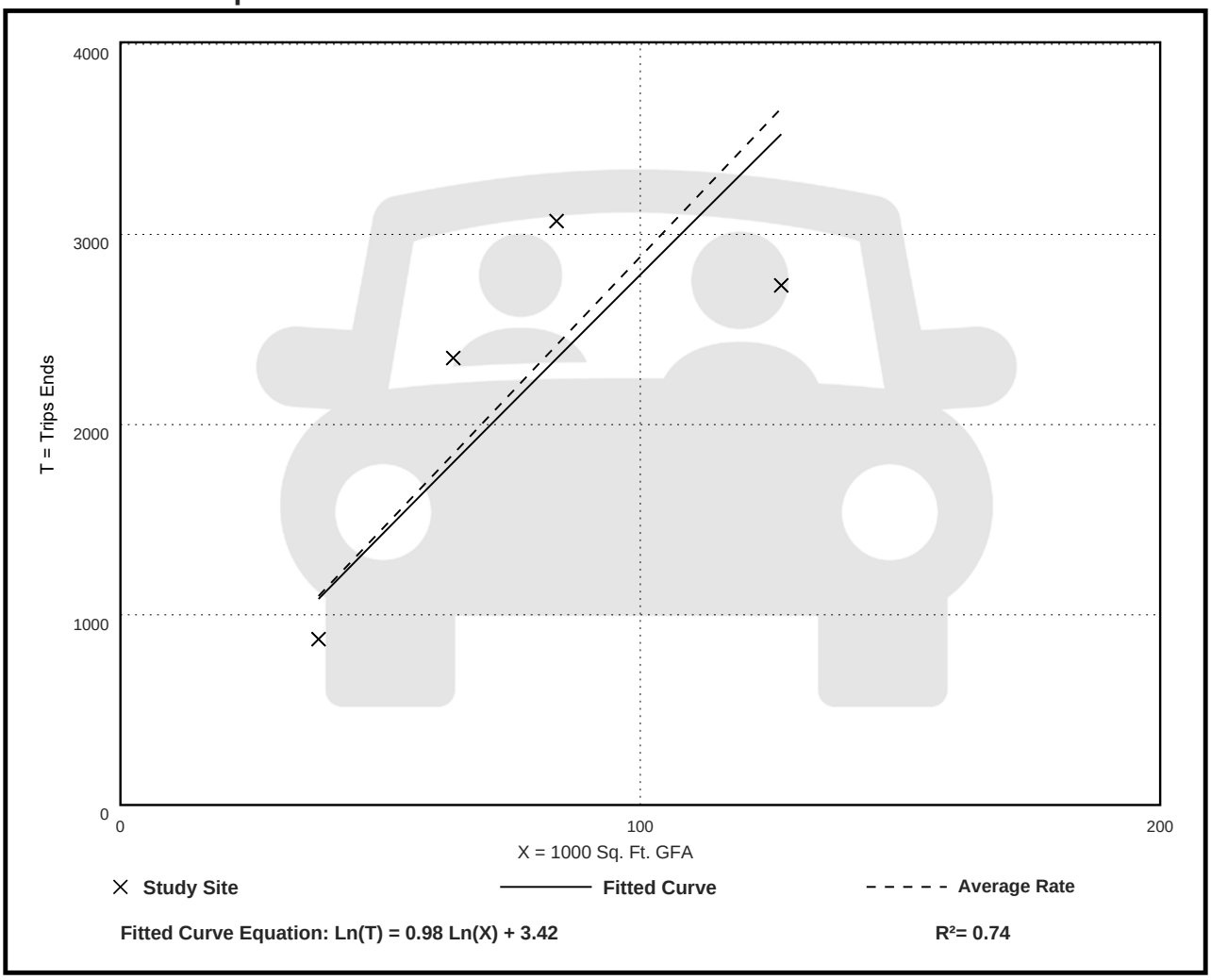
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 4
Avg. 1000 Sq. Ft. GFA: 78
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
28.82	21.49 - 36.71	8.56

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.98 Ln(X) + 3.42

R^2= 0.74

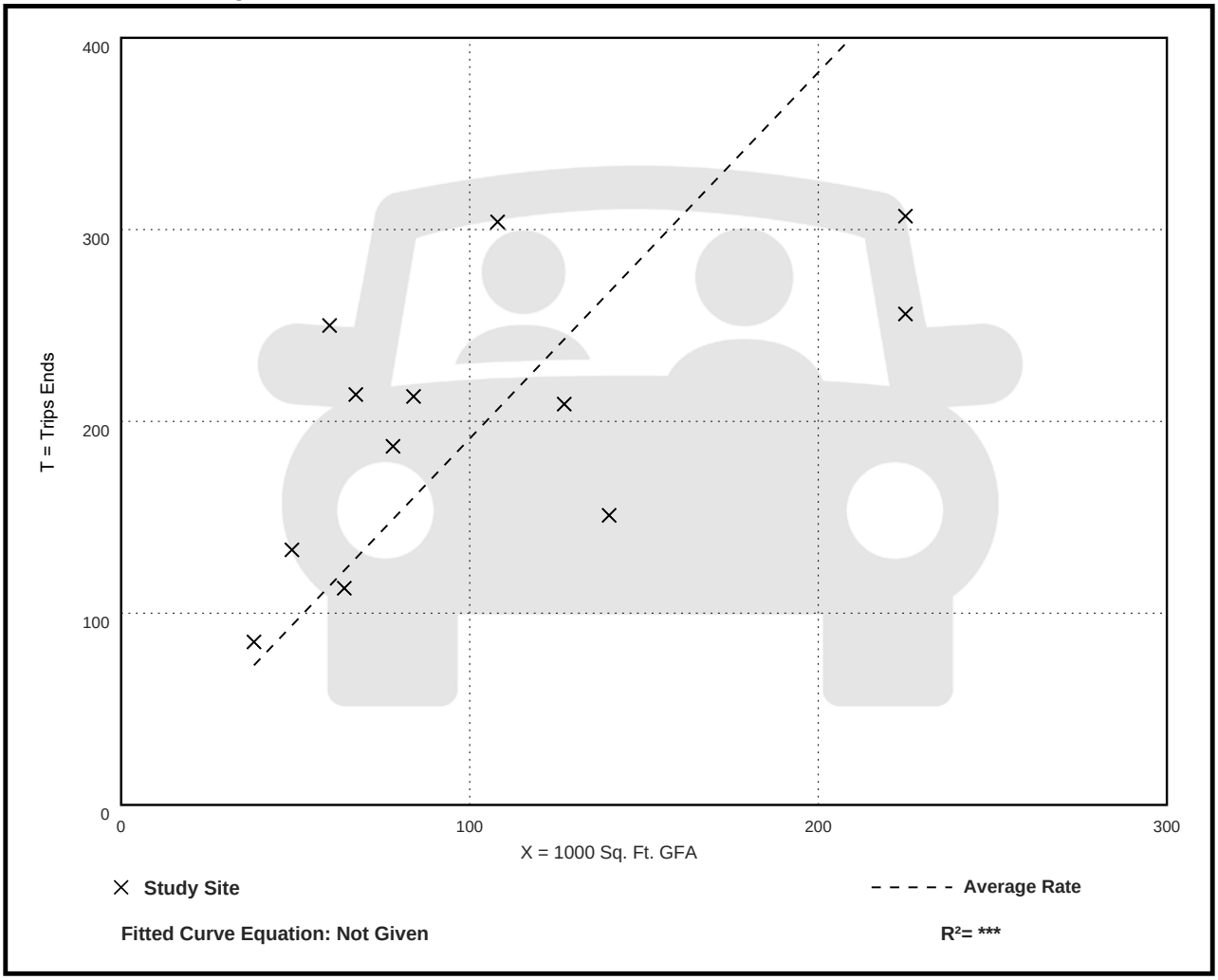
Recreational Community Center
(495)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 12
Avg. 1000 Sq. Ft. GFA: 105
Directional Distribution: 66% entering, 34% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.91	1.08 - 4.18	0.88

Data Plot and Equation



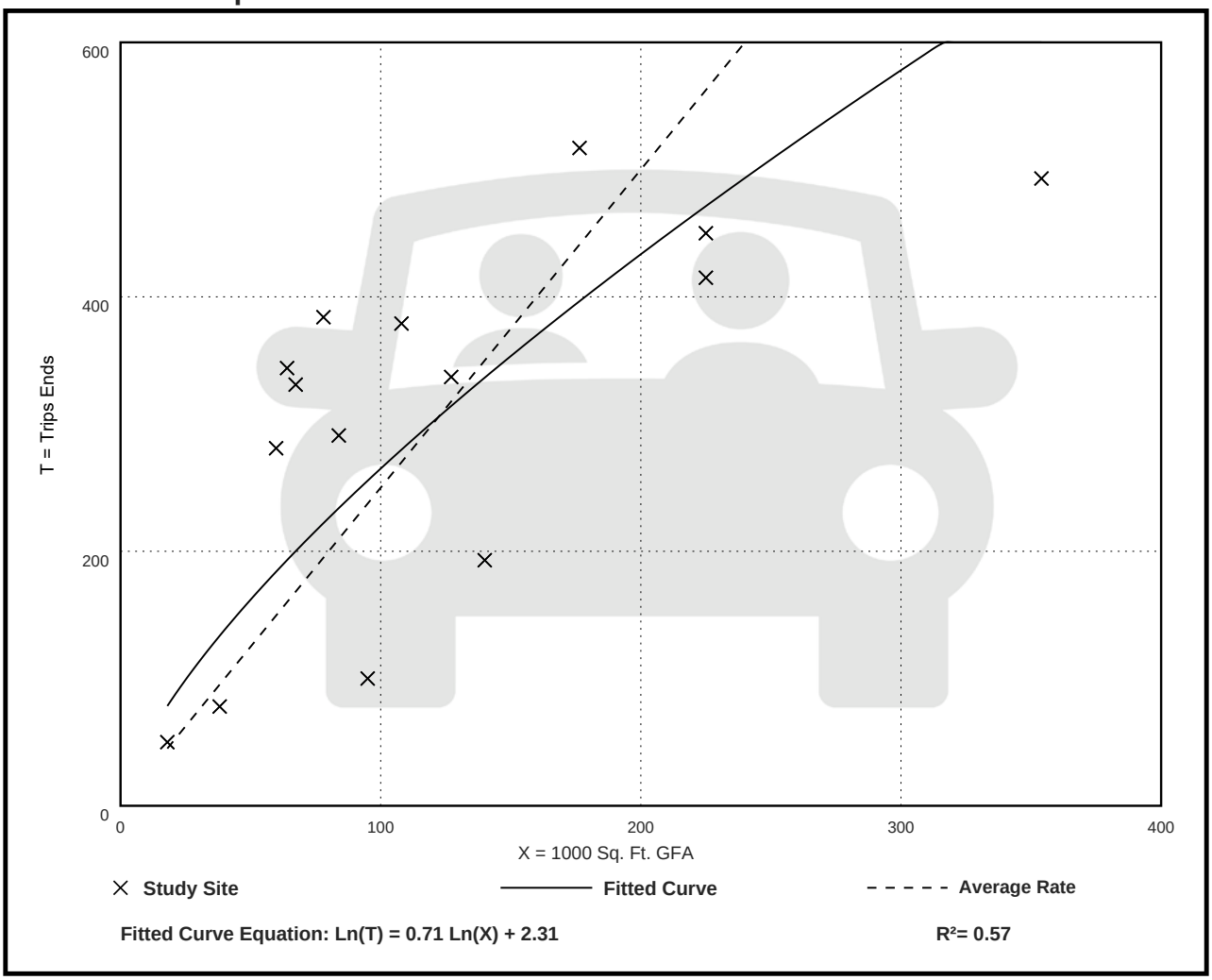
Recreational Community Center
(495)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 15
Avg. 1000 Sq. Ft. GFA: 124
Directional Distribution: 47% entering, 53% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.50	1.05 - 5.37	1.28

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.71 Ln(X) + 2.31

R^2= 0.57

Land Use: 710
General Office Building

Description

A general office building is a location where affairs of businesses, commercial or industrial organizations, or professional persons or firms are conducted. An office building houses multiple tenants that can include, as examples, professional services, insurance companies, investment brokers, a banking institution, a restaurant, or other service retailers. A general office building with a gross floor area of 10,000 square feet or less is classified as a small office building (Land Use 712). Corporate headquarters building (Land Use 714), single tenant office building (Land Use 715), medical-dental office building (Land Use 720), office park (Land Use 750), research and development center (Land Use 760), and business park (Land Use 770) are additional related uses.

Additional Data

If two or more general office buildings are in close physical proximity (within a close walk) and function as a unit (perhaps with a shared parking facility and common or complementary tenants), the total gross floor area or employment of the paired office buildings can be used for calculating the site trip generation. If the individual buildings are isolated or not functionally related to one another, trip generation should be calculated for each building separately.

For study sites with reported gross floor area and employees, an average employee density of 3.3 employees per 1,000 square feet GFA (or roughly 300 square feet per employee) has been consistent through the 1980s, 1990s, and 2000s. No sites counted in the 2010s reported both GFA and employees.

The average building occupancy varies considerably within the studies for which occupancy data were provided. The reported occupied gross floor area was 88 percent for general urban/suburban sites and 96 percent for the center city core and dense multi-use urban sites.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The average numbers of person trips per vehicle trip at the eight center city core sites at which both person trip and vehicle trip data were collected are as follows:

- 2.8 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 2.9 during Weekday, AM Peak Hour of Generator
- 2.9 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 3.0 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 18 dense multi-use urban sites at which both person trip and vehicle trip data were collected are as follows:

- 1.5 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.5 during Weekday, AM Peak Hour of Generator
- 1.5 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.5 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 23 general urban/suburban sites at which both person trip and vehicle trip data were collected are as follows:

- 1.3 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.3 during Weekday, AM Peak Hour of Generator
- 1.3 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.4 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, the 2010s, and the 2020s in Alberta (CAN), California, Colorado, Connecticut, Georgia, Illinois, Indiana, Kansas, Kentucky, Maine, Maryland, Michigan, Minnesota, Missouri, Montana, New Hampshire, New Jersey, New York, Ontario (CAN)Pennsylvania, Texas, Utah, Virginia, and Washington.

Source Numbers

161, 175, 183, 184, 185, 207, 212, 217, 247, 253, 257, 260, 262, 273, 279, 297, 298, 300, 301, 302, 303, 304, 321, 322, 323, 324, 327, 404, 407, 408, 419, 423, 562, 734, 850, 859, 862, 867, 869, 883, 884, 890, 891, 904, 940, 944, 946, 964, 965, 972, 1009, 1030, 1058, 1061

General Office Building
(710)

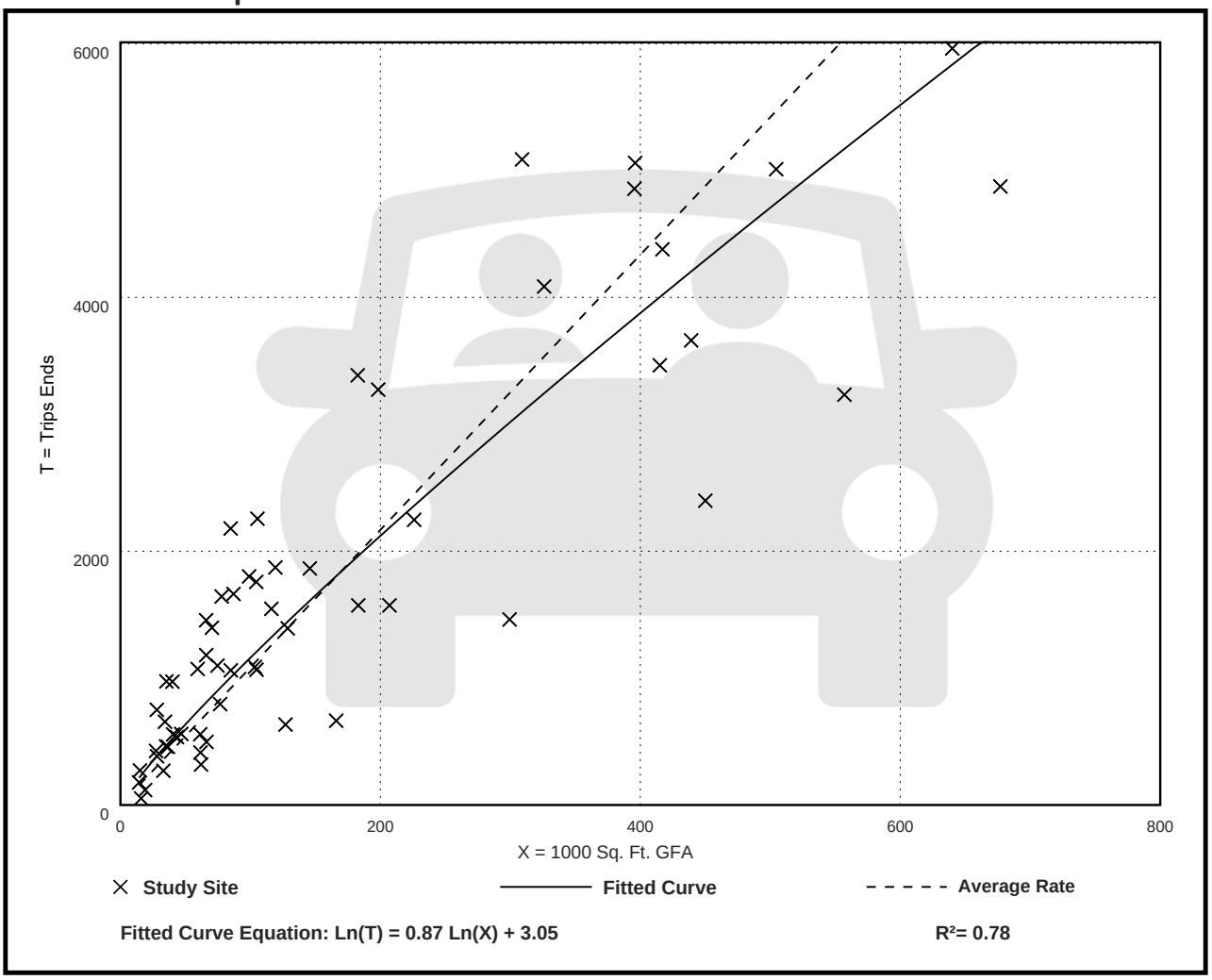
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 59
Avg. 1000 Sq. Ft. GFA: 163
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
10.84	3.27 - 27.56	4.76

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.87 Ln(X) + 3.05

R^2= 0.78

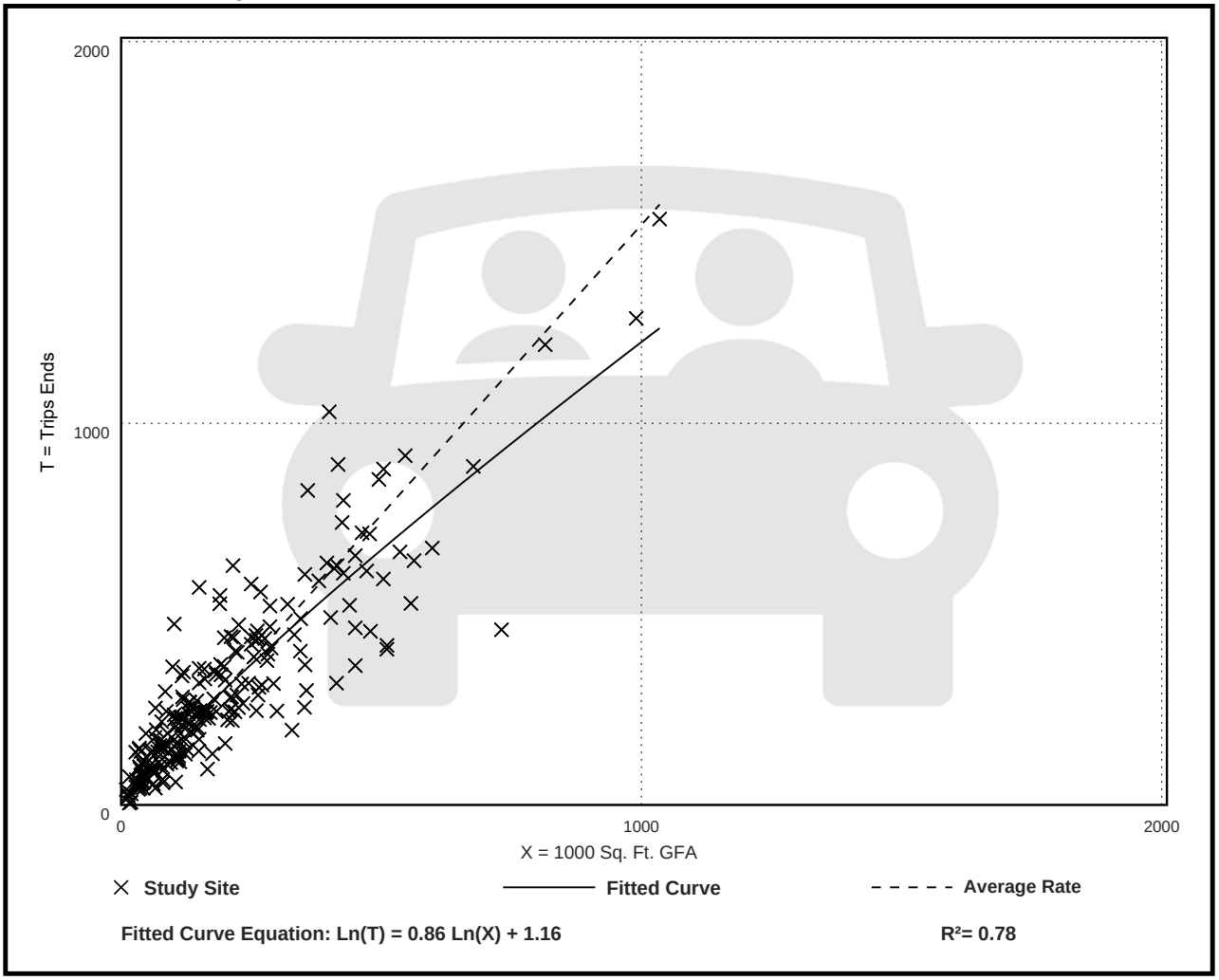
General Office Building
(710)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 221
Avg. 1000 Sq. Ft. GFA: 201
Directional Distribution: 88% entering, 12% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.52	0.32 - 4.93	0.58

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.86 Ln(X) + 1.16

R^2= 0.78

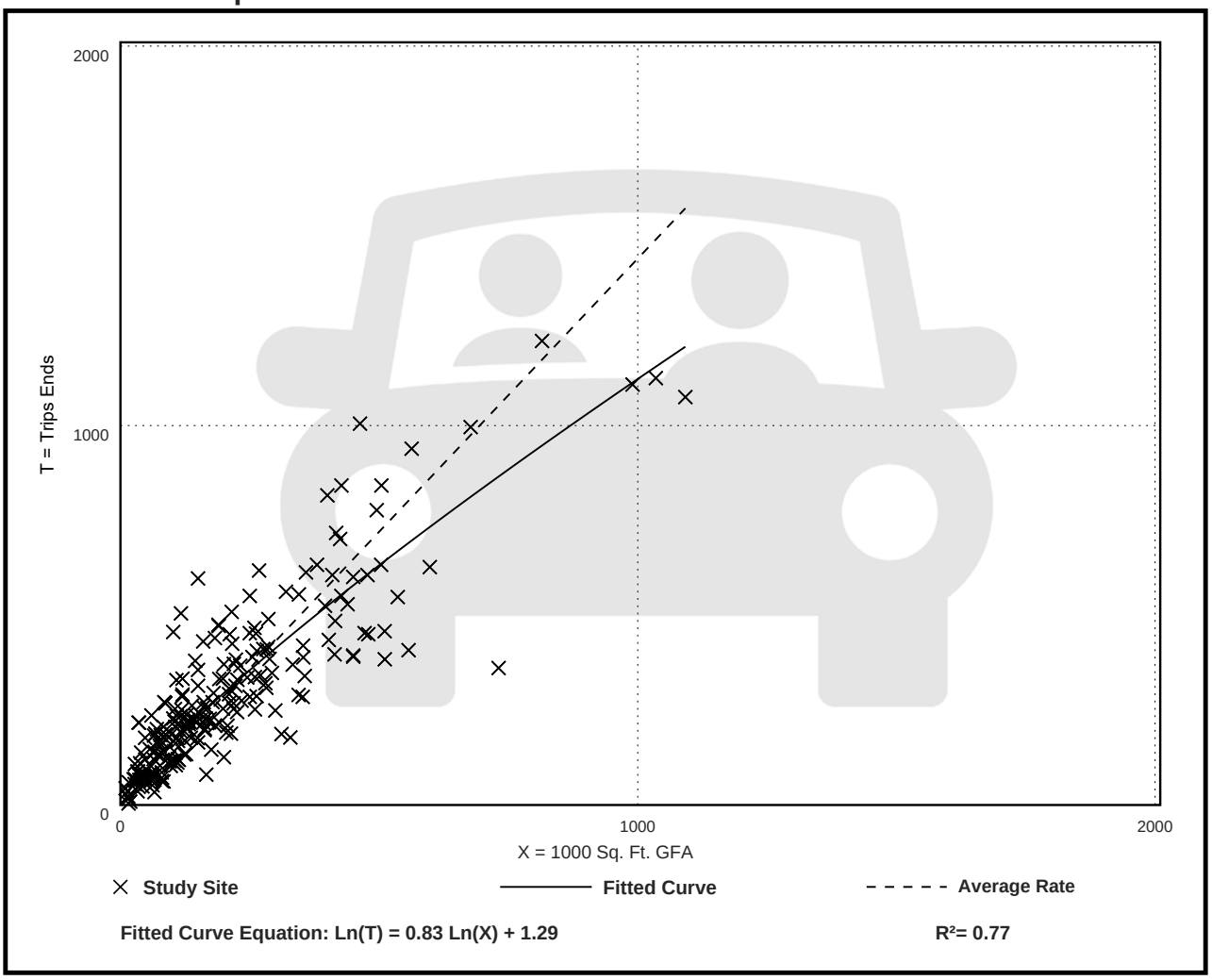
General Office Building
(710)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 232
Avg. 1000 Sq. Ft. GFA: 199
Directional Distribution: 17% entering, 83% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.44	0.26 - 6.20	0.60

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.83 Ln(X) + 1.29

R^2= 0.77

Land Use: 820
Shopping Center (>150k)

Description

A shopping center is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Each study site in this land use has at least 150,000 square feet of gross leasable area (GLA). It often has more than one anchor store. Various names can be assigned to a shopping center within this size range, depending on its specific size and tenants, such as community center, regional center, superregional center, fashion center, and power center.

A shopping center of this size typically contains more than retail merchandising facilities. Office space, a movie theater, restaurants, a post office, banks, a health club, and recreational facilities are common tenants.

A shopping center of this size can be enclosed or open-air. The vehicle trips generated at a shopping center are based upon the total GLA of the center. In the case of a smaller center without an enclosed mall or peripheral buildings, the GLA is the same as the gross floor area of the building.

The 150,000 square feet GLA threshold value between community/regional shopping center and shopping plaza (Land Use 821) is based on an examination of trip generation data. For a shopping plaza that is smaller than the threshold value, the presence or absence of a supermarket within the plaza has a measurable effect on site trip generation. For a shopping center that is larger than the threshold value, the trips generated by its other major tenants mask any effects of the presence or absence of an on-site supermarket.

Shopping plaza (40-150k) (Land Use 821), strip retail plaza (<40k) (Land Use 822), and factory outlet center (Land Use 823) are related uses.

Additional Data

Many shopping centers—in addition to the integrated unit of shops in one building or enclosed around a mall—include outparcels (peripheral buildings or pads located on the perimeter of the center adjacent to the streets and major access points). These buildings are typically drive-in banks, retail stores, restaurants, or small offices. Although the data herein do not indicate which of the centers studied include peripheral buildings, it can be assumed that some of the data show their effect.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Colorado, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky,

Maryland, Massachusetts, Michigan, Minnesota, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Tennessee, Texas, Vermont, Virginia, Washington, West Virginia, and Wisconsin.

Source Numbers

77, 110, 154, 156, 159, 190, 199, 202, 204, 213, 251, 269, 294, 295, 299, 304, 305, 307, 308, 309, 311, 314, 315, 316, 317, 319, 365, 385, 404, 414, 423, 442, 446, 562, 629, 702, 715, 728, 868, 871, 880, 899, 912, 926, 946, 962, 973, 974, 978, 1034, 1040, 1067

Shopping Center (>150k)
(820)

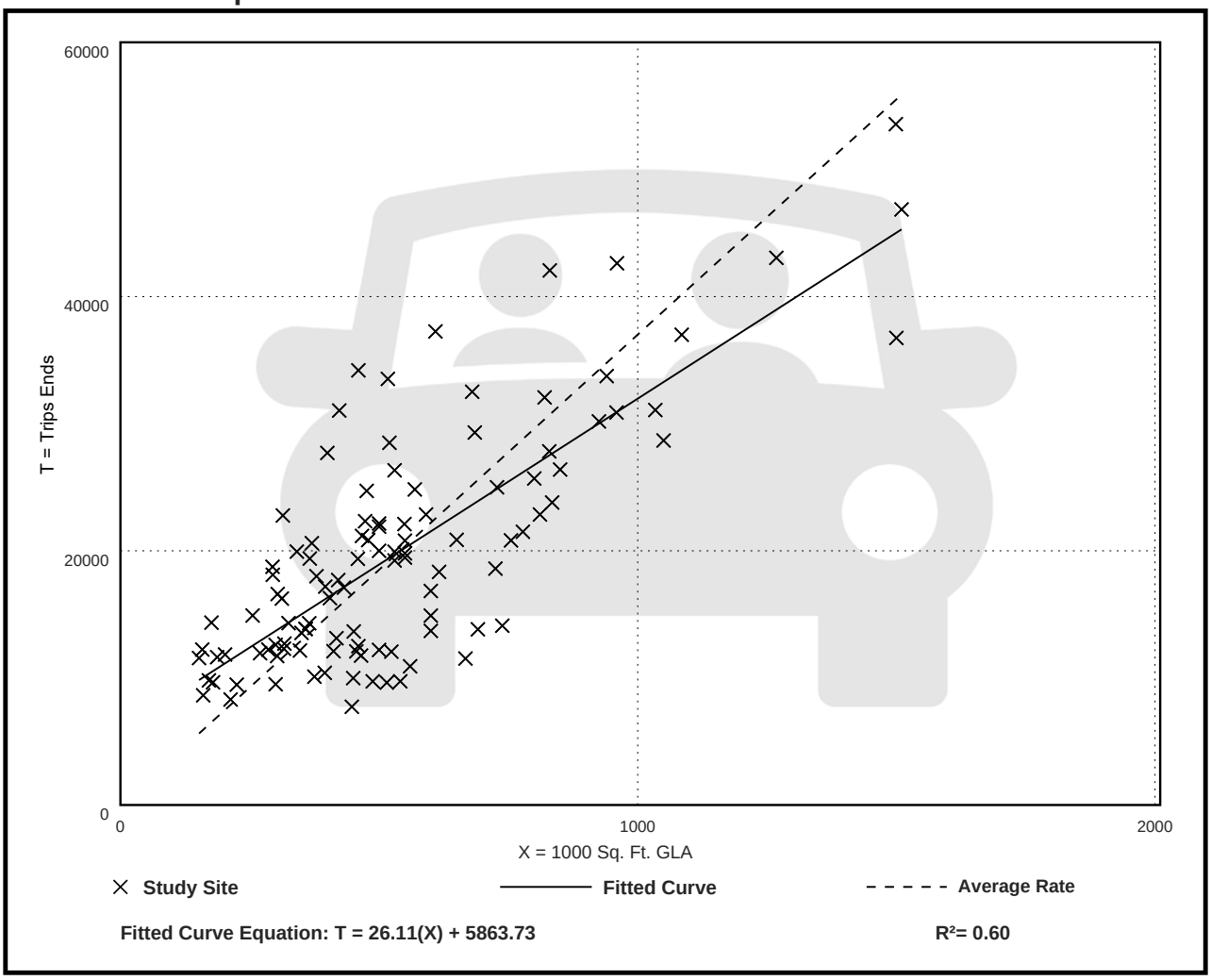
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 108
Avg. 1000 Sq. Ft. GLA: 538
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
37.01	17.27 - 81.53	12.79

Data Plot and Equation



Fitted Curve Equation: T = 26.11(X) + 5863.73

R^2= 0.60

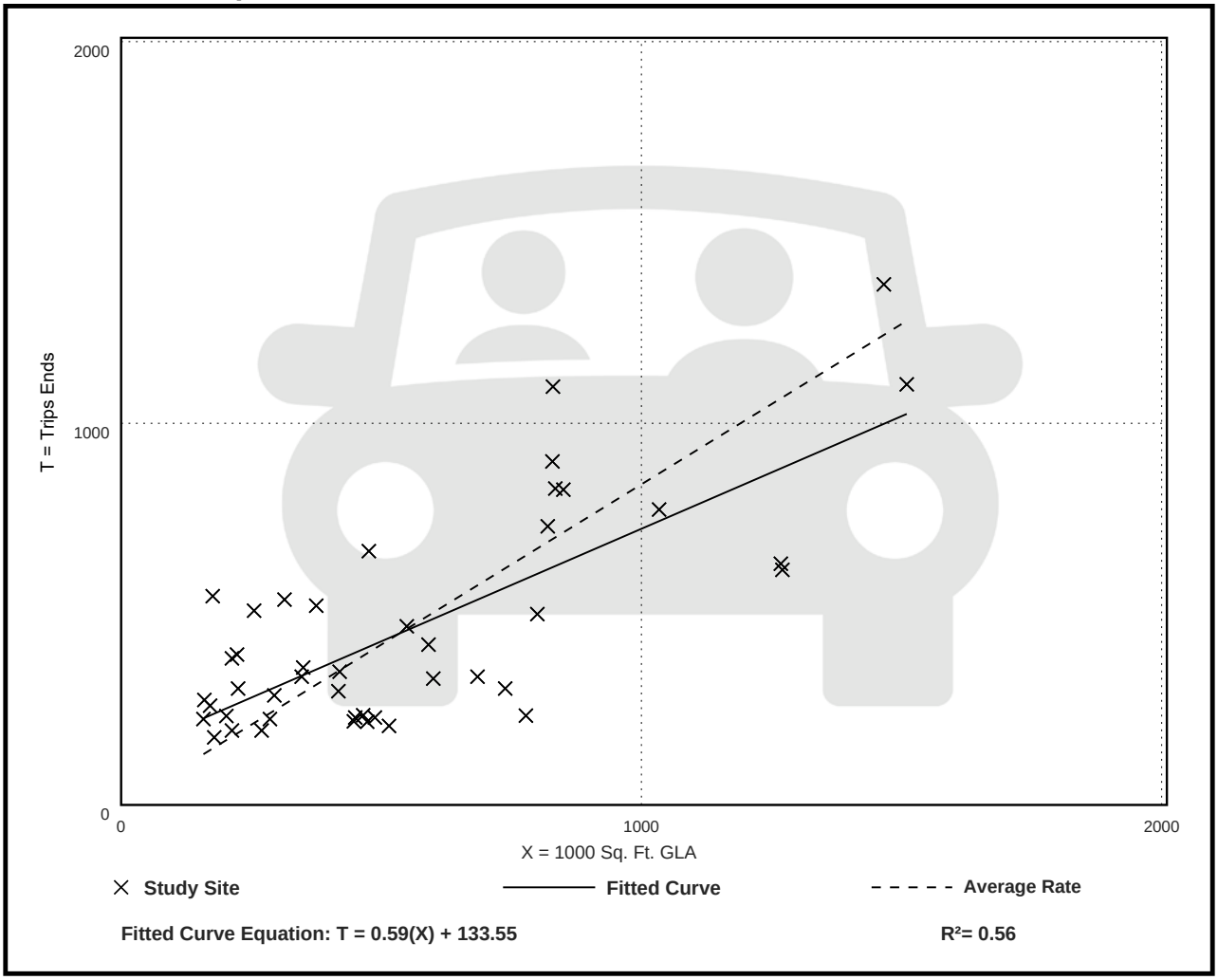
Shopping Center (>150k)
(820)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 44
Avg. 1000 Sq. Ft. GLA: 546
Directional Distribution: 62% entering, 38% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
0.84	0.30 - 3.11	0.42

Data Plot and Equation



Fitted Curve Equation: T = 0.59(X) + 133.55

R^2= 0.56

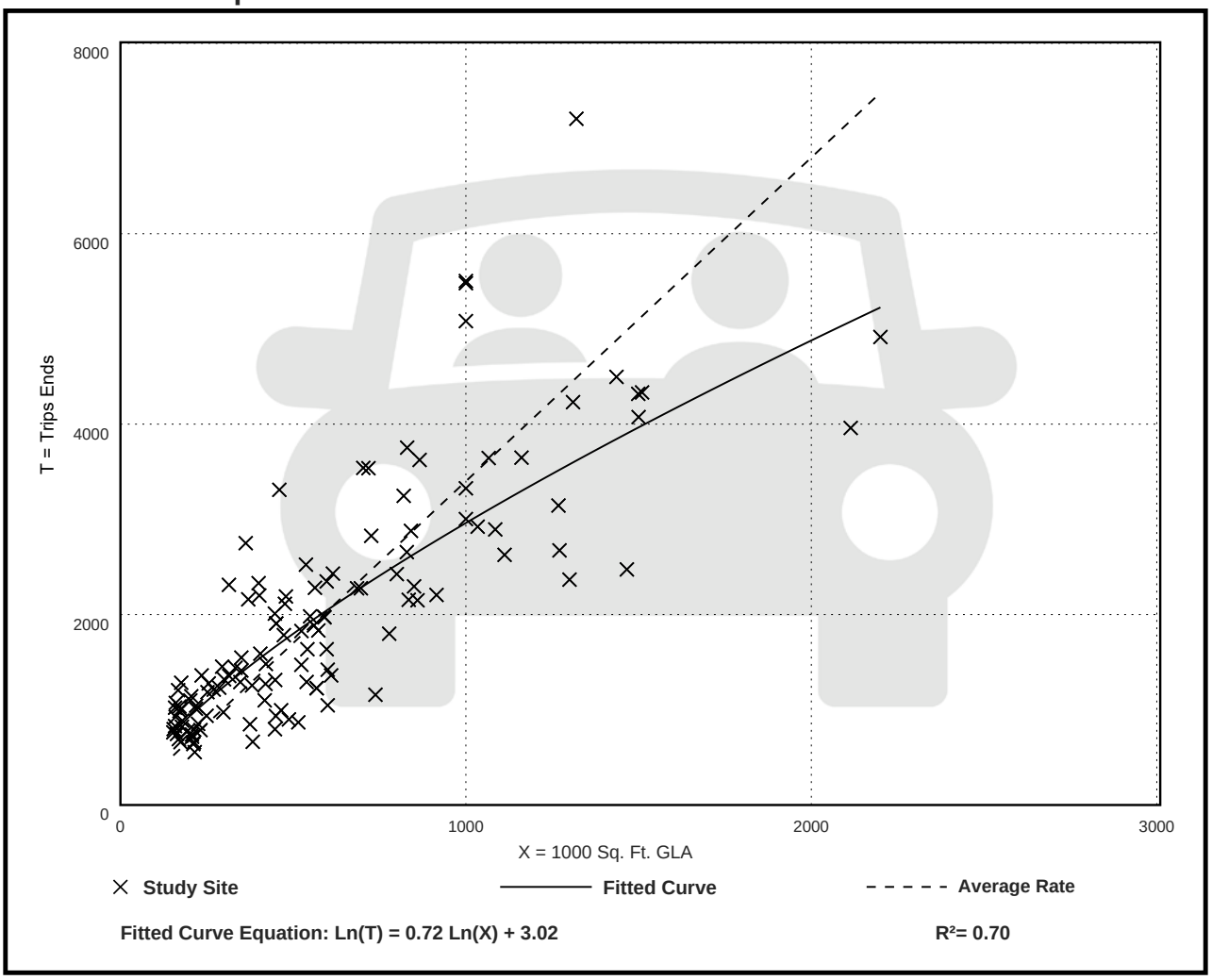
Shopping Center (>150k)
(820)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 126
Avg. 1000 Sq. Ft. GLA: 581
Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
3.40	1.57 - 7.58	1.26

Data Plot and Equation



Land Use: 932
High-Turnover (Sit-Down) Restaurant

Description

This land use consists of sit-down, full-service eating establishments with a typical duration of stay of 60 minutes or less. This type of restaurant is usually moderately priced, frequently belongs to a restaurant chain, and is commonly referred to as casual dining. Generally, these restaurants serve lunch and dinner; they may also be open for breakfast and are sometimes open 24 hours a day. These restaurants typically do not accept reservations. A patron commonly waits to be seated, is served by wait staff, orders from a menu, and pays after the meal.

Some facilities offer carry-out for a small proportion of its customers. Some facilities within this land use may also contain a bar area for serving food and alcoholic drinks.

Fast casual restaurant (Land Use 930), fine dining restaurant (Land Use 931), fast-food restaurant without drive-through window (Land Use 933), and fast-food restaurant with drive-through window (Land Use 934) are related uses.

Additional Data

Users should exercise caution when applying statistics during the AM peak periods, as the sites contained in the database for this land use may or may not be open for breakfast. In cases where it was confirmed that the sites were not open for breakfast, data for the AM peak hour of the adjacent street traffic were removed from the database.

If the restaurant has outdoor seating, its area is not included in the overall gross floor area. For a restaurant that has significant outdoor seating, the number of seats may be more reliable than GFA as an independent variable on which to establish a trip generation rate.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Florida, Georgia, Indiana, Kentucky, Massachusetts, Minnesota, New Hampshire, New Jersey, New York, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Texas, Vermont, and Wisconsin.

Source Numbers

126, 269, 275, 280, 300, 301, 305, 338, 340, 341, 358, 384, 424, 432, 437, 438, 444, 507, 555, 577, 589, 617, 618, 728, 868, 884, 885, 903, 927, 939, 944, 961, 962, 977, 1048

High-Turnover (Sit-Down) Restaurant (932)

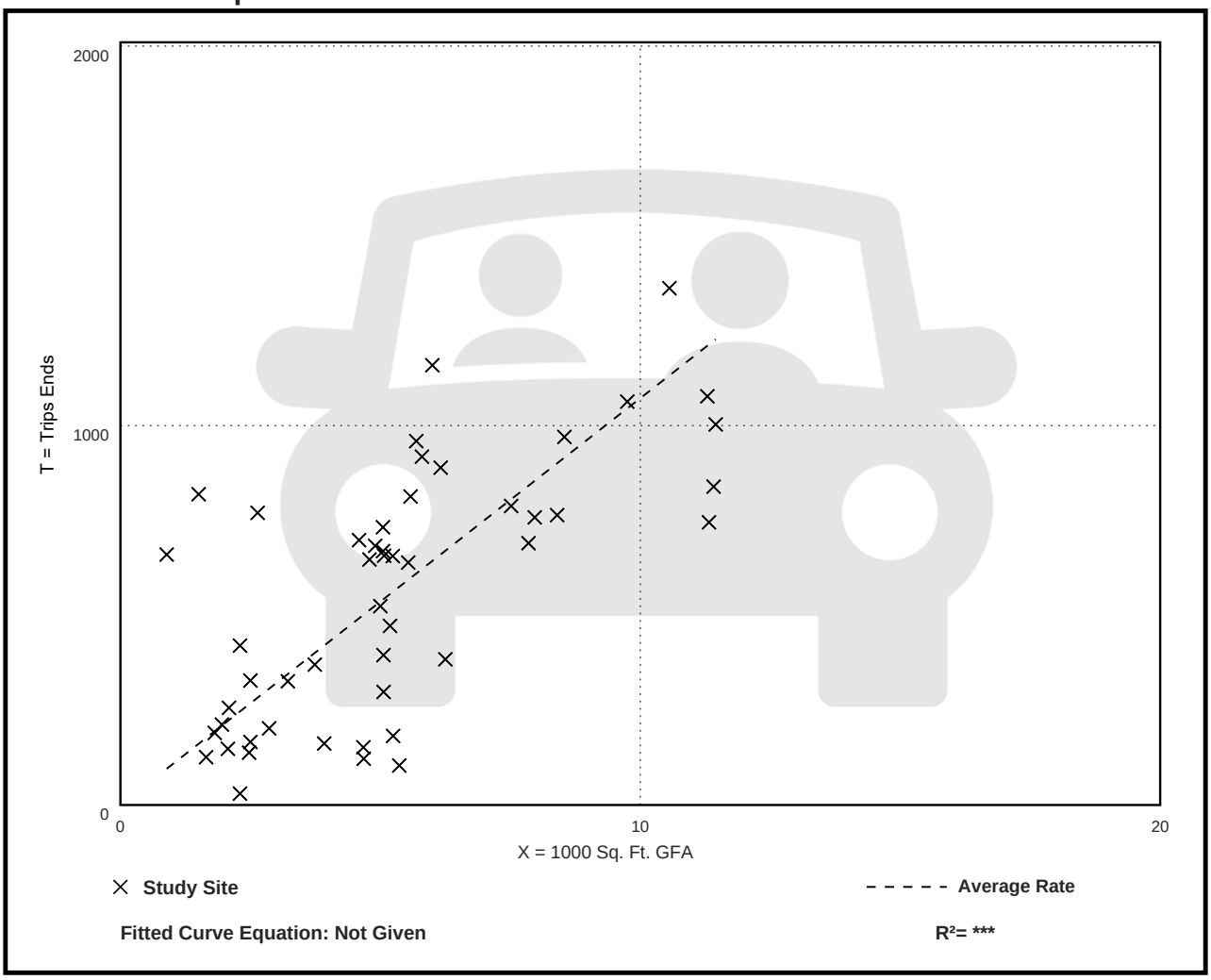
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 50
Avg. 1000 Sq. Ft. GFA: 5
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
107.20	13.04 - 742.41	66.72

Data Plot and Equation



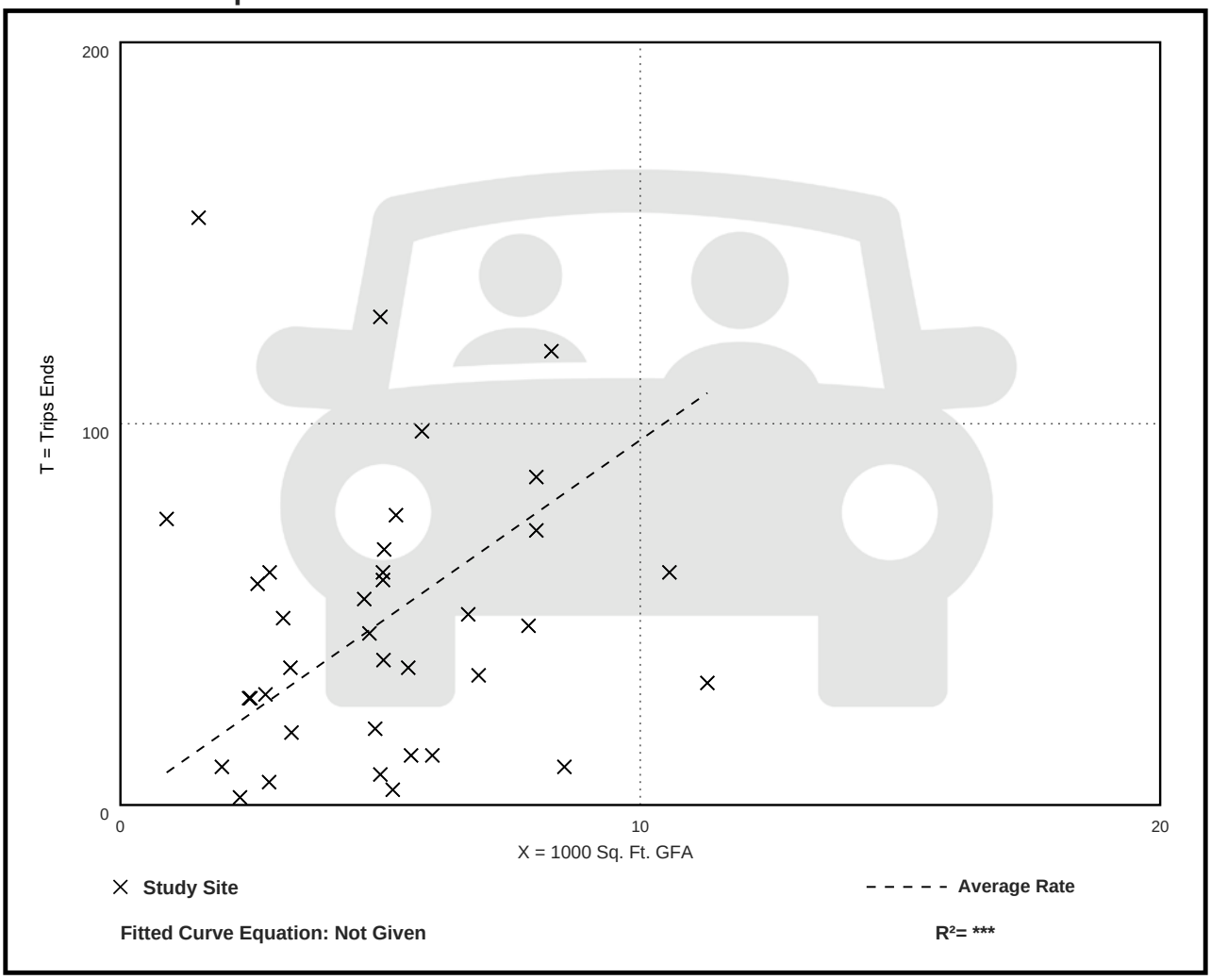
High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 37
Avg. 1000 Sq. Ft. GFA: 5
Directional Distribution: 55% entering, 45% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
9.57	0.76 - 102.39	11.61

Data Plot and Equation



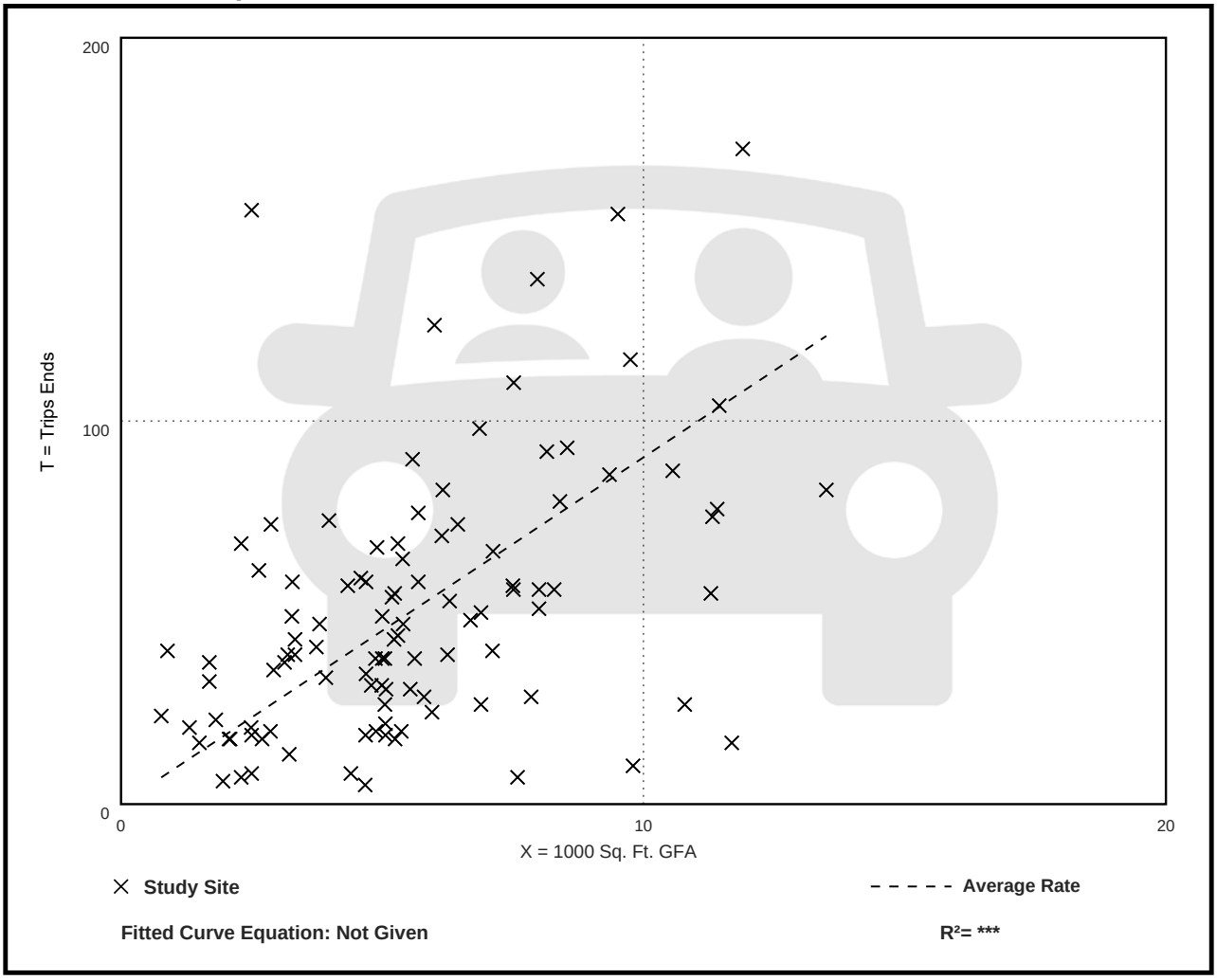
High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 104
Avg. 1000 Sq. Ft. GFA: 6
Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
9.05	0.92 - 62.00	6.18

Data Plot and Equation



APPENDIX B – City of Tustin VMT Screening Form

CITY OF TUSTIN
VMT SCREENING FORM FOR LAND USE PROJECTS

This form acknowledges the City of Tustin requirements for the evaluation of vehicle miles traveled (VMT) under CEQA.
The analysis provided in this form should follow the City of Tustin approved VMT Guidelines, dated February 13, 2024.

I. Project Description

Case Number:	
Project Name:	Tustin Market Place Housing Overlay Zone
Project Location:	The Project is located on the north and south sides of El Camino Real between Myford Road & Jamboree Road.
Project Description:	A future commercial center totaling 13,032 square feet (SF) and 900 residential units
Current GP Land Use:	PCCB
Proposed GP Land Use:	PCCB
Current Zoning:	PC COM
Proposed Zoning:	MU & HDR

Does the Project require a General Plan Amendment and/or Zone Change? YES: x | NO:

II. VMT Screening Criteria

	YES		NO		Attachments:
A. Is the Project 100% affordable housing?	YES		NO	X	
B. Is the Project within 1/2 mile of qualifying transit?	YES		NO	X	
		Commercial		Residential	
C. Is the Project a local serving land use?	YES	X	NO	X	
		Commercial		Residential	
D. Is the Project in a low VMT area?	YES	X	NO	X	
E. Are the Project's Net Daily Trips less than 500 ADT?	YES		NO	X	

Low VMT Area Evaluation:

City of Tustin VMT Thresholds		
Citywide Average Home-Based VMT[1] =	15.0	VMT/Capita
Citywide Average Employment VMT[1] =	25.1	VMT/Employee

[1] OCTAM 5.0 v.6.22.23 base year (2016) statistics.

Project Traffic Analysis Zone (TAZ)	VMT Rate for Project TAZ[1]		Type of Project	
1126	N/A	VMT/Capita	Residential:	X
	23.6	VMT/Employee	Non-Residential:	X

Trip Generation Evaluation:

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

* Use trip rates from the latest edition of the ITE Trip Generation Manual or as approved by City Staff.

Project Trip Generation: 36,857 **Average Daily Trips (ADT)**

Internal Trip Credit:	YES		NO	X	% Trip Credit:
Pass-By Trip Credit:	YES		NO	X	% Trip Credit:
Affordable Housing Credit:	YES		NO	X	% Trip Credit:
Existing Land Use Trip Credit:	YES		NO	X	Trip Credit:

Net Project Trip Generation: 36,857 **Average Daily Trips (ADT)** Attachments:

Does project trip generation warrant an LOS evaluation outside of CEQA? YES: X | NO:

III. VMT Analysis Summary

A. Is additional VMT modeling required to evaluate impacts?

YES*	x	NO	

Projects that do not satisfy at least one (1) of the VMT screening criteria AND generate 2,400 or more net daily trips AND require a zone change/general plan amendment may require additional VMT modeling using OCTAM. Project that generates less than 2,400 daily trips may use the base TAZ rate for VMT analysis and mitigation purposes.

*A complete VMT analysis is only required for the residential portion of the project.

B. City of Tustin VMT Threshold of Significance:

Residential-VMT per Capita: City's Threshold: 15.0

C. Unmitigated Project VMT Rate:

Residential: Based Year 2016 : 8.9 VMT/Capita
Future Year 2045: 8.3 VMT/Capita

D. Does Unmitigated Project VMT Rate Exceed VMT Threshold?

YES		NO	x

E. Is mitigation required?

YES		NO	x

F. Percentage Reduction Required to Achieve the Citywide Average VMT:

G. Mitigation Measures:

Source:		
	VMT Reduction Mitigation Measure:	**Estimated VMT Reduction (%)**
1.	N/A	0.00%
2.	N/A	0.00%
3.	N/A	0.00%
4.	N/A	0.00%
5.	N/A	0.00%
6.	N/A	0.00%
7.	N/A	0.00%
8.	N/A	0.00%
9.	N/A	0.00%
10.	N/A	0.00%
	Total VMT Reduction (%)	

All mitigation measures are subject to become Conditions of Approval of the project. Provide attachments showing all VMT reduction calculations.

H. Mitigated Project TAZ VMT Rate:

I. Significance Finding:
(Less than significant, less than significant with mitigation, potential significant, etc.)

Less than significant

Prepared By		**Developer/Applicant**	
Company:	EPD Solutions	**Company:**	City of Tustin
Contact:	Abby Pal (abby@epdsolutions.com)	**Contact:**	Krys Saldivar
Address:	3333 Michelson Drive, Suite 500 Irvine, CA	**Address:**	300 Centennial Way, Tustin, CA 92780
Phone:	949-794-1180	**Phone:**	714-573-3172
Email:	techservices@epdsolutions.com	**Email:**	ksaldivar@tustinca.org
Date:	Revised 3/22/2024	**Date:**	Revised 3/22/2024

Approved by:

Tustin Public Works Engineering	**Date**	**Tustin Community Development Planning**	**Date**

Development review and processing fees should be submitted with, or prior to the submittal of this Form.
The Public Works and/or Planning Division staff will not process the Form prior to fees being paid to the City.

OCTAM 5.0 v.6.22.23 Base Model Year 2016 VMT Statistics

Zone	Home-based VMT per Capita	Employment (commute) VMT per employee
759	8.8	25.2
832	23.6	33.8
851	23.5	34.3
857	16.0	26.0
859	13.0	25.2
863	16.9	25.3
1102	15.4	25.9
1103	12.1	25.3
1104	21.1	30.1
1105	12.2	25.1
1106	15.8	24.6
1107	14.5	24.3
1108	21.8	33.2
1109	11.6	24.4
1110	21.2	29.4
1111	13.8	24.6
1112	11.4	22.8
1113	10.7	23.6
1114	11.6	23.6
1115	14.1	24.4
1116	15.5	28.6
1117	12.1	24.3
1118	17.2	26.8
1119	15.0	26.0
1120	16.0	27.6
1121	12.9	23.3
1122	13.5	32.1
1123	11.6	22.5
1124	14.7	27.4
1125	16.8	24.5
1126	0.0	23.6
1127	17.5	27.4
1128	0.0	25.2
1129	17.2	28.0
1130	0.0	24.8
1131	18.0	25.7
1132	0.0	25.0
1133	0.0	0.0
1134	13.4	26.0
1135	0.0	0.0
1136	8.3	36.8
1137	17.2	29.6
1138	0.0	25.3

* Geography nests into OCTAM zone structure. VMT includes all VMT to/from specified geography, except for VMT that leaves OCTAM model area.

** Note that as OCTAM is updated, these statistics are subject to change.

Appendix E
Archaeological Resources Records Search

Tustin Market Place Draft EIR

April 26, 2024

Jazmin Rodriguez
EPD Solutions
3333 Michelson Drive, Suite 500
Irvine, California 92660

RE: Archaeological Resources Records Search Results for the Market Place Project, Tustin, California (APNs 500-291-02, -04, -06 through -08, -11, -12, -21, and -23 through -27, and 500-312-01, -02, -03, -04, -06, -08, -09, and -10)

Dear Ms. Rodriguez:

An archaeological resources records search has been completed for the Market Place Project. The proposed approximately 77-acre project is located north of the intersection of Jamboree Road and Santa Ana Freeway (Assessor's Parcel Numbers [APNs] 500-291-02, -04, -06 through -08, -11, -12, -21, and -23 through -27, and 500-312-01, -02, -03, -04, -06, -08, -09, and -10) within the city of Tustin, California. The subject property is situated within the former ranchos of Lomas De Santiago and San Joaquin, Township 1 South, Range 6 West on the U.S. Geological Survey (USGS) *Tustin*, *California* (7.5-minute) topographic quadrangle map. As part of the environmental review process, BFSA Environmental Services, a Perennial Company (BFSA), conducted an archaeological resources records search at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton.

Archaeological Records Search Results

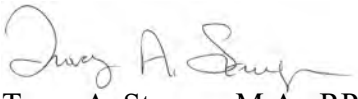
The cultural resources records search was completed by BFSA at the SCCIC on August 22, 2023, and encompassed the project area as well as a 500-foot buffer surrounding the project. Based upon the records search results, no resources are recorded within the project or the 500-foot search buffer. Record search results indicate that the subject property was partially overlapped by five previous studies (Snyder 1982; Mason 1984; Wlodarski and Romani 1984; Casen et al. 1985; Webb and Snyder 1985). However, none of the studies are directly related to the project area. Four of the studies, which surveyed the southern corner of the project area, were focused on the Interstate 5 exchange (Snyder 1982; Wlodarski and Romani 1984; Casen et al. 1985; Webb and Synder 1985). The other study surveyed an 11-mile-long and two-to-three-mile-wide section of

land from Interstate 5 to Highway 91 (Mason 1984). Further, the SCCIC search identified an additional 11 previous studies within the search radius. These studies did not overlap the project area.

BFSA requested a review of the Sacred Lands File (SLF) by the Native American Heritage Commission (NAHC) on August 18, 2023, to determine if any recorded Native American sacred sites or locations of religious or ceremonial importance are present within one mile of the project. The results of this search were received on October 3, 2023. The results were negative.

The full results of the SCCIC completed records search and the NAHC SLF search results are attached to this letter report (Attachments A and B). Please contact us should you have any questions or require additional study for this project.

Regards,



Tracy A. Stropes, M.A., RPA
Director/Principal Archaeologist
BFSA Environmental Services, a Perennial Company

Attachments:

Attachment A – Archaeological Records Search Results
Attachment B – NAHC Sacred Lands File Search Results

ATTACHMENT A

Archaeological Records Search Results

BFSA Environmental Services, a Perennial Company

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEMS

RECORDS SEARCH

Company:	BFSA Environmental Services, a Perennial Company
Processed By:	Emily T. Soong
Date Processed:	August 24, 2023
Project Identification:	The Market Place
Information Center:	South Central Coastal Information Center
Search Radius:	500 Feet Buffer

Historical Resources:

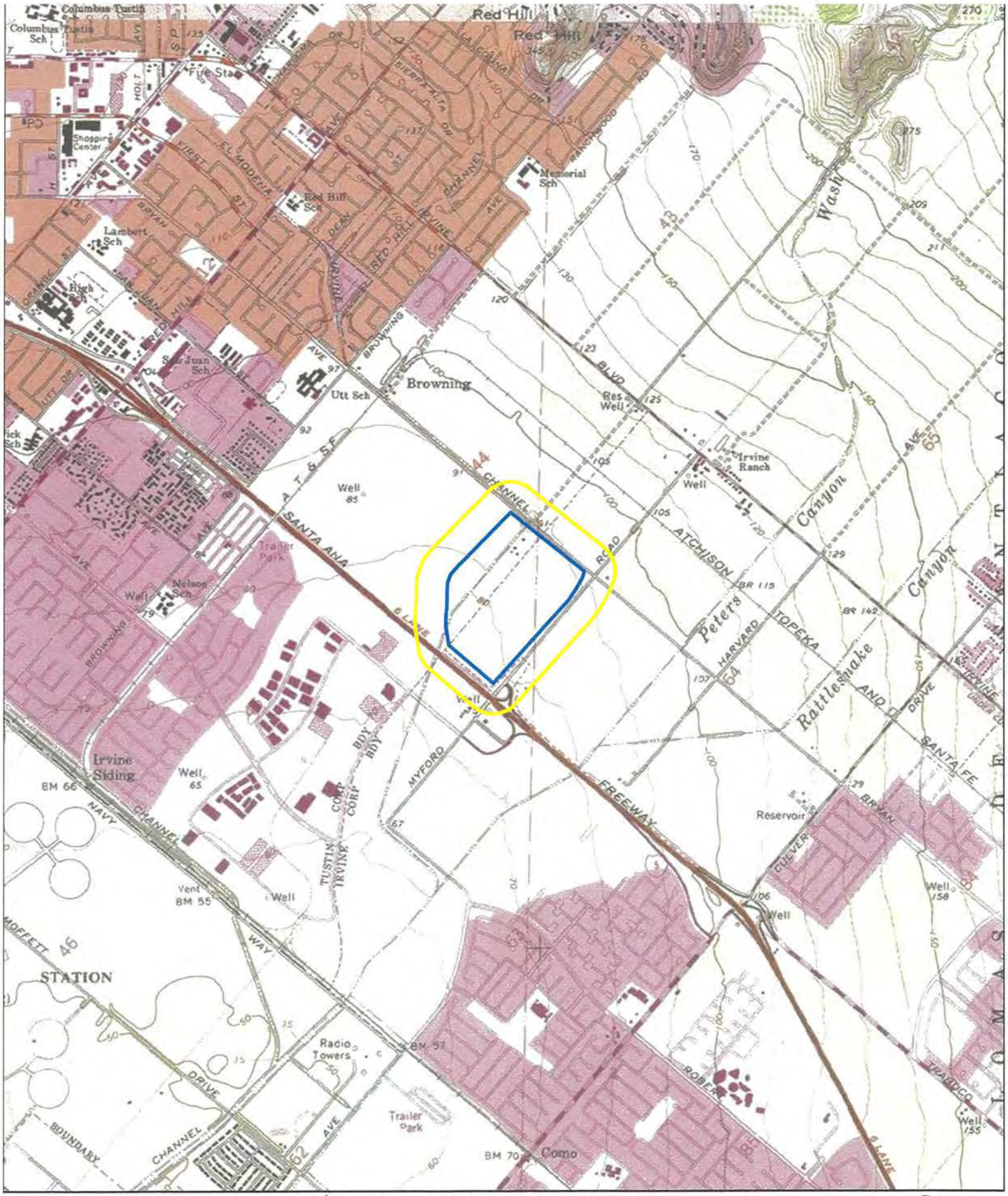
Trinomial and Primary site maps have been reviewed. All sites within the project boundaries and the specified radius of the project area have been plotted. Copies of the site record forms have been reviewed for all recorded sites.

There are no resources located within a 500 feet radius of the current project area or within the subject property.

Previous Survey Report Boundaries:

Project boundary maps have been reviewed. National Archaeological Database (NADB) citations for reports within the project boundaries and within the specified radius of the project area have been reviewed.

There are 16 reports within a 500 feet radius of the current project area, five of which are located within the subject property (OR-747, OR-752, OR-3277a, OR-3277b, and OR3277c).



NO RESOURCES IN SEARCH RADIUS

500 Ft Buffer

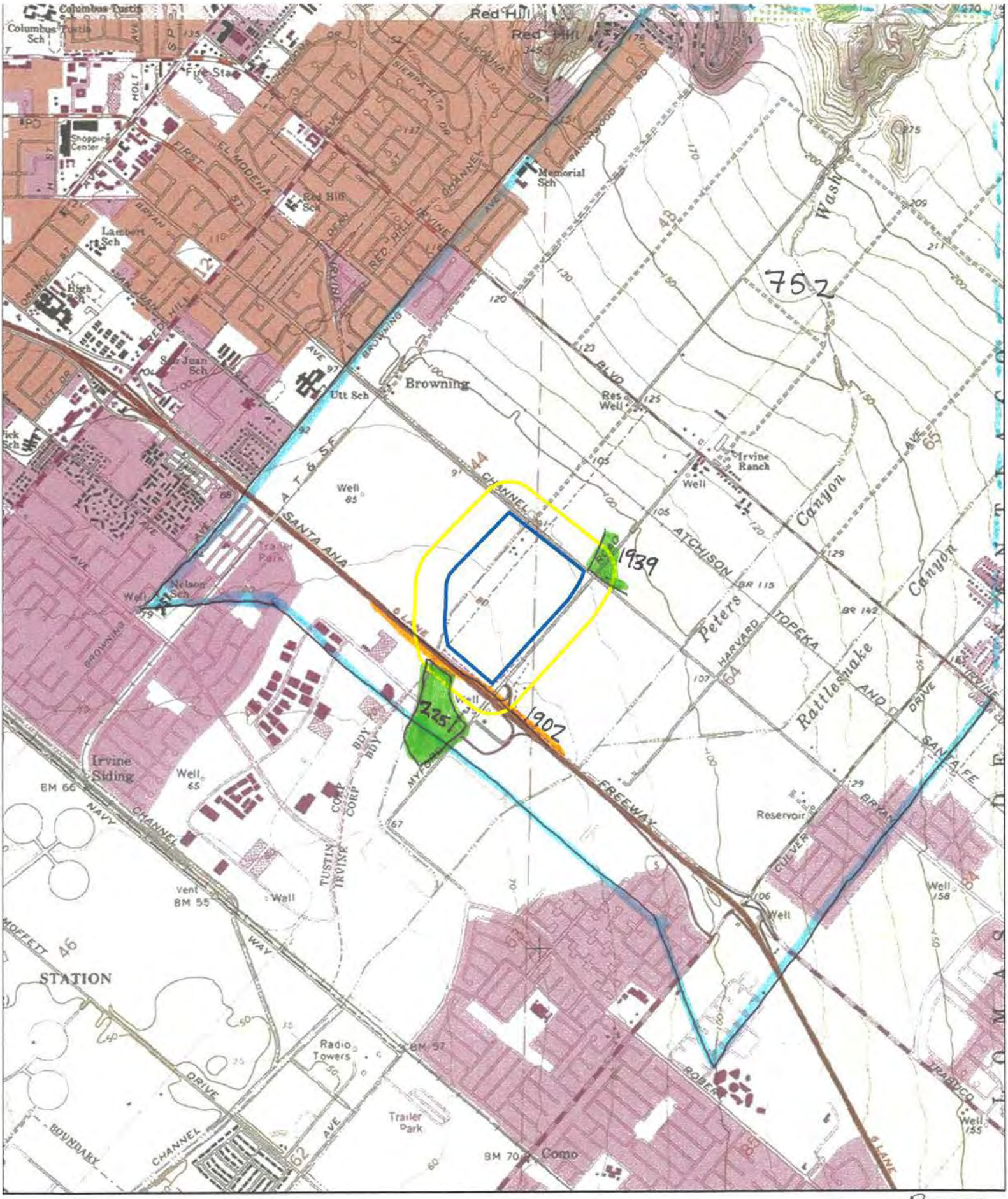
Project

The Market Place Project
USGS *Tustin* Quadrangle
(7.5-minute series)

N

Resource
1:24,000

ETS BFSAES: 8/21/2023



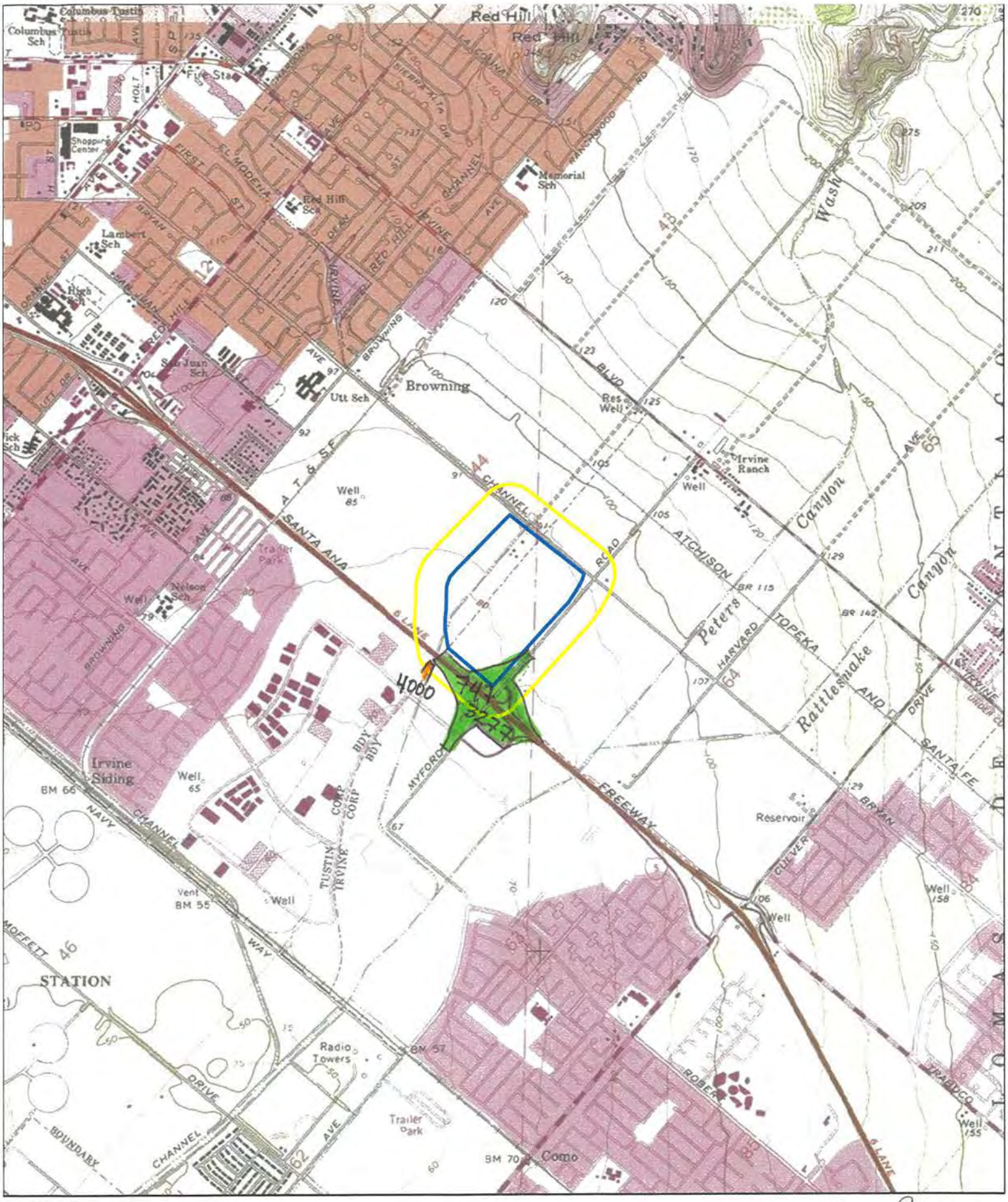
500 Ft Buffer

Project

The Market Place Project
USGS *Tustin* Quadrangle
(7.5-minute series)

N

ETS BFSAES: 8/21/2023



500 Ft Buffer

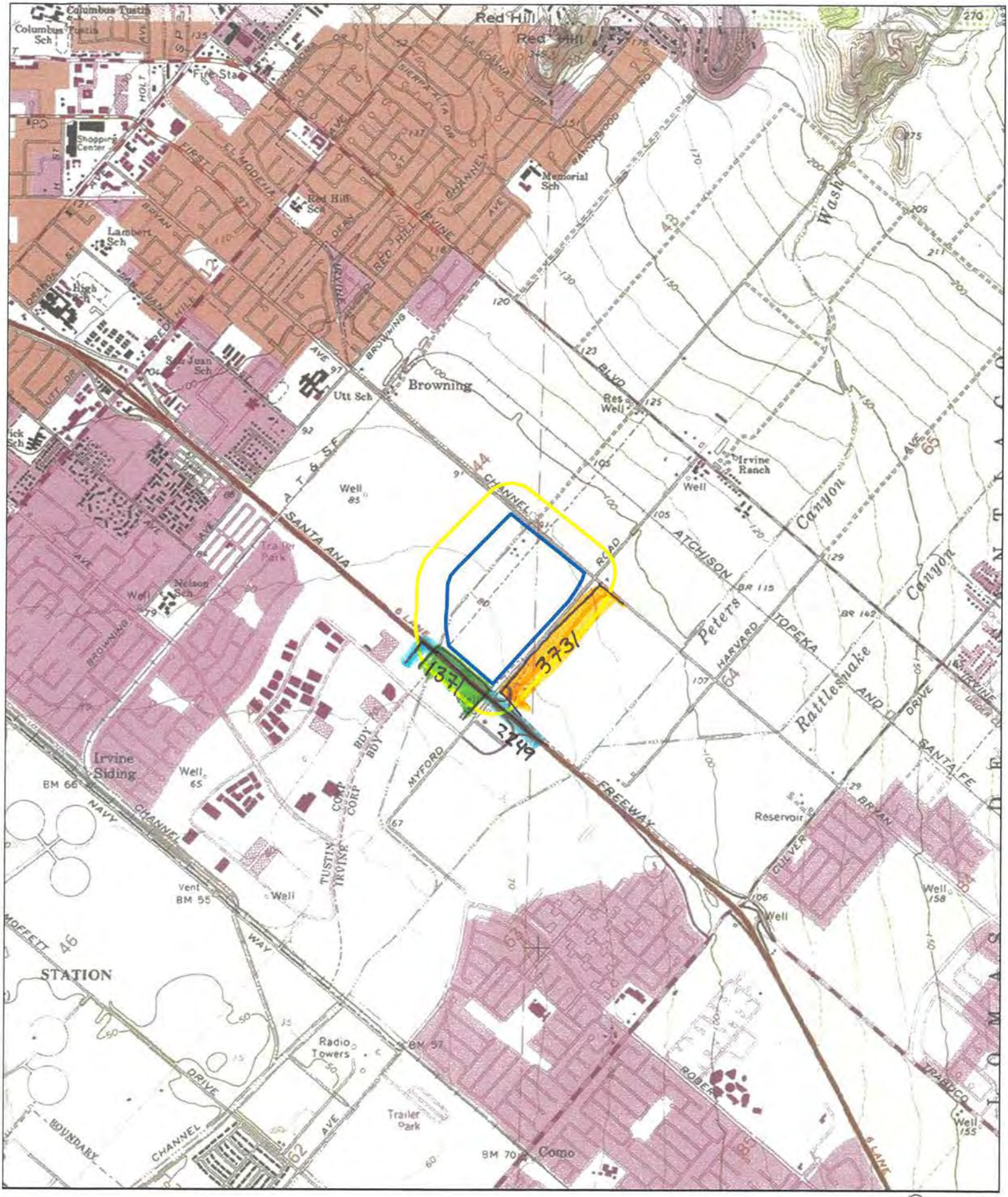
Project

The Market Place Project
USGS *Tustin* Quadrangle
(7.5-minute series)

N

Reports
1:24,000
2 of 4

ETS BFSAES: 8/21/2023



500 Ft Buffer

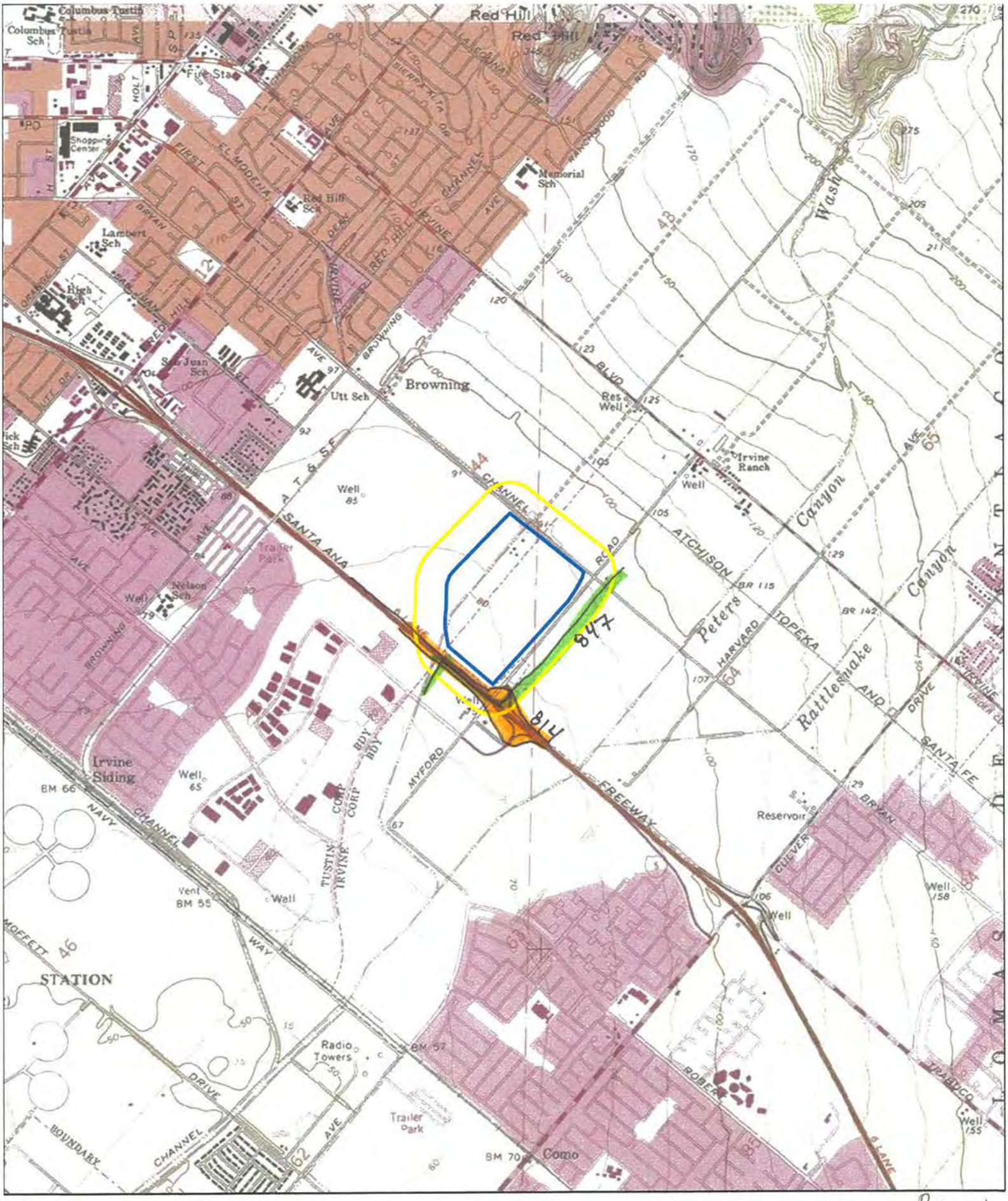
Project

The Market Place Project
USGS *Tustin* Quadrangle
(7.5-minute series)

N

Reports
1:24,000
3 of 4

ETS BFSAES: 8/21/2023



500 Ft Buffer

Project

The Market Place Project
USGS *Tustin* Quadrangle
(7.5-minute series)

N

1:24,000

Reports
41 of 4

ETS BFSAES: 8/21/2023

Report List

The Market Place

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
OR-00747		1984	Wlodarski, Robert J. and John F. Romani	Negative Archaeological Survey Report: The Proposed Project Involved the I-5 Interchange at Myford Road Where Several Alternatives Are Proposed.	Caltrans	
OR-00752		1984	Mason, Roger D.	Eastern Corridor Alignment Study, Orange County, California; Volume II: Prehistory and History	Scientific Resource Surveys, Inc.	30-000184, 30-000303, 30-000304, 30-000321, 30-000513, 30-000541, 30-000546, 30-000547, 30-000556, 30-000557, 30-000584, 30-000585, 30-000586, 30-000587, 30-000588, 30-000589, 30-000590, 30-000591, 30-000592, 30-000626, 30-000770, 30-000771, 30-000772, 30-000793, 30-000794, 30-000795, 30-000818, 30-000819, 30-000820, 30-000962, 30-001067, 30-001068, 30-001195, 30-001196, 30-001197, 30-001198, 30-001199, 30-001200, 30-001201
OR-00814		1982	Romani, John F.	ARCHAEOLOGICAL SURVEY REPORT for the Route I-5 Santa Ana Transportation Corridor, Route 405 in Orange County to Route 605 in Los Angeles County Pm 21.30/44.38; 0.00/6.85	Caltrans	
OR-00847		1985	Padon, Beth	Archaeological Resource Inventory City of Irvine and its Sphere of Influence	LSA Associates, Inc.	30-000161, 30-000349, 30-000361, 30-000383, 30-000478, 30-000494, 30-000495, 30-000496, 30-000499, 30-000545, 30-000601, 30-000734, 30-000735, 30-000767, 30-000803, 30-000804, 30-000805, 30-000806, 30-000807, 30-000808
OR-01371	Paleo -	1993	Padon, Beth and Fran Govean	An Archaeological and Paleontological Assessment of the Proposed Planning Area 10 Project, City of Irvine, Orange County	Petra Resources Inc.	
OR-01902		1985	Casen, George A., John F. Romani, and Lois M. Webb	Hiistoric Property Survey 07 ORA 5 Route 405 to Route 55 PM 21.3/30.3 07210 - 065480	Caltrans	
OR-01902A		1985	Webb, Lois M. and George A. Casen	Historic Architectural Evaluation 07 Ora 5 Route 405 to Route 55 PM 21.3/30.3 07210 065480	Office of Environmental Analysis Department of Transportation	
OR-01902B		1982	Snyder, John W.	Evaluations of Standard Bridges and Culverts on 07-Ora, LA-5 Santa Ana Transit Corridor	Office of Environmental Planning Department of Transportation	

Report List

The Market Place

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
OR-01939	Paleo -	1999	Padon, Beth	Archaeological and Paleontological Monitoring of Preliminary Grading for Market Place III Retail Center, Irvine, California	Discovery Works, Inc.	
OR-02249		1978	Schilz, Allan J.	Archaeological Survey Conducted for Village 10 City of Irvine	Archaeological Resource Management Corp.	
OR-02251	Paleo -	2000	Padon, Beth	Archaeological and Paleontological Monitoring Scope of Work for Planning Area 10, Parcel 8, 9, and 10 Project	Discovery Works, Inc.	
OR-03277		1985	Casen, George A., John F. Romani, and Lois M. Webb	The Proposed Project Is the Widening and General Improvement of Interstate Route 5 Between Route 405 and Route 55 in Orange County, California	Caltrans Environmental Planning Branch	30-157788, 30-161870, 30-161875, 30-161889, 30-176772
OR-03277		1985	Webb, Lois M. and John W. Snyder	Historic Architectural Evaluation 07 Ora 5 Route 405 to Route 55	Environmnetal Planners Caltrans	
OR-03277		1982	Snyder, John W.	Evaluations of Standard Bridges and Culverts on 07-Ora, LA-5 Santa Ana Transit Corridor	Environmental Planning, Caltrans	
OR-03731	Paleo -	1996	Rosenthal, Jane	Archaeological and Paleontological Monitoring of Preliminary Grading and Trenching for the Lower Peters Canyon Retail Site, Tentative Parcel Map 93-204, 940122, County Permit # GA950034.	Petra Resources Inc.	
OR-04000		2010	Strauss, Monica, Ehringer, Candace, and Bray, Madeleine	Irvine Ranch Water District Wells 21 and 22 and Tustin Legacy Well 1 (TL-1) Projects, Phase I Cultural Resources Assessment	ESA	30-000300, 30-000301, 30-000350, 30-000351, 30-000353, 30-000373, 30-000381, 30-001652

ATTACHMENT B

NAHC Sacred Lands File Search Results

August 18, 2023

For: Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, California 95814

From: Emily T. Soong
BFSA Environmental Services, a Perennial Company
14010 Poway Rd. Suite A
Poway, CA 92064

Re: Request for Sacred Lands File and Native American Contact List for the Chase Road Project, Fontana, San Bernardino County, California.

I would like to request a record search of the Sacred Lands File and a list of appropriate Native American contacts for the following project: The Market Place Project (Project No. 23-223). The project is an archaeological study located north of the intersection of Jamboree Road and Santa Ana Freeway (APNs 500-291-02, -04, -06, -07, -08, -11, -21, -23, -24, -25, -26, -27, 500-312-01, -02, -04, -06, -08, -09), Tustin, Orange County, California. Specifically, the project is in former Lomas De Santiago and San Joaquin Ranchos, Township 1 South, Range 6 West as seen on the USGS *Tustin*, California topographic quadrangle. Please find the enclosed map on which the project is delineated.

Thank you for your time.

Sincerely,

Emily T. Soong
Graphics/GIS
Billing: 14010 Poway Road, Suite A, Poway, CA 92064
Phone: 858-484-0915
Email: esoong@bfsa.perennialenv.com

Attachments:
USGS 7.5 *Tustin,* California, topographic maps with project area delineated.
Sacred Lands File request form

Sacred Lands File & Native American Contacts List Request
NATIVE AMERICAN HERITAGE COMMISSION

915 Capitol Mall, RM 364 ∗ Sacramento, CA 95814 ∗ (916) 653-4082
(916) 657-5390 – Fax ∗ nahc@pacbell.net

Information Below is Required for a Sacred Lands File Search

Project: The Market Place Project (Project No. 22-223)

County: Orange

USGS Quadrangle Name(s): *Tustin*

Township 5 South, Range 9 West

Company/Firm/Agency: BFSA Environmental Services, a Perennial Company

Contact Person: Emily T. Soong

Street Address: 14010 Poway Road, Suite A

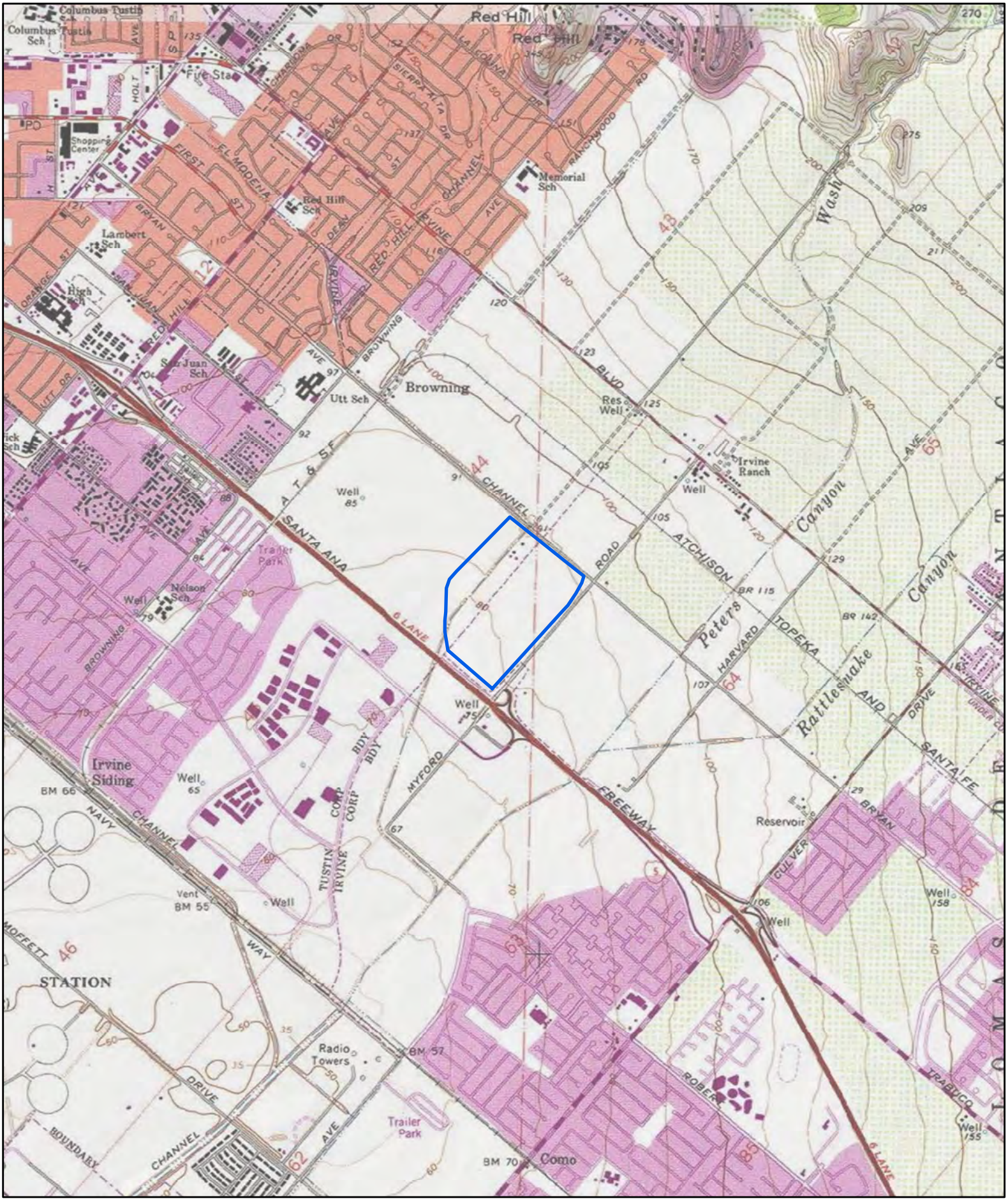
City: Poway Zip: 92064

Phone: 858-484-0915

Fax: 858-679-9896

Email: esoong@bfsa.perennialenv.com

Project Description:
I would like to request a record search of the Sacred Lands File and a list of appropriate Native American contacts for the following project: The Market Place Project (Project No. 23-223). The project is an archaeological study located north of the intersection of Jamboree Road and Santa Ana Freeway (APNs 500-291-02, -04, -06, -07, -08, -11, -21, -23, -24, -25, -26, -27, 500-312-01, -02, -04, -06, -08, -09), Tustin, Orange County, California. Specifically, the project is in former Lomas De Santiago and San Joaquin Ranchos, Township 1 South, Range 6 West as seen on the USGS *Tustin*, California topographic quadrangle. Please find the enclosed map on which the project is delineated.



Project

The Market Center Project
USGS *Tustin* Quadrangle
(7.5-minute series)

N

1:24,000

ETS BFSAES: 8/18/2023

NATIVE AMERICAN HERITAGE COMMISSION

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EXECUTIVE SECRETARY
Raymond C. Hitchcock
Miwok, Nisenan

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

October 3, 2023

Emily T. Soong
BFSA Environmental Services

Via Email to: esoong@bfsa.perennialenv.com

Re: The Market Place Project, Orange County

Dear Ms. Soong:

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

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

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

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Orange County
10/3/2023

Tribe Name	Fed (F) Non-Fed (N)	Contact Person	Contact Address	Phone #	Fax #	Email Address	Cultural Affiliation
Gabrieleno Band of Mission Indians - Kizh Nation	N	Christina Swindall Martinez, Secretary	P.O. Box 393 Covina, CA, 91723	(844) 390-0787		admin@gabrielenoindians.org	Gabrieleno
Gabrieleno Band of Mission Indians - Kizh Nation	N	Andrew Salas, Chairperson	P.O. Box 393 Covina, CA, 91723	(844) 390-0787		admin@gabrielenoindians.org	Gabrieleno
Gabrieleno/Tongva San Gabriel Band of Mission Indians	N	Anthony Morales, Chairperson	P.O. Box 693 San Gabriel, CA, 91778	(626) 483-3564	(626) 286-1262	GTTribalcouncil@aol.com	Gabrieleno
Gabrielino /Tongva Nation	N	Sandonne Goad, Chairperson	106 1/2 Judge John Aiso St., #231 Los Angeles, CA, 90012	(951) 807-0479		sgoad@gabrielino-tongva.com	Gabrielino
Gabrielino Tongva Indians of California Tribal	N	Robert Dorame, Chairperson	P.O. Box 490 Bellflower, CA, 90707	(562) 761-6417	(562) 761-6417	gtongva@gmail.com	Gabrielino
Gabrielino Tongva Indians of California Tribal	N	Christina Conley, Cultural Resource Administrator	P.O. Box 941078 Simi Valley, CA, 93094	(626) 407-8761		christina.marsden@alumni.usc.edu	Gabrielino

Tribe Name	Fed (F) Non-Fed (N)	Contact Person	Contact Address	Phone #	Fax #	Email Address	Cultural Affiliation
Gabrielino-Tongva Tribe	N	Sam Dunlap, Cultural Resource Director	P.O. Box 3919 Seal Beach, CA, 90740	(909) 262-9351		tongvatcr@gmail.com	Gabrielino
Gabrielino-Tongva Tribe	N	Charles Alvarez, Chairperson	23454 Vanowen Street West Hills, CA, 91307	(310) 403-6048		Chavez1956metro@gmail.com	Gabrielino
Juaneno Band of Mission Indians Acjachemen Nation -	N	Joyce Perry, Cultural Resource Director	4955 Paseo Segovia Irvine, CA, 92603	(949) 293-8522		kaamalam@gmail.com	Juaneno
Juaneno Band of Mission Indians Acjachemen Nation 84A	N	Heidi Lucero, Chairperson, THPO	31411-A La Matanza Street San Juan Capistrano, CA, 92675	(562) 879-2884		jbmian.chairwoman@gmail.com	Juaneno
Pala Band of Mission Indians	F	Alexis Wallick, Assistant THPO	PMB 50, 35008 Pala Temecula Road Pala, CA, 92059	(760) 891-3537		awallick@palatribe.com	Cupeno Luiseno
Pala Band of Mission Indians	F	Shasta Gaughen, Tribal Historic Preservation Officer	PMB 50, 35008 Pala Temecula Road Pala, CA, 92059	(760) 891-3515	(760) 742-3189	sgaughen@palatribe.com	Cupeno Luiseno
Santa Rosa Band of Cahuilla Indians	F	Lovina Redner, Tribal Chair	P.O. Box 391820 Anza, CA, 92539	(951) 659-2700	(951) 659-2228	lsaul@santarosa-nsn.gov	Cahuilla

Tribe Name	Fed (F) Non-Fed (N)	Contact Person	Contact Address	Phone #	Fax #	Email Address	Cultural Affiliation
Soboba Band of Luiseno Indians	F	Joseph Ontiveros, Tribal Historic Preservation Officer	P.O. Box 487 San Jacinto, CA, 92581	(951) 663-5279	(951) 654-4198	jontiveros@soboba-nsn.gov	Cahuilla Luiseno
Soboba Band of Luiseno Indians	F	Jessica Valdez, Cultural Resource Specialist	P.O. Box 487 San Jacinto, CA, 92581	(951) 663-6261	(951) 654-4198	jvaldez@soboba-nsn.gov	Cahuilla Luiseno

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed The Market Place Project, Orange County.

Appendix F
Water Supply Assessment

Tustin Market Place Draft EIR

IRVINE RANCH WATER DISTRICT
ASSESSMENT OF WATER SUPPLY
Water Code §10910 *et seq.*

To: (*Lead Agency*)

City of Tustin
300 Centennial Way
Tustin, CA 92780

(*Applicant*)
City of Tustin
300 Centennial Way
Tustin, CA 92780

Project Information

Project Title: Tustin Market Place (Exhibit A)

☒ *Residential*: No. of dwelling units: 900 dwelling units (See Exhibit B)
☒ *Shopping center or business*: No. of employees N/A Sq. ft. of floor space 756,791 (no change)
☐ *Commercial office*: No. of employees_____ Sq. ft. of floor space _____
☐ *Hotel or motel*: No. of rooms _____
☐ *Industrial, manufacturing or processing*: No. of employees_____ No. of acres _____
Sq. ft. of floor space _____
☐ *Mixed use* (check and complete all above that apply) _____
☐ *Other*: _____

Assessment of Availability of Water Supply

On February 12, 2024 the Board of Directors of the Irvine Ranch Water District (IRWD) approved the within assessment and made the following determination regarding the above-described Project:

☐ The projected water demand for the Project ☐ was ☐ was not included in IRWD's most recently adopted urban water management plan.

☒ A sufficient water supply is available for the Project.
The total water supplies available to IRWD during normal, single-dry and multiple-dry years within a 20-year projection will meet the projected water demand of the Project in addition to the demand of existing and other planned future uses, including, but not limited to, agricultural and manufacturing uses.

☐ A sufficient water supply is not available for the Project. *[Plan for acquiring and developing sufficient supply attached. Water Code § 10911(a)]*

The foregoing determination is based on the following Water Supply Assessment Information and supporting information in the records of IRWD.

Leslie Bonkosh 2/13/24 District Secretary
Signature *Date* *Title*

Water Supply Assessment Information

Purpose of Assessment

Irvine Ranch Water District ("IRWD") has been identified by the City as a public water system that will supply water service (both potable and nonpotable) to the project identified on the cover page of this assessment (the "Project"). As the public water system, IRWD is required by Section 10910 *et seq.* of the Water Code to provide the City with an assessment of water supply availability ("assessment") for defined types of projects. The Project has been found by the City to be a project requiring an assessment. The City is required to include this assessment in the environmental document for the Project, and based on the record, make a determination whether projected water supplies are sufficient for the Project and existing and planned uses.

Water Code Section 10910 *et seq.* (the "Assessment Law") contains the requirements for the information to be set forth in the assessment.

Prior Water Supply Assessments

IRWD does not allocate particular supplies to any project but identifies total supplies for its service area. Because of IRWD's aggregation of demands and supplies, each assessment completed by IRWD is expected to be generally similar to the most recent assessment, with changes as needed to take into account changes, if any, in demands and supplies, and any updated and corrected information obtained by IRWD. Previously assessed projects' water demands will be included in the baseline. A newly assessed project's water demand will have been included in previous water supply assessments for other projects (as part of IRWD's "full build-out" demand) to the extent of any land use planning or other water demand information for the project that was available to IRWD.

The Project's water demand was included (as part of IRWD's "full build-out" demand) in previous water supply assessments performed by IRWD, based on land use planning information available to IRWD. In this water supply assessment, the Project demand will be revised in accordance with updated information provided by the applicant and included in the "with project" demand.

Supporting Documentation

IRWD prepares two planning documents to guide water supply decision-making. IRWD's principal planning document is IRWD's "Water Resources Master Plan" ("WRMP"). The WRMP is a comprehensive document compiling data and analyses that IRWD considers necessary for its planning needs. IRWD also prepares an Urban Water Management Plan ("UWMP"), a document required by statute. The UWMP is based on the WRMP, but contains defined elements as listed in the statute (Water Code Section 10631 *et seq.*), and, as a result, is more limited than the WRMP in the treatment of supply and demand issues. Therefore, IRWD primarily relies on its most recent WRMP. The UWMP is required to be updated in years ending with "five" and "zero," and IRWD's most recent update of that document (2020 UWMP) was adopted in June 2021.

In addition to the WRMP and the 2020 UWMP mentioned above, other supporting documentation referenced herein is found in Section 6 of this assessment.

Due to the number of contracts, statutes and other documents comprising IRWD's written proof of entitlement to its water supplies, in lieu of attachment of such items, they are identified by title and summarized in Section 2(b) of this assessment (written contracts/proof of entitlement). Copies of the summarized items can be obtained from IRWD.

Assessment Methodology

Water use factors; dry-year increases. IRWD employs water use factors to enable it to assign water demands to the various land use types and aggregate the demands. The water use factors are based on average water use and incorporate the effect of IRWD's tiered-rate conservation pricing and its other water use efficiency programs. The factors are derived from historical usage (billing data) and a detailed review of water use factors within the IRWD service areas conducted as a part of the WRMP. System losses at a rate of approximately 5% are built into the water use factors. Water demands also reflect normal hydrologic conditions (precipitation). Lower levels of precipitation and higher temperatures will temporarily result in higher water demands, due primarily to the need for additional water for irrigation. To reflect this, base (normal) WRMP water demands have been increased by 7% in the assessment during both "single-dry" and "multiple-dry" years. This increase in estimated demands is considered conservative and is consistent with the Municipal Water District of Orange County's ("MWDOC") 2020 UWMP which assumes increased demands in single-dry and multiple dry years of 6% based on MWDOC's Orange County Reliability Study (MWDOC 2020 UWMP, pg. 7-2). The Metropolitan Water District of Southern California ("MWD") also considers these weather variables in their climate adjustment factors when forecasting demands, as documented in MWD's 2020 UWMP which shows an average increase of 8% for single dry year demands (MWD 2020 UWMP Tables 2-4, 2-5, 2-6) and also documented in their 2020 Integrated Resources Plan - Regional Needs Assessment (2022).

Planning horizon. In accordance with Water Code Section 10910, this assessment reviews demands and supplies covering a 20-year planning horizon. For consistency with IRWD's WRMP, the assessment reviews demands and supplies through the year 2044, which is considered to include build-out or "ultimate development".

Assessment of demands. Water demands are reviewed in this assessment for three development projections (to 2044):

- Existing and committed demand (without the Project) ("baseline"). This provides a baseline condition as of the date of this assessment, consisting of demand from existing development, plus demand from development that has both approved zoning and (if required by the Assessment Law) an adopted water supply assessment.

- Existing and committed demand, plus the Project ("with-project"). This projection adds the Project water demands to the baseline demands.

- Full WRMP build-out ("full build-out"). In addition to the Project, this projection adds potential demands for all presently undeveloped areas of IRWD based on current general plan information, modified by more specific information available to IRWD, as more fully described in Chapter 2 of the WRMP.

Assessment of supplies. For comparison with demands, water supplies are classified as *currently available* or *under development*:

- *Currently available* supplies include those that are presently operational, and those that will be operational within the next several years. Supplies expected to be operational in the next several years are those having completed or substantially completed the environmental and regulatory review process, as well as having necessary contracts (if any) in place to move forward. These supplies are in various stages of planning, design, or construction.

- In general, supplies *under development* may necessitate the preparation and completion of environmental documents, regulatory approvals, and/or contracts prior to full construction and implementation.

IRWD is also evaluating the development of additional supplies that are not included in either *currently available* or *under-development* supplies for purposes of this assessment. As outlined in the WRMP, prudent water supply and financial planning dictates that development of supplies be phased in over time consistent with the growth in demand.

Water supplies available to IRWD include several sources: groundwater pumped from the Orange County groundwater basin (including the Irvine Subbasin); captured local (native) surface water; recycled sewage; and supplemental imported water supplied by MWD through the MWDOC. The supply-demand comparisons in this assessment are broken down among the various sources and are further separated into potable and nonpotable water sources.

Comparison of demand and supply. The three demand projections noted above (baseline, with-project and full build-out) are compared with supplies in the following ways:

- On a total *annual* quantity basis (stated in acre-feet per year ("AFY")).

- On a *peak-flow* (maximum day) basis (stated in cubic feet per second ("cfs")).

- Under three climate conditions: base (normal) conditions and single-dry and multiple-dry year conditions. (Note: These conditions are compared for *annual* demands and not for *peak-flow* demands. *Peak-flow* is a measure of a water delivery system's ability to meet the highest day's demand of the fluctuating demands that will be experienced in a year's time. Peak demands occur during the hot, dry season and as a result are not appreciably changed by dry-year conditions; dry-year conditions do affect *annual* demand by increasing the quantity of water needed to supplement normal wet-season precipitation.)

Summary of Results of Demand-Supply Comparisons

Listed below are Figures provided in this assessment, comparing projected potable and nonpotable water supplies and demands under the three development projections:

Figure 1: Normal Year Supply and Demand – Potable Water
Figure 2: Single Dry-Year Supply and Demand – Potable Water
Figure 3: Multiple Dry-Year Supply and Demand – Potable Water
Figure 4: Maximum-Day Supply and Demand – Potable Water
Figure 5: Normal Year Supply and Demand – Nonpotable Water
Figure 6: Single Dry-Year Supply and Demand – Nonpotable Water
Figure 7: Multiple Dry-Year Supply and Demand – Nonpotable Water
Figure 8: Maximum-Day Supply and Demand – Nonpotable Water

It can be observed in the Figures that IRWD's *supplies* remain essentially constant between normal, single-dry, and multiple-dry years. This result is due to the fact that groundwater and MWD imported water account for the majority of all of IRWD's potable supply, and recycled water, groundwater and imported water comprise all of IRWD's nonpotable supply. Groundwater production typically remains constant or may increase in cycles of dry years, even if overdraft of the basin temporarily increases, as groundwater producers reduce their demand on imported supplies to secure reliability. (See Section 4 herein.) As to imported water, MWD's 2020 Urban Water Management Plan (MWD 2020 UWMP) concludes that MWD has supply capabilities sufficient to meet expected demands from 2025 through 2045 under a single dry year condition and a period of drought lasting five consecutive water years, as well as in a normal water year hydrologic condition. (See also Section 2(b) (1) "IMPORTED SUPPLY - ADDITIONAL INFORMATION," below.) Recycled water production also remains constant and is considered "drought-proof" as a result of the fact that sewage flows remain virtually unaffected by dry years. Only a small portion of IRWD's supply, native water captured in Irvine Lake, is reduced in single-dry and multiple-dry years. The foregoing factors also serve to explain why there is no difference in IRWD's supplies between single-dry and multiple-dry years.

A review of the Figures indicates the following:

- *Currently available* supplies of potable water are adequate to meet annual demands for the *baseline, with-project* and *full build-out* scenarios projected under the normal year, and the single- and multiple-dry year conditions through the year 2044. (Figures 1, 2 and 3.) IRWD plans to proceed with the implementation of future potable supplies (*under development)*, as shown in the Figures, to improve local reliability during dry-year conditions.

- Adequate *currently available* potable water supply capacity is available to meet *peak-flow* (maximum day) demands for all demand projections through the year 2044. (Figure 4.)

- With respect to nonpotable water, *currently available* supplies are adequate to meet projected annual demands for both the *baseline* and *with-project* demand projections under both dry-year conditions through the year 2044. (Figures 5, 6, 7 and 8.) IRWD has implemented all planned nonpotable supplies, as shown in the Figures, to improve local reliability during dry-year conditions.

The foregoing Figures provide an overview of IRWD potable and nonpotable water supply capabilities. More detailed information on the anticipated development and use of supplies, which incorporates source costs and reliability issues, is provided in the WRMP.

Margins of safety. The Figures and other information described in this assessment show that IRWD's assessment of supply availability contains several margins of safety or buffers:

- "Reserve" water supplies (excess of supplies over demands) will be available to serve as a buffer against inaccuracies in demand projections, future changes in land use, or alterations in supply availability.

- Conservative estimates of annual potable and nonpotable *imported* supplies have been made based on connected delivery capacity (by application of peaking factors as

described below in Section 2, footnote 1); additional supplies are expected to be available from these sources, based on legal entitlements, historical uses and information provided by MWD. In addition to MWD's existing regional supply assessments, this assessment has considered MWD information concerning operational limits on Delta pumping. See "***Actions on Delta Pumping,***" below.

- Information provided by MWD, as the imported water supplier, concerning the adequacy of its regional supplies, summarized herein, demonstrates MWD's inclusion of reserves in its regional supply assessments. In addition to MWD's existing regional supply assessments, this assessment has considered MWD's information concerning operational limits on Delta pumping. See "***Actions on Delta Pumping,***" below.

- Although groundwater supply amounts shown in this assessment assume production levels within applicable basin production percentages described herein, production of groundwater can exceed applicable basin production percentages on a short-term basis, which can provide additional reliability during dry years or emergencies. See "***IRWD's Evaluation of Effect of Reduced MWD Supplies to IRWD,***" below.

Actions on Delta Pumping. The Sacramento/San Joaquin Delta ("Delta") is a vulnerable component in both the State and Federal systems to convey water from northern portions of California to areas south of the Delta. Issues associated with the Delta have generally been known for years; however, the continuing decline in the number of endangered Delta smelt resulted in the filing of litigation challenging permits for the operation of the Delta pumping facilities. On August 31, 2007, a Federal court ordered interim protective measures for the endangered Delta smelt, including operational limits on Delta pumping, which have an effect on State Water Project ("SWP") operations and supplies. On June 4, 2009, a federal biological opinion imposed rules that further restrict water diversions from the Delta to protect endangered salmon and other endangered fish species. Several proceedings concerning Delta operations to evaluate options to address Delta smelt impacts and other environmental concerns. In addition to the regulatory and judicial proceedings to address immediate environmental concerns, the Delta Vision process and Bay-Delta Conservation Plan ("BDCP") process were established to identify long-term solutions for the Delta. In addition, State and federal agencies and water user entities are currently engaged in the development of the Delta Conveyance Project (previously California WaterFix), which is aimed at making physical and operational improvements in the Delta necessary to improve south of the Delta SWP water supplies and water quality and protect ecosystem health in the Delta (MWD 2020 UWMP). Prior to the 2007 court decision, MWD's Board approved a Delta Action Plan in May 2007, that described short, mid and long-term conditions and the actions to mitigate potential supply shortages and to develop and implement long-term solutions. To address uncertainties in expected SWP supplies, in October 2007, MWD prepared its 2007 Integrated Resources Plan ("IRP") Implementation Report, in which MWD estimated that it could see as much as up to a 22% reduction on average of its SWP supplies based on the court order. As part of its ongoing long term planning, in its 2010 IRP Update, MWD identified changes to the long-term plan and established direction to address the range of potential changes in water supply planning. The 2010 IRP also discusses dealing with uncertainties related to impacts of climate change (see additional discussion of this below), as well as actions to protect endangered fisheries. The 2010 IRP Update emphasizes an evolving approach and suite of actions to address the water supply challenges that are posed by uncertain weather patterns, regulatory and environmental restrictions, water quality impacts and changes in the state and the region. The 2010 IRP Update includes MWD's Adaptive Resource Management Strategy three components: Core Resources Strategy, Supply Buffer Implementation and Foundational Actions, which together

provides the basis for the 2010 IRP Update. The 2010 IRP Update expands the concept of developing a planning buffer from the 2004 IRP Update by implementing a supply buffer equal to 10 percent of the total retail demand.

In January 2016, MWD adopted its 2015 IRP Update. In the 2015 IRP Update, MWD continued its Adaptive Resource Management Strategy and integrated future supply actions to improve the viability of potential contingency resources as needed, and to position the region to effectively implement these resources in a timely manner. The 2015 IRP finds that additional actions are needed in investments in conservation, local supplies, the Delta Conveyance Project (previously California WaterFix), and stabilizing Colorado River supplies. Among the supply actions, MWD will continue to work collaboratively with state and federal agencies on the California WaterFix, maximize its storage and transfer approach, and continue to develop and protect local supplies and conservation.

MWD is currently developing its 2020 IRP Update and has completed and adopted a 2020 IRP Regional Needs Assessment which is considered Phase 1 of the 2020 IRP. A One Water Implementation phase will be Phase 2 of the 2020 IRP. The One Water Implementation will take the results and findings of Phase 1 to identify integrated regional solutions. It will include an updated Adaptive Management Strategy, policies, programs and projects to address the findings and mitigate any potential shortages.

IRWD's Evaluation of Effect of Reduced MWD Supplies to IRWD: In the MWD 2020 UWMP, MWD states it has supply capability that would be sufficient to meet expected demands from 2025 to 2045 under single dry year and multiple dry year conditions. [1]

Based on the prior MWD 2007 IRP Implementation Report and also reported in the MWD 2015 IRP, MWD estimated that it could receive reduction of SWP supplies of up to 22% on average until a long-term solution was implemented. For purposes of ensuring a conservative analysis, IRWD made an evaluation of the effect of the 22% estimated reduction of MWD's SWP supplies on its overall imported supplies. IRWD estimates that 22% reduction of SWP supplies conservatively translates to approximately 16% reduction in all of MWD's imported supplies over the years 2025 through 2045. For this purpose, it is assumed that MWD's total supplies consist only of imported SWP and Colorado deliveries. Based on this estimate, this assessment uses a 16% reduction in MWD supplies available to IRWD for the years 2025 through 2045, using IRWD's connected capacity without any water supply allocation imposed by MWD. This reduction in MWD supplies is reflected in Figures 1, 2, 3, 5, 6, and 7. (See also the footnote 1).

Per the MWD 2020 UWMP, MWD performs water shortage planning in its Water Surplus and Drought Management ("WSDM") Plan (1988) which guides MWD's planning and operations during both shortage and surplus conditions. Furthermore, MWD developed the Water Supply Allocation Plan ("WSAP") (dated February 2009, updated December 2014) which provides standardized methodology for allocation of MWD's supplies during times of shortage. The WSDM Plan distinguishes between shortages, severe shortages, and extreme shortages.

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[1] The MWD 2020 UWMP utilized DWR's 2019 SWP Delivery Capability Report to estimate future SWP supplies for 2025 through 2045. These estimates incorporate the effect of regulatory requirements in accordance with biological opinions and also reflect potential impacts of climate change on SWP operations. Tables A.3-7 of the MWD 2020 UWMP reflect 58% or 1.1 MAF in MWD's expected average year SWP entitlement supplies. This amount is a higher expected average than MWD's 2015 estimate of 984,000 AF. For purposes of a conservative analysis, IRWD has used the 22% reduction in its supplies from MWD as the basis of IRWD's analysis.

These terms have specific meanings relating to MWD's ability to deliver water and the actions it takes. In June 2008, MWD's Board adopted a Water Supply Condition Framework to communicate the urgency of the region's water supply situation and the need for further water conservation to reduce regional demands, MWD uses the WSDM Plan and Framework to determine if a WSAP is recommended.

As an alternative means of analyzing the effect of reduced MWD supplies on IRWD, listed below are Figures provided comparing projected potable water supplies and demands in all of the five year increments, under a temporary MWD allocation scenario:

Figure 1a: Normal Year Supply and Demand (MWD Allocated) – Potable Water
Figure 2a: Single Dry-Year Supply and Demand (MWD Allocated) – Potable Water
Figure 3a: Multiple Dry-Year Supply and Demand (MWD Allocated) – Potable Water

Figures 1a, 2a, and 3a show IRWD's estimated supplies (average and single and multiple dry years) under a short-term MWD water supply allocation scenario whereby MWD declares a shortage stage under its WSAP, and a cutback is applied to IRWD's actual usage rather than its connected capacity. IRWD's evaluation of reduced MWD supplies to IRWD as shown in Figures 1a, 2a and 3a conservatively analyzes the effect of up to a MWD level 5 Regional Shortage Level. In addition, these Figures do not reflect a reduction in demands, thus representing a more conservative view of IRWD's supply capability. (see "***Recent Actions Related to Drought Conditions"*** below*)*

On April 14, 2015, MWD approved the implementation of its WSAP at a level 3 Regional Shortage Level and an effective 15% reduction in regional deliveries effective July 1, 2015, through June 30, 2016. As a result of IRWD's diversified water supplies, IRWD is reliant on MWD for only 20% of its total supplies. IRWD's evaluation of reduced MWD supplies to IRWD as shown in Figures 1a, 2a and 3a includes MWD's 2015 actions to implement a level 3 Regional Shortage Level and 15% reduction.

Under shortage scenarios, IRWD may need to supplement supplies with production of groundwater, which can exceed the applicable basin production percentage on a short-term basis, providing additional reliability during dry years or emergencies.[2]

[2] In these scenarios, it is anticipated that other water suppliers who produce water from the Orange County Basin will also experience cutbacks of imported supplies and will increase groundwater production and that Orange County Water District ("OCWD") imported replenishment water may also be cutback. The OCWD's "2021-2022 Engineer's Report on the Groundwater Conditions, Water Supply and Basin Utilization" references a report (OCWD Report on Evaluation of Orange County Groundwater Basin Storage and Operational Strategy, 2007) which recommends a basin management strategy that provides general guidelines for annual basin refill or storage decrease based on the level of accumulated overdraft. It states: "Although it is considered to be generally acceptable to allow the basin to decline to 500,000 AF overdraft for brief periods due to severe drought conditions and lack of supplemental water...an accumulated overdraft of 100,000 AF best represents an optimal basin management target. This optimal target level provides sufficient storage space to accommodate anticipated recharge from a single wet year while also providing water in storage for at least 2 or 3 consecutive years of drought." MWD replenishment water is a supplemental source of recharge water and OCWD estimates other main supply sources for recharge are available.

In addition, IRWD has developed water banking projects in Kern County, California which may be called upon for delivery of supplemental banked water to IRWD under a MWD WSAP.[3] IRWD may also convert non-potable water uses to recycled water as a way to conserve potable water. In addition, if needed, resultant net shortage levels can be addressed by demand reduction programs as described in IRWD's updated Water Shortage Contingency Plan adopted in 2021. IRWD's Water Shortage Contingency Plan provides procedures for responding to various levels of supply shortages through a combination of supply augmentation and demand management measures. As stated in IRWD's Water Shortage Contingency Plan, use of local supplies, storage and other supply augmentation measures can mitigate shortages, and are used as necessary and appropriate during declared shortage levels.

It can be noted that IRWD's above approach is conservative, in that IRWD evaluates the effect of the 16% reduction through 2044 and shows the effect of current allocation scenarios in all of the five-year increments. However, MWD reports that it has made significant progress in other water resource categories such as transfers, groundwater storage and developing other local resources, and supplies will be available from these resources over the long-term.

Climate Change. The California Department of Water Resources ("DWR") released a report "Progress on Incorporating Climate Change into Management of California's Water Resources" (July 2006), considering the impacts of climate change on the State's water supply. In 2012, DWR adopted phase 1 of its Climate Action Plan, its department-wide plan for reducing greenhouse gas emissions (GHG). In September 2018, the DWR released phase 2 of its Climate Action Plan, which is DWR's guide to addressing climate change in the programs, projects, and activities over which it has authority. Per this guidance, California's climate policy focuses on reducing GHG emissions, preparing for climate change impacts, and supporting climate-related research to inform policy responses and decision-making processes.

In MWD's 2015 IRP Update, MWD recognizes there is additional risk and uncertainty associated with climate change that may affect future supply and demands. In the 2015 IRP Update, MWD states that it plans to hedge against supply and demand uncertainties by implementing a long-term plan that recognizes the risk and provides resource development to offset the risk. Per the MWD 2020 UWMP, for longer term risks, like climate change, MWD established a Robust Decision Making ("RDM") approach that can show how vulnerable the region's reliability is to the longer-term risks such as climate change and can also establish "signposts" that can be monitored to see when crucial changes may be happening. MWD states in its 2020 UWMP that the RDM analysis was valuable in identifying vulnerabilities to its 2015 IRP approach to long-term reliability and in understanding how climate change would best be incorporated into the 2020 IRP.

Per the MWD 2020 UWMP, MWD continues to incorporate current climate change science into its planning efforts and MWD has made great efforts to implement GHG mitigation programs and policies for its facilities and operations. In 2022, MWD released a Climate Action Plan which complements MWD's IRP planning process and set reduction targets and outlined strategies to reduce emission levels by 2045. In MWD's 2020 IRP Regional Needs Assessment, MWD finds that SWP supplies are highly susceptible to varying hydrologic conditions, climate change, and regulatory restrictions. In this report, MWD assesses climate

[3] IRWD has developed water banking projects ("Water Bank") in Kern County, California and has entered into a 30-year water banking partnership with Rosedale-Rio Bravo Water Storage District to operate IRWD's Strand Ranch and Stockdale West portions of the Water Bank. The Water Bank can improve IRWD's water supply reliability by capturing lower cost water available during wet hydrologic periods for use during dry periods. The Water Bank can enhance IRWD's ability to respond to drought conditions and potential water supply interruptions.

vulnerabilities and the need for future projects such as indirect potable reuse, stormwater capture, and expanded storage capacity to mitigate and adapt to these vulnerabilities and ensure future resilience. Specific climate change impacts on regional and local water supplies and relevant information for the Orange County hydrologic basin and Santa Ana Watershed have not been sufficiently developed at this time to permit IRWD to assess and quantify the effect of any such impact on its conclusions in the Assessment.

Catastrophic Supply Interruption Planning. MWD has developed Emergency Storage Requirements (MWD 2020 UWMP) to safeguard the region from catastrophic loss of water supply. MWD has made substantial investments in emergency storage and has based its planning on a 100% reduction in its supplies for a period of six months. The emergency plan outlines that under such a catastrophe, non-firm service deliveries would be suspended, and firm supplies would be restricted by a mandatory cutback of 25 percent from normal year demand deliveries. In addition, MWD discusses DWR's investments in improvements on the SWP and the long term Delta plan in the MWD 2020 UWMP (pages 3-19 to 3-23). IRWD has also addressed supply interruption planning in its WRMP and 2020 UWMP.

Recent Actions Related to Drought Conditions. In response to historically dry conditions throughout the state of California, on April 1, 2015, Governor Brown issued an Executive Order directing the State Water Resources Control Board (SWRCB) to impose restrictions to achieve an aggregate statewide 25 percent reduction in potable water use through February 2016. The Governor's Order also included mandatory actions aimed at reducing water demands, with a particular focus on outdoor water use. On May 5, 2015, the SWRCB adopted regulations which required that IRWD achieve a 16% reduction in potable water use from its 2013 potable water use levels. On November 13, 2015, Governor Brown issued an Executive Order directing the SWRCB to extend the 2015 Emergency Regulation through October 31, 2016, if drought conditions continued. On February 2, 2016, the SWRCB adopted an extended and modified Emergency Regulation. As a result of the modification, IRWD's mandated reduction was changed from 16% to 9% effective March 1, 2016. On April 14, 2015, MWD approved actions to implement its WSAP at a level 3 Regional Shortage Level and a 15% reduction in regional deliveries effective July 1, 2015, through June 30, 2016. During this period, IRWD continued to implement actions to reduce potable water demands during the drought; however, this did not affect IRWD's long-term supply capability to meet the demands. On April 7, 2017, Governor Brown rescinded the Executive Order.

In California's most recent drought (2021-2023), in July 2021, Governor Newsom called for voluntary 15 percent reduction in potable water use from all urban suppliers. Consistent with the Governor's Executive Order, IRWD implemented Level 2 of its Water Shortage Contingency Plan, although IRWD had no projected shortages in supplies. In March 2023, Governor Newsom rescinded the Executive Order.

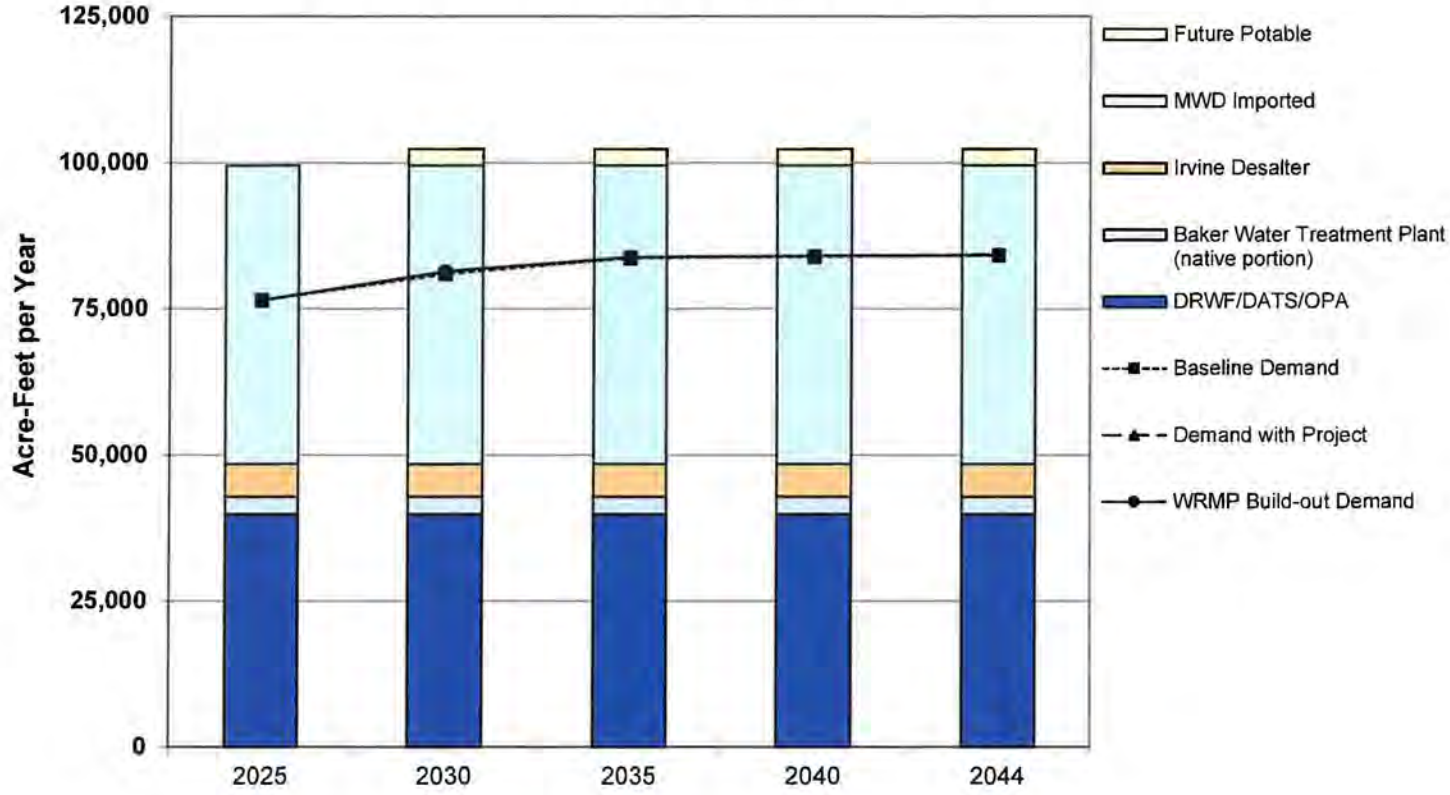
As discussed under *"IRWD's Evaluation of Effect of Reduced MWD Supplies to IRWD"* (see above), IRWD has effectively analyzed an imported water supply reduction up to a level 5 Regional Shortage Stage in Figures 1a, 2a, 3a. These Figures, however, do not reflect a reduction in demands, thus representing a more conservative view of IRWD's supply capability. In particular, the reduction in demand mandated by Senate Bill 7 in 2010, requiring urban retail water suppliers to establish water use targets to achieve a 20% reduction in daily per capita water use by 2020, has not been factored into the demands in this analysis. Similarly, notwithstanding the Governors' 2015 and 2021 orders, IRWD's conservative supply-sufficiency analysis in Figures 1a, 2a and 3a does not include the ordered reduction in potable demands.

Detailed Assessment

1. Supply and demand comparison

Comparisons of IRWD's average annual and peak (maximum day) demands and supplies, under *baseline* (existing and committed demand, without the Project), *with-project* (baseline plus Project), and *full build-out* development projections, are shown in the following Figures 1-4 (potable water), Figures 5-8 (nonpotable water) and Figures 1a, 2a, and 3a (short term MWD allocation potable water). See also the "Actions on Delta Pumping" above.

Figure 1
IRWD Normal-Year Supply & Demand - Potable Water

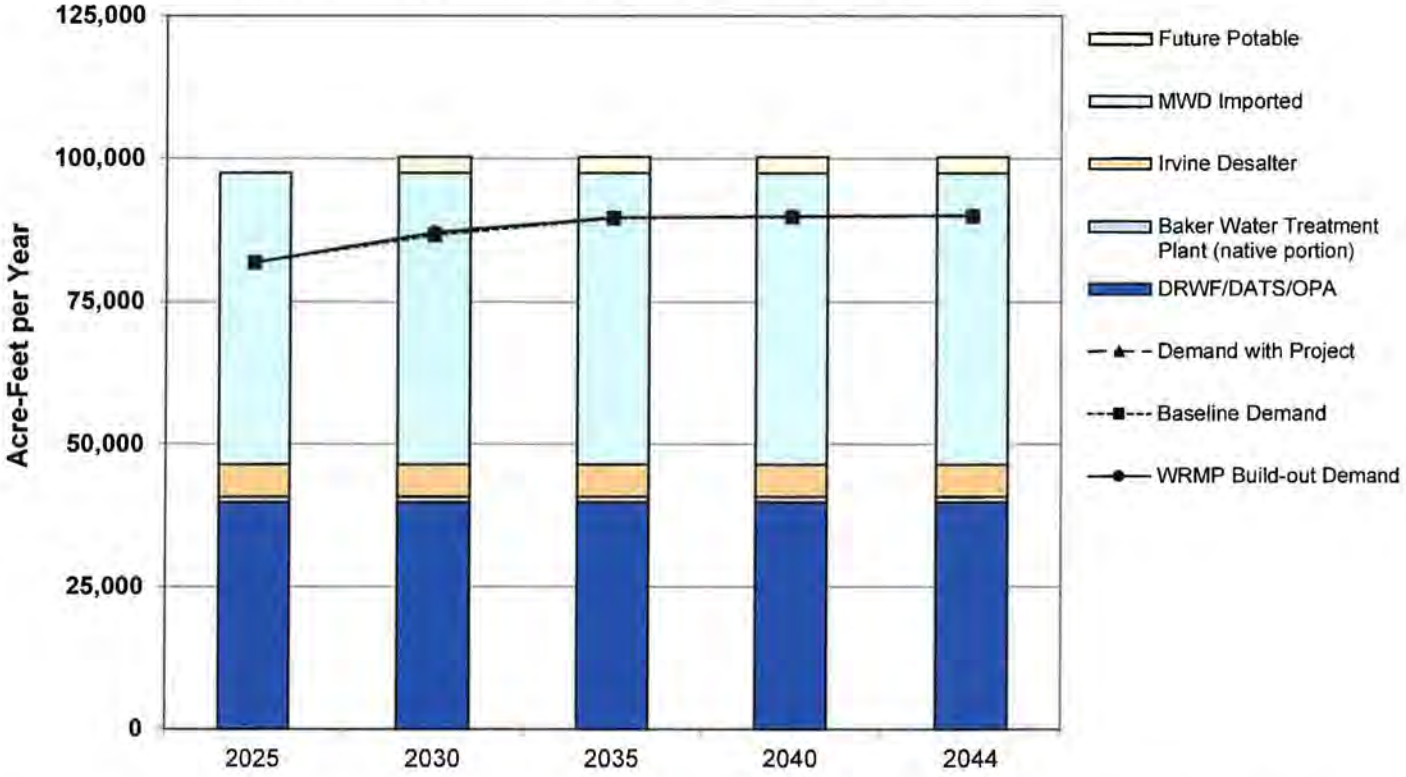


(in acre-feet per year)	2025	2030	2035	2040	2044
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF, Baker)	51,027	51,027	51,027	51,027	51,027
DRWF/DATS/OPA	39,818	39,818	39,818	39,818	39,818
Irvine Desalter	5,618	5,618	5,618	5,618	5,618
Wells 21 & 22	2,400	2,400	2,400	2,400	2,400
Baker Water Treatment Plant (native portion)	3,048	3,048	3,048	3,048	3,048
Supplies Under Development					
Future Potable	-	2,800	2,800	2,800	2,800
Maximum Supply Capability	101,911	104,711	104,711	104,711	104,711
Baseline Demand	76,467	80,981	83,748	83,958	84,126
Demand with Project	76,468	81,430	83,850	84,060	84,228
WRMP Build-out Demand	76,468	81,430	83,850	84,060	84,228
Reserve Supply with Project	25,443	23,281	20,861	20,651	20,483

Notes: By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.
Baker Water Treatment Plant is supplied untreated imported water and native water from Irvine Lake.

Figure 2
IRWD Single Dry-Year Supply & Demand - Potable Water

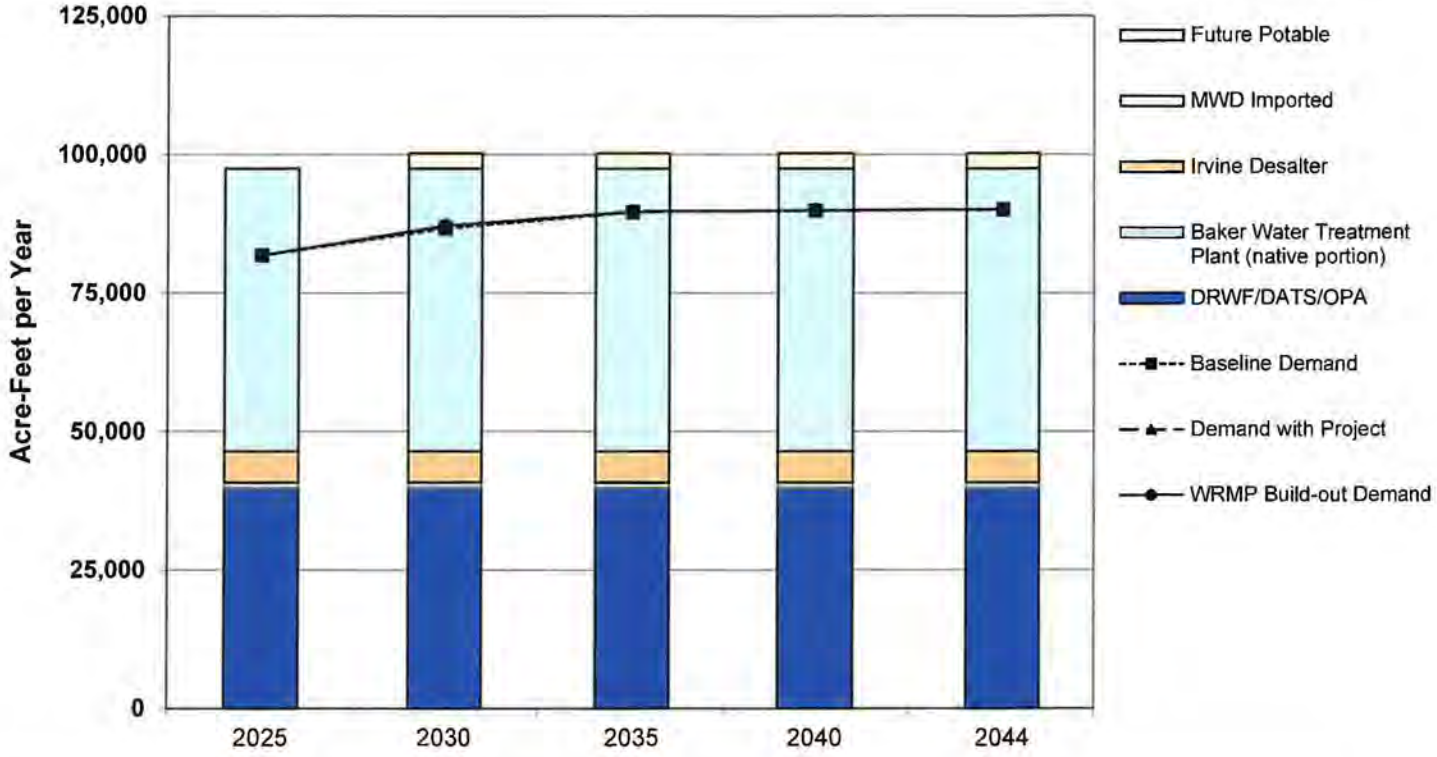


(in acre-feet per year)	2025	2030	2035	2040	2044
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF, Baker)	51,027	51,027	51,027	51,027	51,027
DRWF/DATS/OPA	39,818	39,818	39,818	39,818	39,818
Irvine Desalter	5,618	5,618	5,618	5,618	5,618
Wells 21 & 22	2,400	2,400	2,400	2,400	2,400
Baker Water Treatment Plant (native portion)	1,000	1,000	1,000	1,000	1,000
Supplies Under Development					
Future Potable	-	2,800	2,800	2,800	2,800
Maximum Supply Capability	99,863	102,663	102,663	102,663	102,663
Baseline Demand	81,820	86,649	89,611	89,835	90,015
Demand with Project	81,821	87,130	89,719	89,944	90,124
WRMP Build-out Demand	81,821	87,130	89,719	89,944	90,124
Reserve Supply with Project	18,042	15,532	12,943	12,719	12,539

Notes: Supplies identical to Normal-Year based on Metropolitan's Urban Water Management Plan and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.
Baker Water Treatment Plant is supplied untreated imported water and native water from Irvine Lake.

Figure 3
IRWD Multiple Dry-Year Supply & Demand - Potable Water

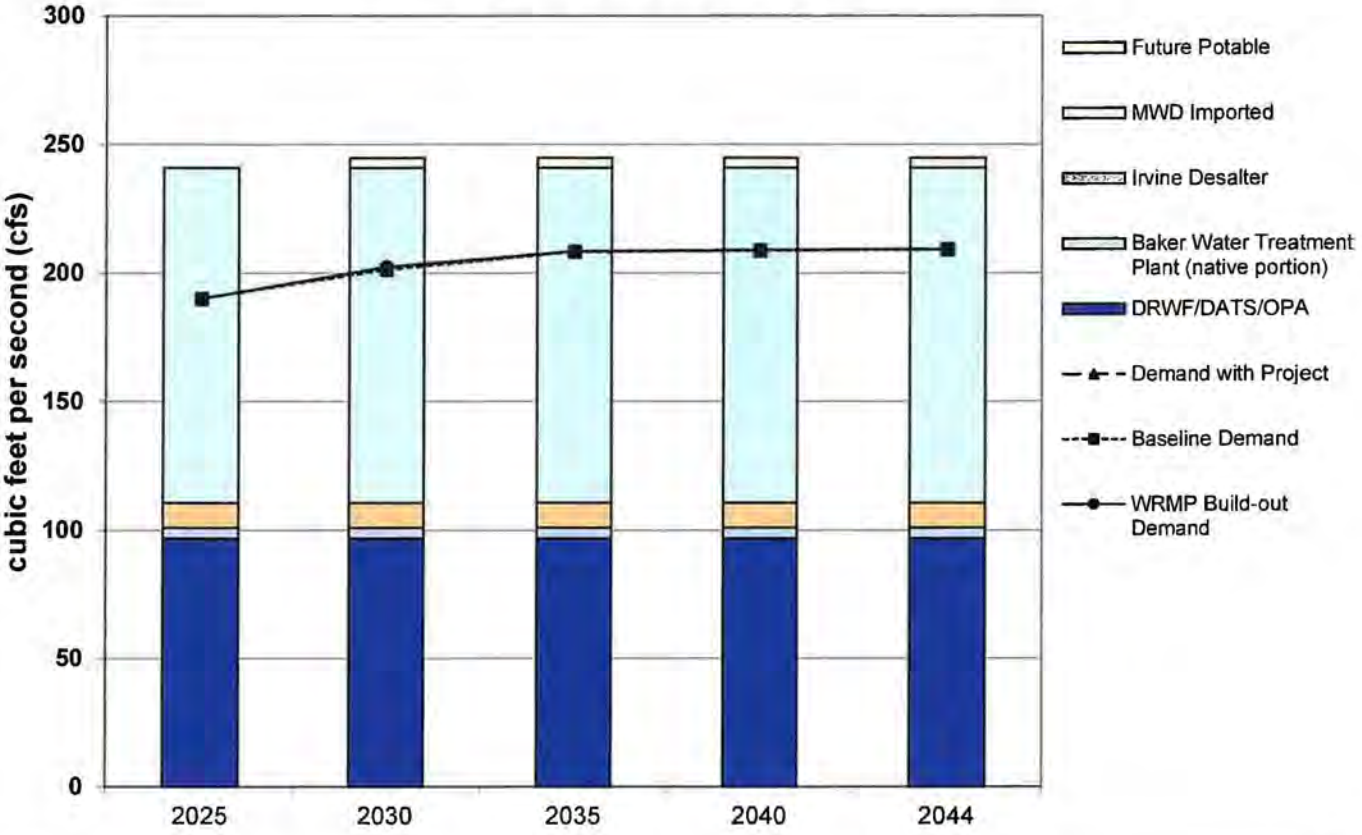


(in acre-feet per year)	2025	2030	2035	2040	2044
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF, Baker	51,027	51,027	51,027	51,027	51,027
DRWF/DATS/OPA	39,818	39,818	39,818	39,818	39,818
Irvine Desalter	5,618	5,618	5,618	5,618	5,618
Wells 21 & 22	2,400	2,400	2,400	2,400	2,400
Baker Water Treatment Plant (native portion)	1,000	1,000	1,000	1,000	1,000
Supplies Under Development					
Future Potable	-	2,800	2,800	2,800	2,800
Maximum Supply Capability	99,863	102,663	102,663	102,663	102,663
Baseline Demand	81,820	86,649	89,611	89,835	90,015
Demand with Project	81,821	87,130	89,719	89,944	90,124
WRMP Build-out Demand	81,821	87,130	89,719	89,944	90,124
Reserve Supply with Project	18,042	15,532	12,943	12,719	12,539

Notes: Supplies identical to Normal-Year based on Metropolitan's Urban Water Management Plan and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

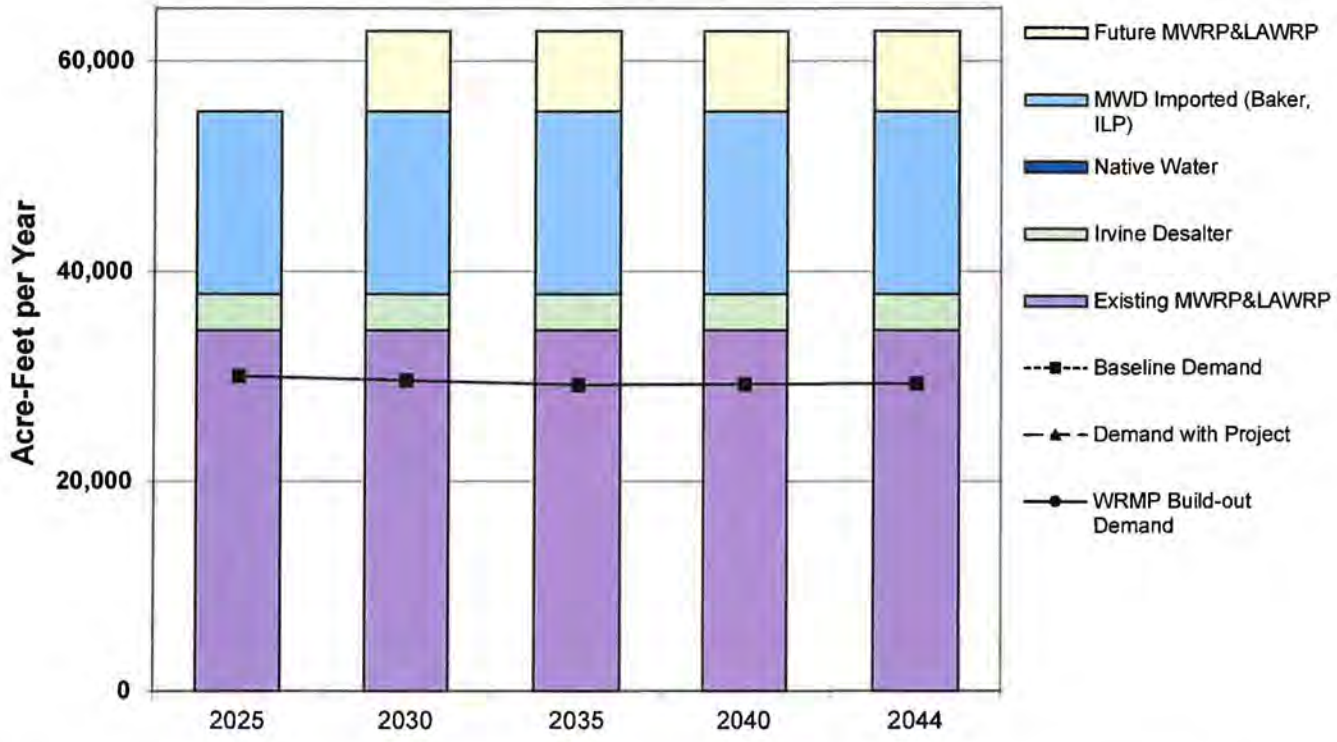
MWD Imported Supplies are shown at 16% reduction off of average connected capacity.
Baker Water Treatment Plant is supplied untreated imported water and native water from Irvine Lake.

Figure 4
IRWD Maximum-Day Supply & Demand - Potable Water



(in cfs)	2025	2030	2035	2040	2044
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF, Baker)	130.4	130.4	130.4	130.4	130.4
DRWF/DATS/OPA	96.7	96.7	96.7	96.7	96.7
Irvine Desalter	9.7	9.7	9.7	9.7	9.7
Wells 21 & 22	8.6	8.6	8.6	8.6	8.6
Baker Water Treatment Plant (native portion)	4.2	4.2	4.2	4.2	4.2
Supplies Under Development					
Future Potable	-	3.9	3.9	3.9	3.9
Maximum Supply Capability	249.6	253.4	253.4	253.4	253.4
Baseline Demand	190.1	201.3	208.2	208.7	209.2
Demand with Project	190.1	202.5	208.5	209.0	209.4
WRMP Build-out Demand	190.1	202.5	208.5	209.0	209.4
Reserve Supply with Project	59.5	51.0	45.0	44.4	44.0

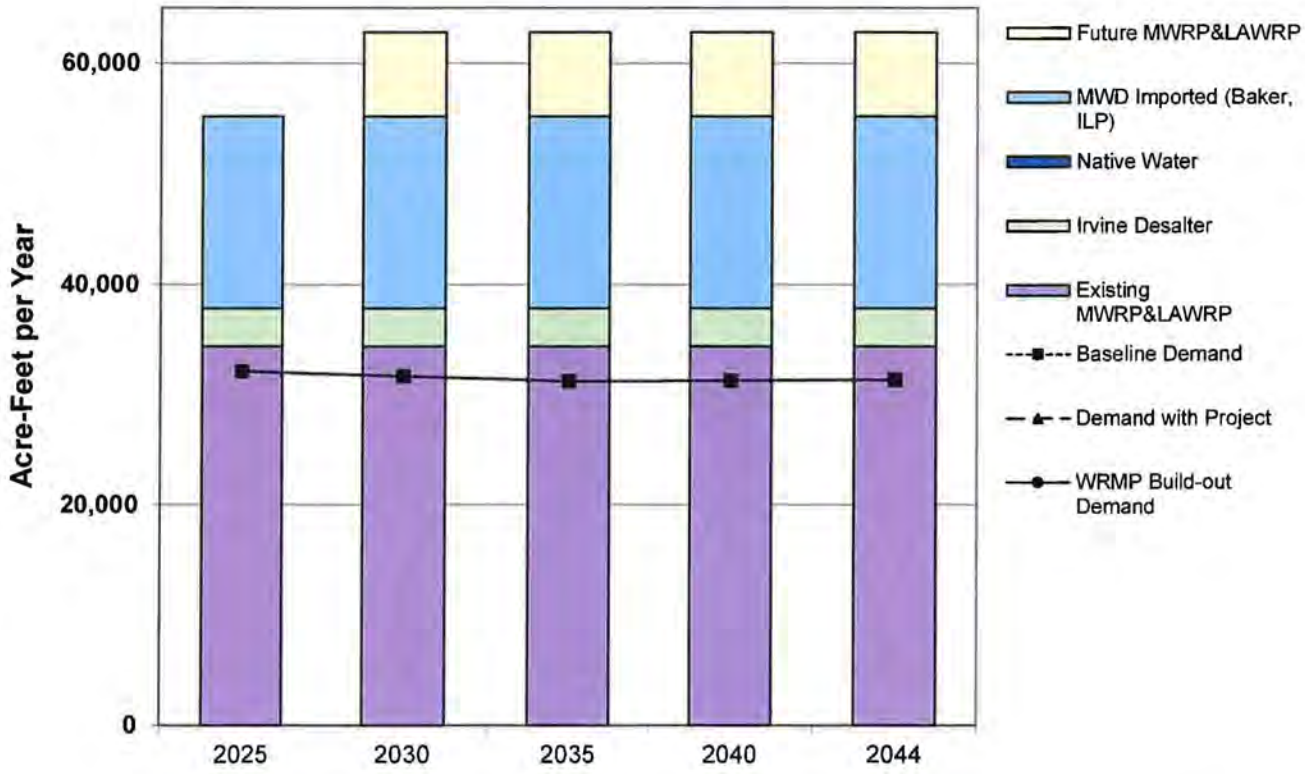
Figure 5
IRWD Normal-Year Supply & Demand - Nonpotable Water



(in acre-feet per year)	2025	2030	2035	2040	2044
Current Nonpotable Supplies					
Existing MWRP&LAWRP	34,389	34,389	34,389	34,389	34,389
Future MWRP&LAWRP	-	7,623	7,623	7,623	7,623
MWD Imported (Baker, ILP)	17,347	17,347	17,347	17,347	17,347
Irvine Desalter	3,461	3,461	3,461	3,461	3,461
Native Water	-	-	-	-	-
Maximum Supply Capability	55,197	62,820	62,820	62,820	62,820
Baseline Demand	30,020	29,606	29,179	29,252	29,310
Demand with Project	30,024	29,623	29,177	29,250	29,308
WRMP Build-out Demand	30,024	29,623	29,177	29,250	29,308
Reserve Supply with Project	25,173	33,197	33,643	33,570	33,512

Note: Downward trend reflects reduction in agricultural use over time.
MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

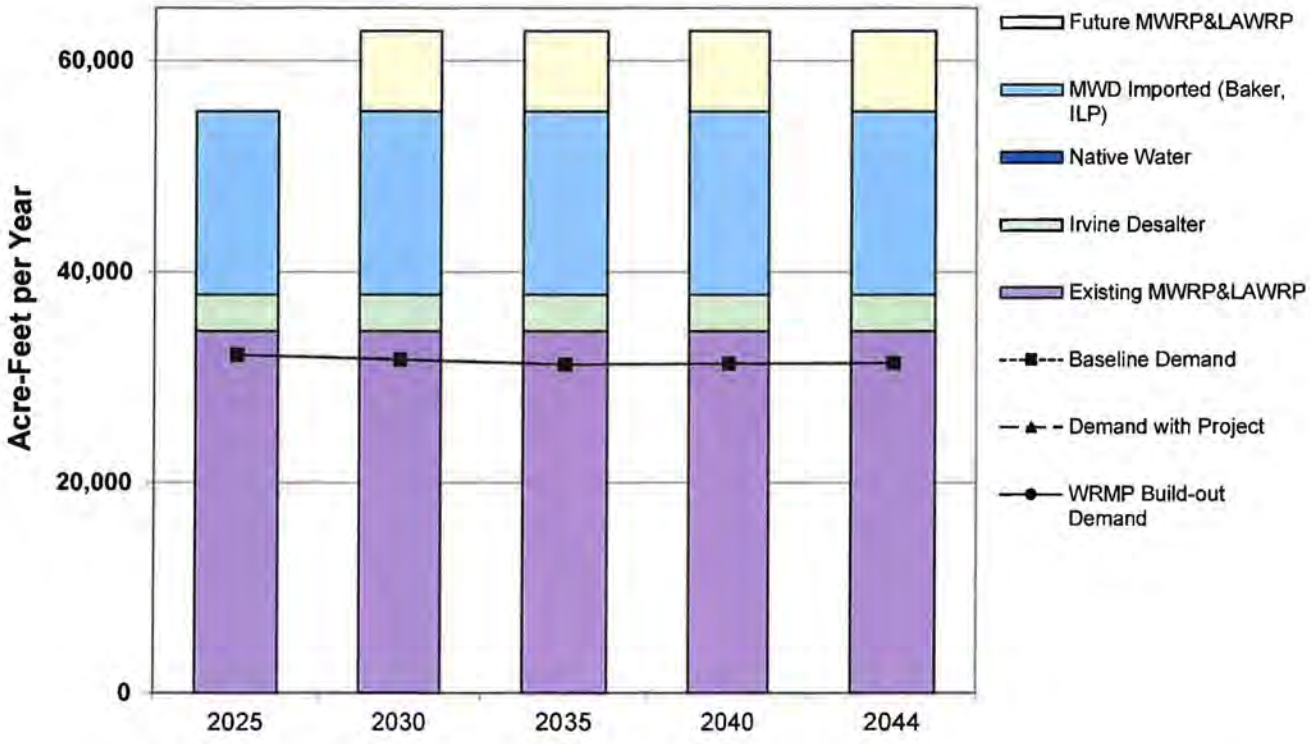
Figure 6
IRWD Single Dry-Year Supply & Demand - Nonpotable Water



(in acre-feet per year)	2025	2030	2035	2040	2044
Current Nonpotable Supplies					
Existing MWRP&LAWRP	34,389	34,389	34,389	34,389	34,389
Future MWRP&LAWRP	-	7,623	7,623	7,623	7,623
MWD Imported (Baker, ILP)	17,347	17,347	17,347	17,347	17,347
Irvine Desalter	3,461	3,461	3,461	3,461	3,461
Native Water	-	-	-	-	-
Maximum Supply Capability	55,197	62,820	62,820	62,820	62,820
Baseline Demand	32,121	31,678	31,221	31,299	31,362
Demand with Project	32,125	31,696	31,219	31,297	31,360
WRMP Build-out Demand	32,125	31,696	31,219	31,297	31,360
Reserve Supply with Project	23,072	31,124	31,601	31,523	31,460

Note: Downward trend reflects reduction in agricultural use over time.
MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

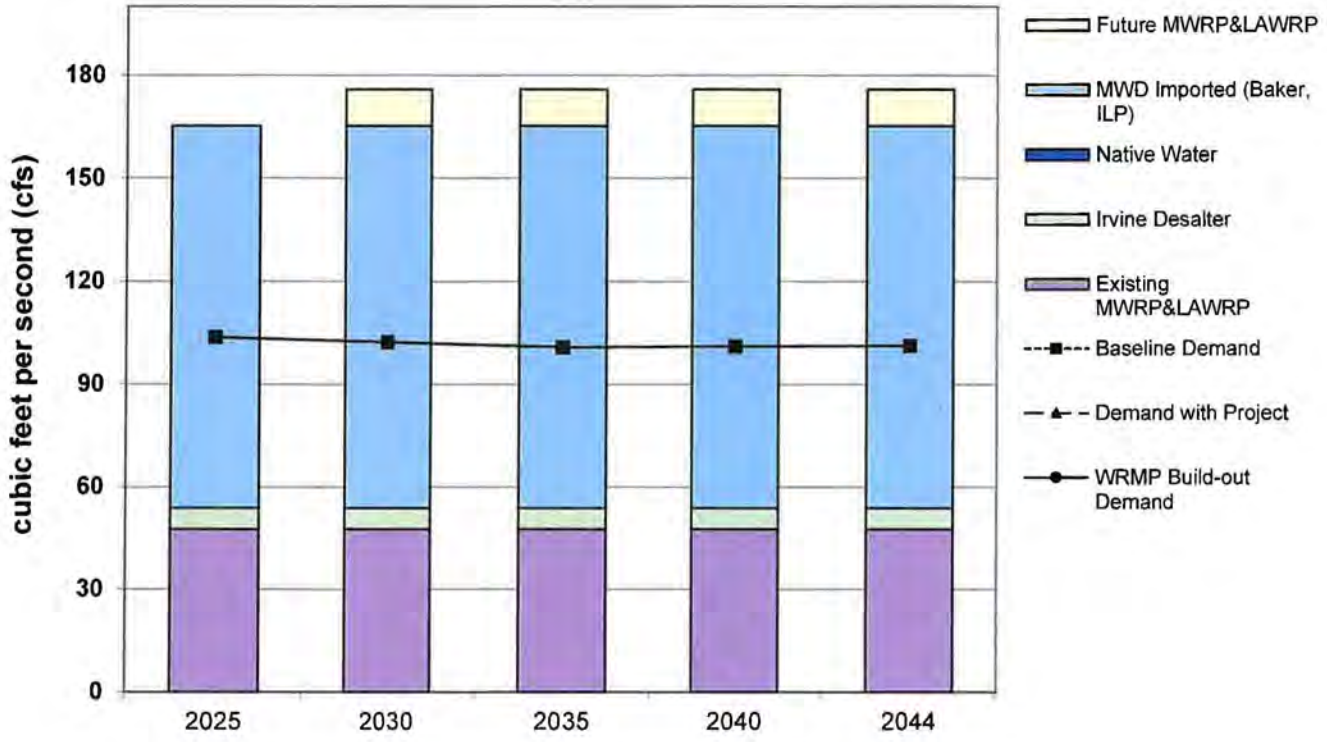
Figure 7
IRWD Multiple Dry-Year Supply & Demand - Nonpotable Water



(in acre-feet per year)	2025	2030	2035	2040	2044
Current Nonpotable Supplies					
Existing MWRP&LAWRP	34,389	34,389	34,389	34,389	34,389
Future MWRP&LAWRP	-	7,623	7,623	7,623	7,623
MWD Imported (Baker, ILP)	17,347	17,347	17,347	17,347	17,347
Irvine Desalter	3,461	3,461	3,461	3,461	3,461
Native Water	-	-	-	-	-
Maximum Supply Capability	55,197	62,820	62,820	62,820	62,820
Baseline Demand	32,121	31,678	31,221	31,299	31,362
Demand with Project	32,125	31,696	31,219	31,297	31,360
WRMP Build-out Demand	32,125	31,696	31,219	31,297	31,360
Reserve Supply with Project	23,072	31,124	31,601	31,523	31,460

Note: Downward trend reflects reduction in agricultural use over time.
MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

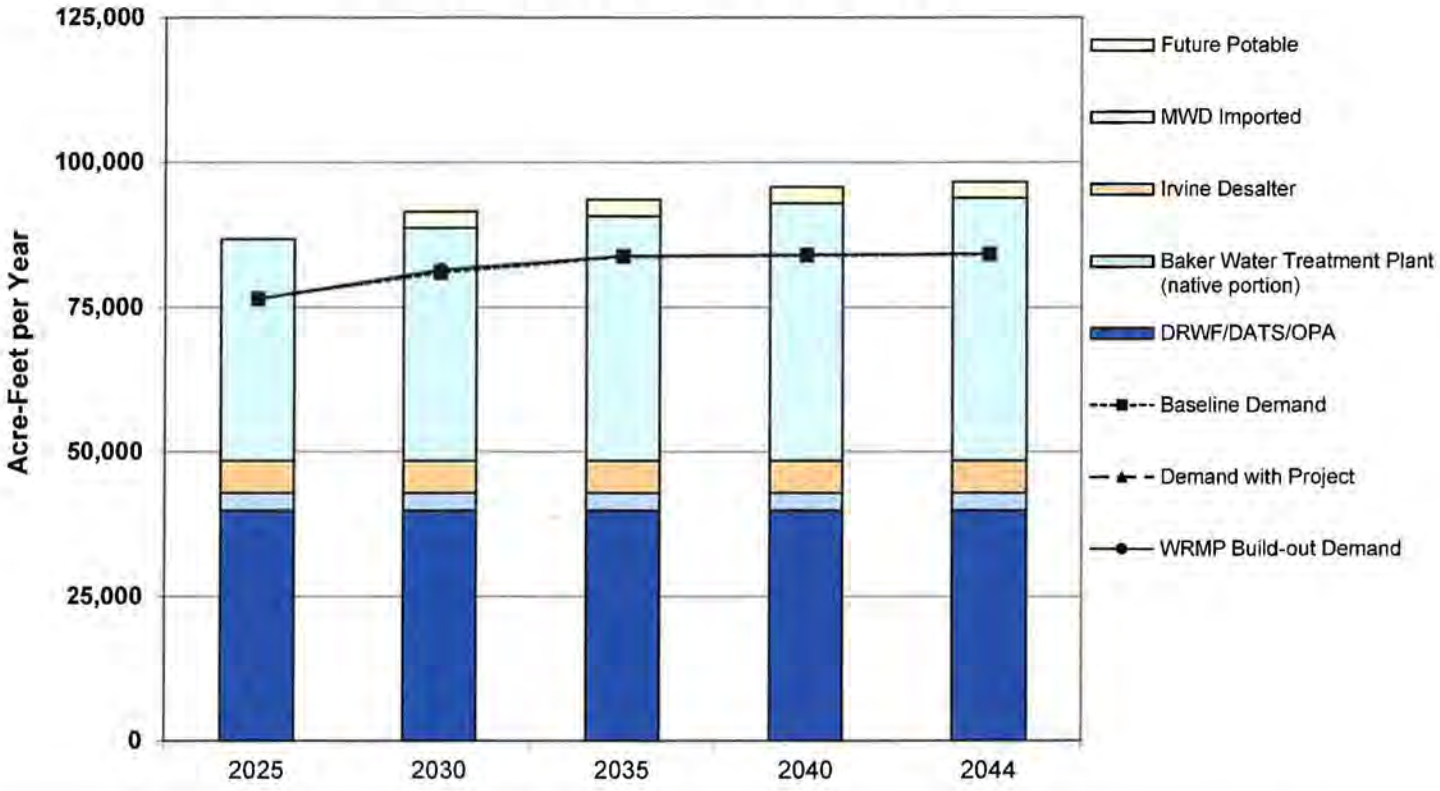
Figure 8
IRWD Maximum-Dry Supply & Demand - Nonpotable Water



(in cfs)	2025	2030	2035	2040	2044
Current Nonpotable Supplies					
Existing MWRP&LAWRP	47.6	47.6	47.6	47.6	47.6
Future MWRP&LAWRP	-	10.5	10.5	10.5	10.5
MWD Imported (Baker, ILP)	111.5	111.5	111.5	111.5	111.5
Irvine Desalter	6.2	6.2	6.2	6.2	6.2
Native Water	-	-	-	-	-
Maximum Supply Capability	165.3	175.8	175.8	175.8	175.8
Baseline Demand	103.7	102.2	100.8	101.0	101.2
Demand with Project	103.7	102.3	100.7	101.0	101.2
WRMP Build-out Demand	103.7	102.3	100.7	101.0	101.2
Reserve Supply with Project	61.6	73.5	75.1	74.8	74.6

Note: Downward trend reflects reduction in agricultural use over time.

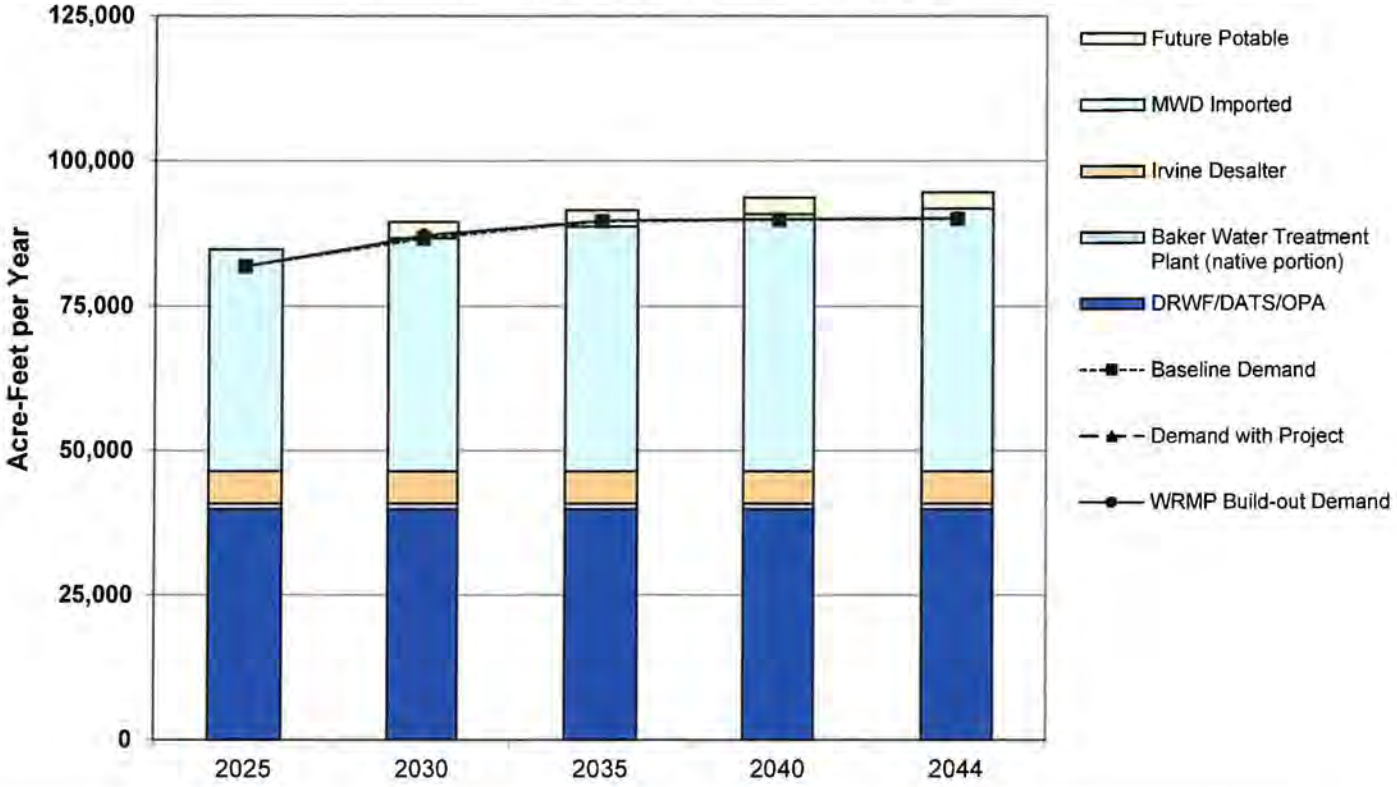
Figure 1a
IRWD Normal-Year Supply & Demand - Potable Water Under Temporary MWD Allocation*



(in acre-feet per year)	2025	2030	2035	2040	2044
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF, Baker)	38,270	40,222	42,274	44,430	45,323
DRWF/DATS/OPA	39,818	39,818	39,818	39,818	39,818
Irvine Desalter	5,618	5,618	5,618	5,618	5,618
Wells 21 & 22	2,400	2,400	2,400	2,400	2,400
Baker Water Treatment Plant (native portion)	3,048	3,048	3,048	3,048	3,048
Supplies Under Development					
Future Potable	-	2,800	2,800	2,800	2,800
Maximum Supply Capability	89,154	93,906	95,958	98,114	99,007
Baseline Demand	76,467	80,981	83,748	83,958	84,126
Demand with Project	76,468	81,430	83,850	84,060	84,228
WRMP Build-out Demand	76,468	81,430	83,850	84,060	84,228
Reserve Supply with Project	12,686	12,476	12,108	14,055	14,779

*For illustration purposes, IRWD has shown MWD Imported Supplies as estimated under a MWD short-term allocation up to a level 5 in all of the 5-year increments. This does not reflect a reduction in demands, thus representing a conservative view of supply capability. Under a MWD Allocation, IRWD could supplement supplies with groundwater production which can exceed applicable basin percentages on a short-term basis or transfer water from IRWD's water bank. IRWD may also reduce demands by implementing shortage contingency measures as described in the 2020 UWMP. Under a MWD Allocation, the Baker WTP would be limited to available MWD and native water.

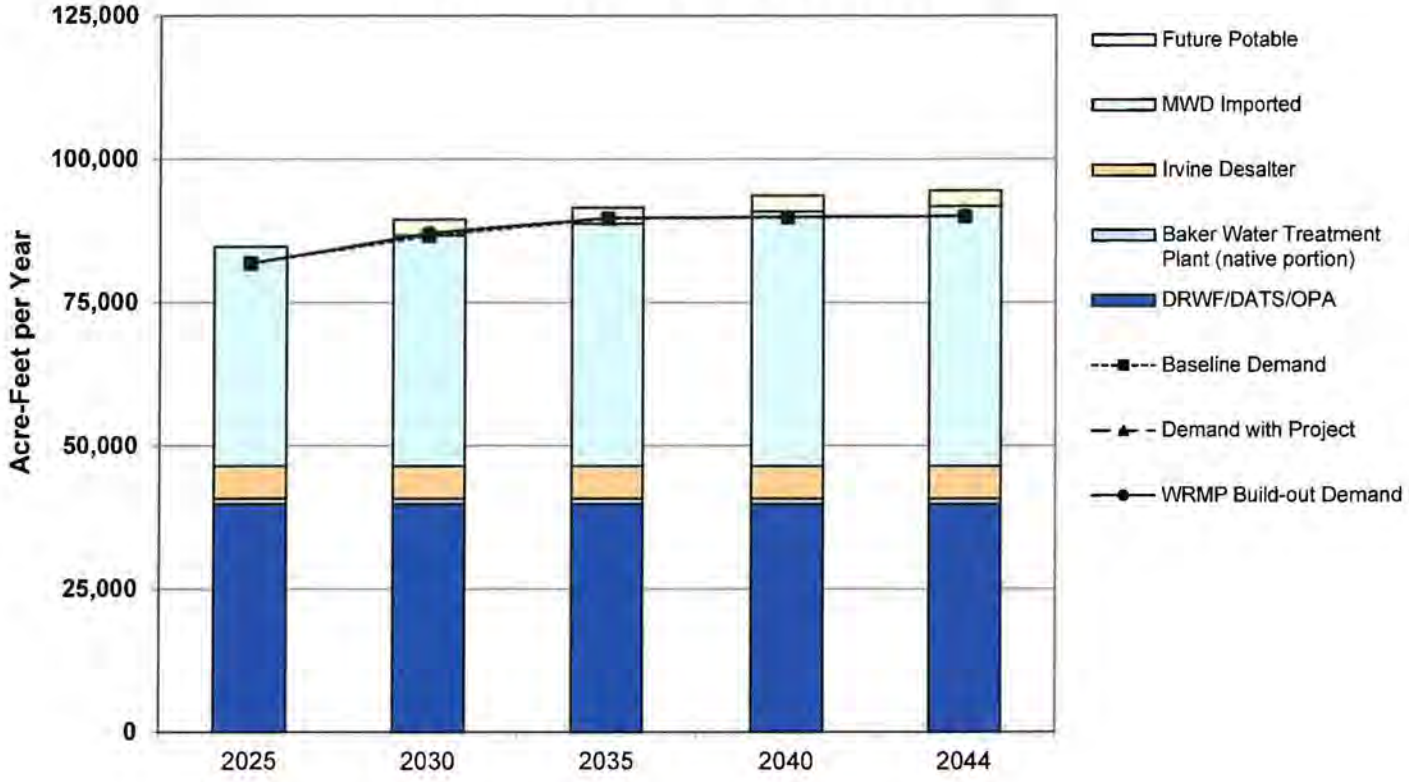
Figure 2a
IRWD Single Dry-Year Supply & Demand - Potable Water Under Temporary MWD Allocation*



(in acre-feet per year)	2025	2030	2035	2040	2044
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF, Baker)	38,270	40,222	42,274	44,430	45,323
DRWF/DATS/OPA	39,818	39,818	39,818	39,818	39,818
Irvine Desalter	5,618	5,618	5,618	5,618	5,618
Wells 21 & 22	2,400	2,400	2,400	2,400	2,400
Baker Water Treatment Plant (native portion)	1,000	1,000	1,000	1,000	1,000
Supplies Under Development					
Future Potable	-	2,800	2,800	2,800	2,800
Maximum Supply Capability	87,106	91,858	93,910	96,066	96,959
Baseline Demand	81,820	86,649	89,611	89,835	90,015
Demand with Project	81,821	87,130	89,719	89,944	90,124
WRMP Build-out Demand	81,821	87,130	89,719	89,944	90,125
Reserve Supply with Project	5,285	4,728	4,190	6,122	6,835

*For illustration purposes, IRWD has shown MWD Imported Supplies as estimated under a MWD short-term allocation up to a level 5 in all of the 5-year increments. This does not reflect a reduction in demands, thus representing a conservative view of supply capability. Under a MWD Allocation, IRWD could supplement supplies with groundwater production which can exceed applicable basin percentages on a short-term basis or transfer water from IRWD's water bank. IRWD may also reduce demands by implementing shortage contingency measures as described in the 2020 UWMP. Under a MWD Allocation, the Baker WTP would be limited to available MWD and native water.

Figure 3a
IRWD Multiple Dry-Year Supply & Demand - Potable Water
Under Temporary MWD Allocation*



(in acre-feet per year)	2025	2030	2035	2040	2044
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF, Baker)	38,270	40,222	42,274	44,430	45,323
DRWF/DATS/OPA	39,818	39,818	39,818	39,818	39,818
Irvine Desalter	5,618	5,618	5,618	5,618	5,618
Wells 21 & 22	2,400	2,400	2,400	2,400	2,400
Baker Water Treatment Plant (native portion)	1,000	1,000	1,000	1,000	1,000
Supplies Under Development					
Future Potable	-	2,800	2,800	2,800	2,800
Maximum Supply Capability	87,106	91,858	93,910	96,066	96,959
Baseline Demand	81,820	86,649	89,611	89,835	90,015
Demand with Project	81,821	87,130	89,719	89,944	90,124
WRMP Build-out Demand	81,821	87,130	89,719	89,944	90,124
Reserve Supply with Project	5,285	4,728	4,190	6,122	6,835

*For illustration purposes, IRWD has shown MWD Imported Supplies as estimated under a MWD short-term allocation up to a level 5 in all of the 5-year increments. This does not reflect a reduction in demands, thus representing a conservative view of supply capability. Under a MWD Allocation, IRWD could supplement supplies with groundwater production which can exceed applicable basin percentages on a short-term basis or transfer water from IRWD's water bank. IRWD may also reduce demands by implementing shortage contingency measures as described in the 2020 UWMP. Under a MWD Allocation, the Baker WTP would be limited to available MWD and native water.

Existing sources of identified water supply for the proposed project: IRWD does not allocate particular supplies to any project, but identifies total supplies for its service area, as updated in the following table:

	Max Day (cfs)	Avg. Annual (AFY)		Annual by Category (AFY)
Current Supplies				
Potable - Imported 10				
East Orange County Feeder No. 2	41.4	18,746	1	
Allen-McColloch Pipeline*	64.7	29,296	1	
Orange County Feeder	18.0	8,150	1	
	124.1	56,192		56,192
Potable - Treated Surface				
Baker Treatment Plant (Imported) 10	6.3	4,554	6	4,554
Baker Treatment Plant (Native)	4.2	3,048	6	3,048
Potable - Groundwater				
Dyer Road Wellfield	80.0	28,000	2	
OPA Well	4.4	3,200	11	
Deep Aquifer Treatment System-DATS	12.3	8,618	2	
Wells 21 & 22	8.6	2,400	2	
Irvine Desalter	9.7	5,618	3	49,479
Total Potable Current Supplies	249.6			113,273
Nonpotable - Recycled Water				
MWRP (25.2 mgd)	39.1	28,228	4	
LAWRP (5.5 mgd)	8.5	6,161	4	
Future MWRP & LAWRP	10.6	7,623	5	42,012
Nonpotable - Imported 10				
Baker Aqueduct	40.2	11,651	6	
Irvine Lake Pipeline	65.0	9,000	7	
	105.2	20,651		20,651
Nonpotable - Groundwater				
Irvine Desalter-Nonpotable	6.2	3,461	8	3,461
Nonpotable Native				
Irvine Lake (see Baker Treatment Plant above)	4.2	3,048	6,9	
Total Nonpotable Current Supplies (Excludes Native)	169.6			66,124
Total Combined Current Supplies	419.2			179,397
Supplies Under Development				
Potable Supplies				
Future Groundwater Production Facilities	3.9	2,800		2,800
Total Under Development	3.9	2,800		2,800
Total Supplies				
Potable Supplies	253.4			116,073
Nonpotable Supplies	169.6			66,124
Total Supplies (Current and Under Development)	423.0			182,197

1 Based on converting maximum day capacity to average by dividing the capacity by a peaking factor of 1.6. Max Day is equivalent to Treatment Plant Production

2 Contract amount - See Assessment Potable Supply-Groundwater(iii). Due to groundwater limitations, value changed from 6,329 AF to 2,400 AF

3 Contract amount - See Assessment Potable Supply-Groundwater (iv) and (v). Maximum day well capacity is compatible with contract amount.

4 MWRP 28.0 mgd treatment capacity (28,228 AFY RW production) with 90% plant efficiency (25.2 mgd) and LAWRP permitted 5.5 mgd tertiary treatment capacity (6,161 AFY)

5 Future estimated MWRP & LAWRP recycled water production. Includes biosolids and expansion to 33 mgd

6 Since 2017, Baker Water Treatment Plant (WTP) treats imported and native water. Baker Aqueduct capacity has been allocated to Baker WTP participants and IRWD owns 46.50 cfs in Baker Aqueduct, of which, 10.5 cfs is for for potable treatment. IRWD has 36 cfs remaining capacity for non-potable uses. The nonpotable average use is based on converting maximum day capacity to average by dividing the capacity by a peaking factor of 2.5 (see Assessment Footnote 8, page 27). In 2023, IRWD executed an Agreement that sells 3 cfs to South County agencies, leaving 7.5 cfs for daily use for IRWD. However, should an emergency arise, IRWD retains the right to use the 3 cfs sold. The amount shown in the table remains 10.5 cfs

7 Based on IRWD's proportion of Irvine Lake imported water storage; Actual ILP capacity would allow the use of additional imported water from MWD through the Santiago Lateral.

8 Contract amount - See Assessment Nonpotable Supply-Groundwater (i) and (ii). Maximum day well capacity (cfs) is compatible with contract amount.

9 Based on 70+ years historical average of Santiago Creek Inflow into Irvine Lake. Since 2020, native water is treated through Baker WTP.

10 Supplies in this table are total and are not adjusted to account for any reductions in imported water.

11 Per Agreement with the City of Orange, average annual capacity increased to 3,200 acre-feet

*64.7 cfs is current assigned capacity; based on increased peak flow, IRWD can purchase 10 cfs more (see page 25 (b)(1)(iii))

(b) Required information concerning currently available and under-development water supply entitlements, water rights and water service contracts:

(1) Written contracts or other proof of entitlement.[4] [5]

•POTABLE SUPPLY - IMPORTED[6]

Potable imported water service connections (currently available).

(i) Potable imported water is delivered to IRWD at various service connections to the imported water delivery system of The Metropolitan Water District of Southern California ("MWD"): service connections CM-01A and OC-7 (Orange County Feeder); CM-10, CM-12, OC-38, OC-39, OC-57, OC-58, OC-63 (East Orange County Feeder No. 2); and OC-68, OC-71, OC-72, OC-73/73A, OC-74, OC-75, OC-83, OC-84, OC-87 (Allen-McColloch Pipeline). IRWD's entitlements regarding service from the MWD delivery system facilities are described in the following paragraphs and summarized in the above Table ((2)(a)(1)). IRWD receives imported water service through Municipal Water District of Orange County ("MWDOC"), a member agency of MWD.

Allen-McColloch Pipeline ("AMP") (currently available).

(ii) Agreement For Sale and Purchase of Allen-McColloch Pipeline, dated as of July 1, 1994 (Metropolitan Water District Agreement No. 4623) ("AMP Sale Agreement"). Under the AMP Sale Agreement, MWD purchased the Allen-McColloch Pipeline (formerly known as the "Diemer Intertie") from MWDOC, the MWDOC Water Facilities Corporation and certain agencies, including IRWD and Los Alisos Water District ("LAWD"),[7] identified as "Participants" therein. Section 5.02 of the AMP Sale Agreement obligates MWD to meet IRWD's and the other Participants' requests for deliveries and specified minimum hydraulic grade lines at each connection serving a Participant, subject to availability of water. MWD agrees to operate the AMP as any other MWD pipeline. MWD has the right to

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[4] In some instances, the contractual and other legal entitlements referred to in the following descriptions are stated in terms of flow capacities, in cubic feet per second (cfs). In such instances, the cfs flows are converted to volumes of AFY for purposes of analyzing supply sufficiency in this assessment, by dividing the capacity by a peaking factor of 1.8 (potable) or 2.5 (nonpotable), consistent with maximum day peaking factors used in the WRMP. The resulting reduction in assumed available annual AFY volumes through the application of these factors recognizes that connected capacity is provided to meet peak demands and that seasonal variation in demand and limitations in local storage prevent these capacities from being utilized at peak capacity on a year-round basis. However, the application of these factors produces a conservatively low estimate of annual AFY volumes from these connections; additional volumes of water are expected to be available from these sources.

[5] In the following discussion, contractual and other legal entitlements are characterized as either potable or nonpotable, according to the characterization of the source of supply. Some of the nonpotable supplies surplus to nonpotable demand could potentially be rendered potable by the addition of treatment facilities; however, except where otherwise noted, IRWD has no current plans to do so.

[6] See Imported Supply - Additional Information, below, for information concerning the availability of the MWD supply.

[7] IRWD has succeeded to LAWD's interests in the AMP and other LAWD water supply facilities and rights mentioned in this assessment, by virtue of the consolidation of IRWD and LAWD on December 31, 2000.

operate the AMP on a "utility basis," meaning that MWD need not observe capacity allocations of the Participants but may use available capacity to meet demand at any service connection.

The AMP Sale Agreement obligates MWD to monitor and project AMP demands and to construct specified pump facilities or make other provision for augmenting MWD's capacity along the AMP, at MWD's expense, should that be necessary to meet demands of all of the Participants (Section 5.08).

(iii) Agreement For Allocation of Proceeds of Sale of Allen-McColloch Pipeline, dated as of July 1, 1994 ("AMP Allocation Agreement"). This agreement, entered into concurrently with the AMP Sale Agreement, provided each Participant, including IRWD, with a capacity allocation in the AMP, for the purpose of allocating the sale proceeds among the Participants in accordance with their prior contractual capacities adjusted to conform to their respective future demands. IRWD's capacity under the AMP Allocation Agreement (including its capacity as legal successor agency to LAWD) is 64.69 cfs at IRWD's first four AMP connections, 49.69 cfs at IRWD's next five downstream AMP connections and 35.01 and 10.00 cfs, respectively at IRWD's remaining two downstream connections. The AMP Allocation Agreement further provides that if a Participant's peak flow exceeds its capacity, the Participant shall "purchase" additional capacity from the other Participants who are using less than their capacity, until such time as MWD augments the capacity of the AMP. The foregoing notwithstanding, as mentioned in the preceding paragraph, the allocated capacities do not alter MWD's obligation under the AMP Sale Agreement to meet all Participants' demands along the AMP, and to augment the capacity of the AMP if necessary. Accordingly, under these agreements, IRWD can legally increase its use of the AMP beyond the above-stated capacities but would be required to reimburse other Participants from a portion of the proceeds IRWD received from the sale of the AMP.

(iv) Improvement Subleases (or "FAP" Subleases) [MWDOC and LAWD; MWDOC and IRWD], dated August 1, 1989; 1996 Amended and Restated Allen-McColloch Pipeline Subleases [MWDOC and LAWD; MWDOC and IRWD], dated March 1, 1996. IRWD subleases its AMP capacity, including the capacity it acquired as successor to LAWD. To facilitate bond financing for the construction of the AMP, it was provided that the MWDOC Water Facilities Corporation, and subsequently MWDOC, would have ownership of the pipeline, and the Participants would be sublessees. As is the case with the AMP Sale Agreement, the subleases similarly provide that water is subject to availability.

East Orange County Feeder No. 2 ("EOCF#2") (currently available).

(v) Agreement For Joint Exercise of Powers For Construction, Operation and Maintenance of East Orange County Feeder No. 2, dated July 11, 1961, as amended on July 25, 1962, and April 26, 1965; Agreement Re Capacity Rights In Proposed Water Line, dated September 11, 1961 ("IRWD MWDOC Assignment Agreement"); Agreement Regarding Capacity Rights In the East Orange County Feeder No. 2, dated August 28, 2000 ("IRWD Coastal Assignment Agreement"). East Orange County Feeder No. 2 ("EOCF#2"), a feeder linking Orange County with MWD's feeder system, was constructed pursuant to a joint powers

agreement among MWDOC (then called Orange County Municipal Water District), MWD, Coastal Municipal Water District ("Coastal"), Anaheim and Santa Ana. A portion of IRWD's territory is within MWDOC and the remainder is within the former Coastal (which was consolidated with MWDOC in 2001). Under the IRWD MWDOC Assignment Agreement, MWDOC assigned 41 cfs of capacity to IRWD in the reaches of EOCF#2 upstream of the point known as Coastal Junction (reaches 1 through 3), and 27 cfs in reach 4, downstream of Coastal Junction. Similarly, under the IRWD Coastal Assignment Agreement, prior to Coastal's consolidation with MWDOC, Coastal assigned to IRWD 0.4 cfs of capacity in reaches 1 through 3 and 0.6 cfs in reach 4 of EOCF#2. Delivery of water through EOCF#2 is subject to the rules and regulations of MWD and MWDOC and is further subject to application and agreement of IRWD respecting turnouts.

Orange County Feeder (currently available)

(vi) Agreement, dated March 13, 1956. This 1956 Agreement between MWDOC's predecessor district and the Santa Ana Heights Water Company ("SAHWC") provides for delivery of MWD imported supply to the former SAHWC service area. SAHWC's interests were acquired on behalf of IRWD through a stock purchase and IRWD annexation of the SAHWC service area in 1997. The supply is delivered through a connection to MWD's Orange County Feeder designated as OC-7.

(vii) Agreement For Transfer of Interest In Pacific Coast Highway Water Transmission and Storage Facilities From The Irvine Company To the Irvine Ranch Water District, dated April 23, 1984; Joint Powers Agreement For the Construction, Operation and Maintenance of Sections 1a, 1b and 2 of the Coast Supply Line, dated June 9, 1989; Agreement, dated January 13, 1955 ("1955 Agreement"). The jointly constructed facility known as the Coast Supply Line ("CSL"), extending southward from a connection with MWD's Orange County Feeder at Fernleaf Street in Newport Beach, was originally constructed pursuant to a 1952 agreement among Laguna Beach County Water District ("LBCWD"), The Irvine Company (TIC) and South Coast County Water District. Portions were later reconstructed. Under the above-referenced transfer agreement in 1984, IRWD succeeded to TIC's interests in the CSL. The CSL is presently operated under the above-referenced 1989 joint powers agreement, which reflects IRWD's ownership of 10 cfs of capacity. The 1989 agreement obligates LBCWD, as the managing agent and trustee for the CSL, to purchase water and deliver it into the CSL for IRWD. LBCWD purchases such supply, delivered by MWD to the Fernleaf connection, pursuant to the 1955 Agreement with Coastal (now MWDOC).

Baker Water Treatment Plant (currently available)

IRWD recently constructed the Baker Water Treatment Plant (Baker WTP) in partnership with El Toro Water District, Moulton-Niguel Water District, Santa Margarita Water District and Trabuco Canyon Water District. The Baker WTP is supplied with untreated imported water from MWD and native Irvine Lake water supply. IRWD owns 10.5 cfs of treatment capacity rights in the Baker WTP.[8]

•POTABLE SUPPLY - GROUNDWATER

(i) Orange County Water District Act ("OCWD"), Water Code App., Ch. 40 ("Act"). IRWD is an operator of groundwater-producing facilities in the Orange County Groundwater Basin (the "Basin"). Although the rights of the producers within the Basin vis a vis one another have not been adjudicated, they nevertheless exist and have not been abrogated by the Act (§40-77). The rights consist of municipal appropriators' rights and may include overlying and riparian rights. The Basin is managed by OCWD under the Act, which functions as a statutorily-imposed physical solution. The Act empowers OCWD to impose replenishment assessments and basin equity assessments on production and to require registration of water-producing facilities and the filing of certain reports; however, OCWD is expressly prohibited from limiting extraction unless a producer agrees to such limitation (§ 40-2(6) (c)) and from impairing vested rights to the use of water (§ 40-77). Thus, producers may install and operate production facilities under the Act; OCWD approval is not required. OCWD is required to annually investigate the condition of the Basin, assess overdraft and accumulated overdraft, and determine the amount of water necessary for replenishment (§40-26). OCWD has studied the Basin replenishment needs and potential projects to address growth in demand through 2035 in its Final Draft Long-Term Facilities Plan (January 2006), last updated November 19, 2014. The Long-Term Facilities Plan is updated approximately every five years.

(ii) *Irvine Ranch Water District v. Orange County Water District*, Orange County Superior Court Case No. 795827. A portion of IRWD is outside the jurisdictional boundary of OCWD. IRWD is eligible to annex the Santa Ana River Watershed portion of this territory to OCWD, under OCWD's current annexation policy (OCWD Resolution No. 86-2-15, adopted on February 19, 1986, and reaffirmed on June 2, 1999). This September 29, 1998, Superior Court ruling indicates that IRWD is entitled to deliver groundwater from the Basin to the IRWD service area irrespective of whether such area is also within OCWD.

Dyer Road Wellfield ("DWRF") / Deep Aquifer Treatment System ("DATS") (currently available)

(iii) Agreement For Water Production and Transmission Facilities, dated March 18, 1981, as amended May 2, 1984, September 19, 1990, and November 3,

[8] The Baker WTP is supplied nonpotable imported water through the existing Baker Pipeline. IRWD's existing Baker Pipeline capacity (see Section 2(b)(1) NONPOTABLE SUPPLY – IMPORTED) has been apportioned to the Baker WTP participants based on Baker WTP capacity ownership, and IRWD retains 10.5 cfs of pipeline capacity through the Baker WTP for potable supply and retains 36 cfs in Reach 1U of the Baker Pipeline capacity for nonpotable supply. In 2023, IRWD executed an agreement that sells 3 cfs to South County agencies, leaving 7.5 cfs for daily use for IRWD. However, should an emergency arise, IRWD retains the right to the use of the 3 cfs sold.

1999 (the "DRWF Agreement"). The DRWF Agreement, among IRWD, OCWD and Santa Ana, concerns the development of IRWD's Dyer Road Wellfield (DRWF), within the Basin. The DRWF consists of 16 wells pumping from the non-colored water zone of the Basin and 2 wells (with colored-water treatment facilities) pumping from the deep, colored-water zone of the Basin (the colored-water portion of the DRWF is sometimes referred to as the Deep Aquifer Treatment System or DATS.) Under the DRWF Agreement, an "equivalent" basin production percentage ("BPP") has been established for the DRWF, currently 28,000 AFY of non-colored water and 8,000 AFY of colored water, provided any amount of the latter 8,000 AFY not produced results in a matching reduction of the 28,000 AFY BPP. Although typically IRWD production from the DRWF does not materially exceed the equivalent BPP, the equivalent BPP is not an extraction limitation; it results in imposition of monetary assessments on the excess production. The DRWF Agreement also establishes monthly pumping amounts for the DRWF. With the addition of the Concentrated Treatment System ("CATS"), IRWD has increased the yield of DATS.

Irvine Subbasin / Irvine Desalter (currently available)

(iv) First Amended and Restated Agreement, dated March 11, 2002, as amended June 15, 2006, restating May 5, 1988 agreement ("Irvine Subbasin Agreement"). TIC has historically pumped agricultural water from the Irvine Subbasin. (As in the rest of the Basin of which this subbasin is a part, the groundwater rights have not been adjudicated and OCWD provides governance and management under the Act.) The 1988 agreement between IRWD and TIC provided for the joint use and management of the Irvine Subbasin. The 1988 agreement further provided that the 13,000 AFY annual yield of the Irvine Subbasin ("Subbasin") would be allocated 1,000 AFY to IRWD and 12,000 AFY to TIC. Under the restated Irvine Subbasin Agreement, the foregoing allocations were superseded as a result of TIC's commencement of the building its Northern Sphere Area project, with the effect that the Subbasin production capability, wells and other facilities, and associated rights have been transferred from TIC to IRWD, and IRWD has assumed the production from the Subbasin. In consideration of the transfer, IRWD is required to count the supplies attributable to the transferred Subbasin production in calculating available supplies for the Northern Sphere Area project and other TIC development and has agreed that they will not be counted toward non-TIC development.

A portion of the existing Subbasin water production facilities produce water which is of potable quality. IRWD could treat some of the water produced from the Subbasin for potable use, by means of the Desalter and other projects. Although, as noted above, the Subbasin has not been adjudicated and is managed by OCWD, TIC reserved water rights from conveyances of its lands as development over the Subbasin has occurred, and under the Irvine Subbasin Agreement TIC has transferred its rights to IRWD.

(v) Second Amended and Restated Agreement Between Orange County Water District and Irvine Ranch Water District Regarding the Irvine Desalter Project, dated June 11, 2001, and other agreements referenced therein. This agreement provides for the extraction and treatment of subpotable groundwater from the Irvine Subbasin, a portion of the Basin. As is the case with the remainder of the

Basin, IRWD's entitlement to extract this water is not adjudicated, but the use of the entitlement is governed by the OCWD Act. (See also, discussion of Irvine Subbasin in the preceding paragraph.) A portion of the product water has been delivered into the IRWD potable system, and the remainder has been delivered into the IRWD nonpotable system.

Orange Park Acres (currently available)

On June 1, 2008, through annexation and merger, IRWD acquired the water system of the former Orange Park Acres Mutual Water company, including its well ("OPA Well"). The well is operated within the Basin.

Wells 21 and 22 (currently available)

In early 2013, IRWD completed construction of treatment facilities, pipelines, and wellhead facilities for Wells 21 and 22. Water supplied through this project became available in 2013. The wells are operated within the Basin.

Irvine Wells (under development)

(vi) IRWD is pursuing the installation of production facilities in the west Irvine, Tustin Legacy and Tustin Ranch portions of the Basin. These groundwater supplies are considered to be under development; however, four wells have been drilled and have previously produced groundwater, three wells have been drilled but have not been used as production wells to date, and a site for an additional well and treatment facility has been acquired by IRWD. These production facilities can be constructed and operated under the Act; no statutory or contractual approval is required to do so. Appropriate environmental review has or will be conducted for each facility. See discussion of the Act under Potable Supply - Groundwater, paragraph (i), above.

•NONPOTABLE SUPPLY - RECYCLED

Water Recycling Plants (currently available)

Water Code Section 1210. IRWD supplies its own recycled water from sewage collected by IRWD and delivered to IRWD's Michelson Water Recycling Plant ("MWRP") and Los Alisos Water Recycling Plant ("LAWRP"). Under the recently completed MWRP Phase II Capacity Expansion Project, IRWD increased its tertiary treatment capacity on the existing MWRP site to produce sufficient recycled water to meet the projected demand through the year 2044. MWRP currently has a permitted tertiary capacity of 28 million gallons per day ("MGD") and LAWRP currently has a permitted tertiary capacity of 5.5 MGD. Water Code Section 1210 provides that the owner of a sewage treatment plant operated for the purposes of treating wastes from a sanitary sewer system holds the exclusive right to the treated effluent as against anyone who has supplied the water discharged into the sewer system. IRWD's permits for the operation of MWRP and LAWRP allow only irrigation and other customer uses of recycled water, and do not permit stream discharge of recycled water under normal conditions; thus, no issue of downstream appropriation arises, and IRWD is entitled to deliver all of the effluent to meet contractual and customer demands. Additional

reclamation capacity will augment local nonpotable supplies and improve reliability.

•NONPOTABLE SUPPLY - IMPORTED[9]

Baker Pipeline (currently available)

Santiago Aqueduct Commission ("SAC") Joint Powers Agreement, dated September 11, 1961, as amended December 20, 1974, January 13, 1978, November 1, 1978, September 1, 1981, October 22, 1986, and July 8, 1999 (the "SAC Agreement"); Agreement Between Irvine Ranch Water District and Carma-Whiting Joint Venture Relative to Proposed Annexation of Certain Property to Irvine Ranch Water District, dated May 26, 1981 (the "Whiting Annexation Agreement"); service connections OC-13/13A, OC-33/33A. The imported untreated water pipeline initially known as the Santiago Aqueduct and now known as the Baker Pipeline was constructed under the SAC Agreement, a joint powers agreement. The Baker Pipeline is connected to MWD's Santiago Lateral. IRWD's capacity in the Baker Pipeline includes the capacity it subleases as successor to LAWD, as well as capacity rights IRWD acquired through the Whiting Annexation Agreement. (To finance the construction of AMP parallel untreated reaches which were incorporated into the Baker Pipeline, replacing original SAC untreated reaches that were made a part of the AMP potable system, it was provided that the MWDOC Water Facilities Corporation, and subsequently MWDOC, would have ownership, and the participants would be sublessees.) IRWD's original capacities in the Baker Pipeline include 52.70 cfs in the first reach, 12.50 cfs in each of the second, third and fourth reaches and 7.51 cfs in the fifth reach of the Baker Pipeline. These existing Baker Pipeline capacities have been apportioned to the Baker WTP participants based on Baker WTP capacity ownership. IRWD retains 10.5 cfs of the pipeline capacity for potable supply through the Baker WTP and retains 36 cfs in Reach 1U of the Baker Pipeline capacity for nonpotable supply (See also footnote 8, page 27). In 2023, IRWD executed an Agreement that sells 3 cfs to South County agencies, leaving 7.5 cfs for daily use for IRWD. However, should an emergency arise, IRWD retains the right to use the 3 cfs sold. Water is subject to availability from MWD.

•NONPOTABLE SUPPLY - NATIVE

Irvine Lake (currently available)

(i) Permit For Diversion and Use of Water ("Permit No. 19306") issued pursuant to Application No. 27503; License For Diversion and Use of Water ("License 2347") resulting from Application No. 4302 and Permit No. 3238; License For Diversion and Use of Water ("License 2348") resulting from Application No. 9005 and Permit No. 5202. The foregoing permit and licenses, jointly held by IRWD (as successor to The Irvine Company ("TIC") and Carpenter Irrigation District ("CID")) and Serrano Water District ("SWD"), secure appropriative rights to the

[9] See Imported Supply - Additional Information, below, for information concerning the availability of the MWD supply.

flows of Santiago Creek. Under Licenses 2347 and 2348, IRWD and SWD have the right to diversion by storage at Santiago Dam (Irvine Lake) and a submerged dam, of a total of 25,000 AFY. Under Permit No. 19306, IRWD and SWD have the right to diversion by storage of an additional 3,000 AFY by flashboards at Santiago Dam (Irvine Lake). (Rights under Permit No. 19306 may be junior to an OCWD permit to divert up to 35,000 AFY of Santiago Creek flows to spreading pits downstream of Santiago Dam.) The combined total of native water that may be diverted to storage under these licenses and permit is 28,000 AFY. A 1996 amendment to License Nos. 2347, 2348 and 2349 [replaced by Permit No. 19306 in 1984] limits the withdrawal of water from the Lake to 15,483 AFY under the licenses. This limitation specifically references the licenses and doesn't reference water stored pursuant to other legal entitlements. The use and allocation of the native water is governed by the agreements described in the next paragraph.

(ii) Agreement, dated February 6, 1928 ("1928 Agreement"); Agreement, dated May 15, 1956, as amended November 12, 1973 ("1956 Agreement"); Agreement, dated as of December 21, 1970 ("1970 Agreement"); Agreement Between Irvine Ranch Water District and The Irvine Company Relative to Irvine Lake and the Acquisition of Water Rights In and To Santiago Creek, As Well As Additional Storage Capacity in Irvine Lake, dated as of May 31, 1974 ("1974 Agreement"). The 1928 Agreement was entered into among SWD, CID and TIC, providing for the use and allocation of native water in Irvine Lake. Through the 1970 Agreement and the 1974 Agreement, IRWD acquired the interests of CID and TIC, leaving IRWD and SWD as the two co-owners. TIC retains certain reserved rights. The 1928 Agreement divides the stored native water by a formula which allocates to IRWD one-half of the first 1,000 AF, plus increments that generally yield three-fourths of the amount over 1,000 AF.[10] The agreements also provide for evaporation and spill losses and carryover water remaining in the Lake at the annual allocation dates. Given the dependence of native water on rainfall, for purposes of this assessment only a small portion of IRWD's share of the 28,000 AFY of native water rights (3,048 AFY in normal years and 1,000 AFY in single and multiple-dry years) is shown in currently available supplies, based on averaging of historical data. However, IRWD's ability to supplement Irvine Lake storage with its imported untreated water supplies, described herein, offsets the uncertainty associated with the native water supply.

•NONPOTABLE SUPPLY - GROUNDWATER

Irvine Subbasin / Irvine Desalter (currently available)

(i) IRWD's entitlement to produce nonpotable water from the Irvine Subbasin is included within the Irvine Subbasin Agreement. See discussion of the Irvine Subbasin Agreement under Potable Supply - Groundwater; paragraph (iv), above.

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[10] The 1956 Agreement provides for facilities to deliver MWD imported water into Irvine Lake, and grants storage capacity for the imported water. By succession, IRWD owns 9,000 AFY of this 12,000 AFY imported water storage capacity. This storage capacity does not affect availability of the imported supply, which can be either stored or delivered for direct use by customers.

(ii) See discussion of the Irvine Desalter project under Potable Supply - Groundwater, paragraph (v), above. The Irvine Desalter project will produce nonpotable as well as potable water.

•IMPORTED SUPPLY - ADDITIONAL INFORMATION

As described above, the imported supply from MWD is contractually subject to availability. To assist local water providers in assessing the adequacy of local water supplies that are reliant in whole or in part on MWD's imported supply, MWD has provided information concerning the availability of the supplies to its entire service area. In the MWD 2020 UWMP, MWD has extended its planning timeframe out through 2045 to ensure that the MWD 2020 UWMP may be used as a source document for meeting requirements for sufficient supplies. In addition, the MWD 2020 UWMP includes "Justifications for Supply Projections" (Appendix A-3) that details the planning, legal, financial, and regulatory basis for including each source of supply in the plan. The MWD 2020 UWMP summarizes MWD's planning initiatives over the past 15 years, which includes the Integrated Resources Plan (IRP), the IRP 2015 Update, the WSDM Plan, Strategic Plan and Rate Structure. The reliability analysis in MWD's 2015 IRP Update shows that MWD can maintain reliable supplies under the conditions that have existed in past dry periods throughout the period through 2040. The MWD 2020 UWMP includes tables that show the region can provide reliable supplies under both the single driest year (1977) and multiple dry years (1990-92) through 2045. MWD has also identified buffer supplies, including additional State Water Project groundwater storage and transfers that could serve to supply the additional water needed.

It is anticipated that MWD will revise its regional supply availability analysis periodically, if needed, to supplement the MWD 2020 UWMP in years when the MWD UWMP is not being updated.

IRWD is permitted by the statute (Wat. Code, § 10610 *et seq.*) to rely upon the water supply information provided by the wholesaler concerning a wholesale water supply source, for use in preparing its UWMPs. In turn, the statute provides for the use of UWMP information to support water supply assessments and verifications. In accordance with these provisions, IRWD is entitled to rely upon the conclusions of the MWD UWMP. As referenced above under Summary of Results of Demand-Supply Comparisons - ***Actions on Delta Pumping,*** MWD has provided additional information on its imported water supply.

MWD's reserve supplies, together with the fact that IRWD relies on MWD supplies as supplemental supplies that need not be used to the extent IRWD operates currently available and under-development local supplies, build a margin of safety into IRWD's supply availability.

(2) Adopted capital outlay program to finance delivery of the water supplies.

All necessary delivery facilities currently exist for the use of the *currently available* and *under-development* supplies assessed herein, with the exception of future groundwater wells, and IRWD sub-regional and developer-dedicated conveyance facilities necessary to complete the local distribution systems for the

Project. IRWD's turnout at each MWD connection and IRWD's regional delivery facilities are sufficiently sized to deliver all of the supply to the sub-regional and local distribution systems.

With respect to future groundwater well projects (PR Nos. 11828 and 11829), IRWD adopted its fiscal year 2023-24 capital budget on April 24, 2023 (Resolution No. 2023-6), budgeting portions of the funds for such projects. (A copy is available from IRWD on request.) For these facilities, as well as unbuilt IRWD sub-regional conveyance facilities, the sources of funding are previously authorized general obligation bonds, revenue-supported certificates of participation and/or capital funds held by IRWD Improvement Districts. IRWD has maintained a successful program for the issuance of general obligation bonds and certificates of participation on favorable borrowing terms, and IRWD has received AAA public bond ratings. IRWD has approximately $585.5 million (water) and $711.1 million (recycled water) of unissued, voter-approved general obligation bond authorization. Certificates of participation do not require voter approval. Proceeds of bonds and available capital funds are expected to be sufficient to fund all IRWD facilities for delivery of the supplies under development. Tract-level conveyance facilities are required to be donated to IRWD by the Applicant or its successor(s) at time of development.

See also the MWD 2020 UWMP, Appendix A.3 Justifications for Supply Projections with respect to capital outlay programs related to MWD's supplies.

(3) Federal, state and local permits for construction of delivery infrastructure.

Most IRWD delivery facilities are constructed in public right-of-way or future right-of-way. State statute confers on IRWD the right to construct works along, under or across any stream of water, watercourse, street, avenue, highway, railway, canal, ditch, or flume (Water Code Section 35603). Although this right cannot be denied, local agencies may require encroachment permits when work is to be performed within a street. If easements are necessary for delivery infrastructure, IRWD requires the developer to provide them. The crossing of watercourses or areas with protected species requires federal and/or state permits as applicable.

See also the MWD 2020 UWMP, Appendix A.3 Justifications for Supply Projections with respect to permits related to MWD's supplies.

(4) Regulatory approvals for conveyance or delivery of the supplies.

See response to preceding item (3). Additionally, in general, supplies under development may necessitate the preparation and completion of environmental documents and/or regulatory approvals prior to full construction and implementation. IRWD obtains such approvals when required, and copies of documents pertaining to approvals can be obtained from IRWD.

See also the MWD 2020 UWMP, Appendix A.3 Justifications for Supply Projections with respect to regulatory approvals related to MWD's supplies.

3. Other users and contractholders (identified supply not previously used).

For each of the water supply sources identified by IRWD, if no water has been received from that source(s), IRWD is required to identify other public water systems or water service contractholders that receive a water supply from, or have existing water supply entitlements, water rights and water service contracts to, that source(s):

Water has been received from all listed sources. A small quantity of Subbasin water is used by Woodbridge Village Association for the purpose of supplying its North and South Lakes. There are no other public water systems or water service contractholders that receive a water supply from, or have existing water supply entitlements, water rights and water service contracts to, the Irvine Subbasin.

4. Information concerning groundwater included in the supply identified for the Project:

(a) Relevant information in the Urban Water Management Plan (UWMP):

See Irvine Ranch Water District 2020 UWMP, section 6.2.

(b) Description of the groundwater basin(s) from which the Project will be supplied:

The Orange County Groundwater Basin ("Basin") is described in the Orange County Water District Groundwater Management Plan ("GMP") 2015 Update, dated June 17, 2015[11]. The rights of the producers within the Basin vis a vis one another have not been adjudicated. The Basin is managed by the Orange County Water District ("OCWD") for the benefit of municipal, agricultural, and private groundwater producers. OCWD is responsible for the protection of water rights to the Santa Ana River in Orange County as well as the management and replenishment of the Basin. Current production from the Basin is approximately 260,000 AFY.

The DWR has not identified the Basin as "critically overdrafted," and has not identified the Basin as overdrafted in its most current bulletin that characterizes the condition of the Basin, Bulletin 118. The efforts being undertaken by OCWD to avoid long-term overdraft in the Basin are described in the OCWD GMP 2015 Update and OCWD Master Plan Report ("MPR"), including in particular, Chapters 4, 5, 6, 14 and 15 of the MPR. OCWD has also prepared a Long Term Facilities Plan ("LTFP") which was received by the OCWD Board in July 2009 and was last updated in November 2014. The LTFP Chapter 3 describes the efforts being undertaken by OCWD to eliminate long-term overdraft in the Basin. See also following section on "***Sustainable Groundwater Management Act".***

Although the water supply assessment statute (Water Code Section 10910(f)) refers to elimination of "long-term overdraft," overdraft includes conditions which may be managed for optimum basin storage, rather than eliminated. OCWD's Act defines annual groundwater overdraft to be the quantity by which production

[11] OCWD has also prepared a Long-Term Facilities Plan which was received and filed by its Board in July 2009, and last updated in November 2014.

exceeds the natural replenishment of the Basin. Accumulated overdraft is defined in the OCWD Act to be the quantity of water needed in the groundwater basin forebay to prevent landward movement of seawater into the fresh groundwater body. However, seawater intrusion control facilities have been constructed by OCWD since the Act was written and have been effective in preventing landward movement of seawater. These facilities allow greater utilization of the storage capacity of the Basin.

OCWD has invested over $250 million in seawater intrusion control (injection barriers), recharge facilities, laboratories, and Basin monitoring to effectively manage the Basin. Consequently, although the Basin is defined to be in an "overdraft" condition, it is actually managed to allow utilization of up to 500,000 acre-feet of storage capacity of the basin during dry periods, acting as an underground reservoir and buffer against drought. OCWD has an optimal basin management target of 100,000 acre-feet of accumulated overdraft provides sufficient storage space to accommodate increased supplies from one wet year while also provide enough water in storage to offset decreased supplies during a two- to three year drought. If the Basin is too full, artesian conditions can occur along the coastal area, causing rising water and water logging, an adverse condition. Since the formation of OCWD in 1933, OCWD has made substantial investment in facilities, Basin management and water rights protection, resulting in the elimination and prevention of adverse long-term "mining" overdraft conditions. OCWD continues to develop new replenishment supplies, recharge capacity and basin protection measures to meet projected production from the basin during normal rainfall and drought periods. (OCWD GMP, OCWD MPR and LTFP)

OCWD's efforts include ongoing replenishment programs and planned capital improvements. It should be noted under OCWD's management of overdraft to maximize the Basin's use for annual production and recharge operations, overdraft varies over time as the Basin is managed to keep it in balance over the long term. The Basin is not operated on an annual safe-yield basis. (OCWD GMP, OCWD MPR, section 3.2 and LTFP, section 6). See also the following section on "***Sustainable Groundwater Management Act".***

(c) Description and analysis of the amount and location of groundwater pumped by IRWD from the Basin for the past five years:

The following table shows the amounts pumped, by groundwater source since the year 2002:

(In AFY)

Year (ending 6/30)	DRWF/DATS/ OPA/21-22	Irvine Subbasin (IRWD)	Irvine Subbasin (TIC)	LAWD[12]
2023	36,558	4,692	0	0

[12] The water produced from IRWD's Los Alisos wells is not included in this assessment. IRWD is presently evaluating the future use of these wells.

2022	35,344	5,159	0	0
2021	38,722	3,644	0	0
2020	33,975	4,005	0	0
2019	38,603	3,961	0	0
2018	38,196	4,619	0	0
2017	39,787	4,077	0	169
2016	37,216	4,672	0	307
2015	40,656	9,840	0	336
2014	42,424	10,995	0	376
2013	38,617	8,629	0	282
2012	37,059	7,059	0	0
2011	34,275	7,055	0	0
2010	37,151	8,695	0	3
2009	38,140	7,614	0	0
2008	36,741	4,539	0	16
2007	37,864	5,407	0	6
2006	37,046	2,825	0	268
2005	36,316	2,285	628	357
2004	30,265	1,938	3,079	101
2003	24,040	2,132	4,234	598
2002	25,855	2,533	5,075	744

(d) Description and analysis of the amount and location of groundwater projected to be pumped by IRWD from the Basin:

IRWD has a developed groundwater supply of 35,200 AFY from its Dyer Road Wellfield (including the Deep Aquifer Treatment System), in the main portion of the Basin.

Although TIC's historical production from the Subbasin declined as its use of the Subbasin for agricultural water diminished, OCWD's and other historical production records for the Subbasin show that production has been as high as 13,000 AFY. Plans are also underway to expand IRWD's main Orange County Groundwater Basin supply (characterized as *under-development* supplies herein). (See Section 2 (a) (1) herein). IRWD anticipates the development of potential additional production facilities within both the main Basin and the Irvine Subbasin. However, such additional facilities have not been included or relied upon in this assessment. Additional groundwater development will provide an additional margin of safety as well as reduce future water supply costs to IRWD.

The following table summarizes future IRWD groundwater production from currently available and under-development supplies.

(In AFY)

Year (ending 6/30)	DRWF[13]	Future GW[14]	IDP (Potable)	IDP (Nonpotable)
2025	42,218	2,800	5,618	3,461
2030	42,218	2,800	5,618	3,461
2035	42,218	2,800	5,618	3,461
2040	42,218	2,800	5,618	3,461

(e) If not included in the 2020 UWMP, analysis of the sufficiency of groundwater projected to be pumped by IRWD from the Basin to meet the projected water demand of the Project:

See responses to 4(b) and 4(d).

The OCWD MPR and LTFP examined future Basin conditions and capabilities, water supply and demand, and identified projects to meet increased replenishment needs of the basin. With the implementation of OCWD's preferred projects, the Basin yield in the year 2025 would be up to 500,000 AF. The amount that can be produced will be a function of which projects will be implemented by OCWD and how much increased recharge capacity is created by those projects, total demands by all producers, and the resulting Basin Production Percentage ("BPP") that OCWD sets based on these factors.[15] Sufficient replenishment supplies are projected by the OCWD MPR to be available to OCWD to meet the increasing demand on the Basin. These supplies include capture of increasing Santa Ana River flows, purchases of replenishment water from MWD, and development of new local supplies. In 2008, OCWD began operating its replenishment supply project, the Groundwater Replenishment System project ("GWRS"). The GWRS currently produces approximately 100,000 AFY of new replenishment supply from recycled water (OCWD GMP).

Production of groundwater can exceed applicable basin production percentages on a short-term basis, providing additional reliability during dry years or emergencies. Additional groundwater production is anticipated by OCWD in the

[13] See Potable Supply - Groundwater, paragraph (iii), above. DRWF non-colored production above 28,000 AFY and colored water production above 8,000 AFY are subject to contractually-imposed assessments. In addition, seasonal production amounts apply. This also includes 3,200 AFY for the OPA well and 2,800 AFY for Wells 21 & 22.

[14] Under-development.

[15] OCWD has adopted a basin production percentage of 85% for 2023-24. In prior years OCWD has maintained a basin production percentage that is lower than the current percentage, and IRWD anticipates that such reductions may occur from time to time as a temporary measure employed by OCWD to encourage lower pumping levels as OCWD implements other measures to reduce the current accumulated overdraft in the Basin. Any such reductions are not expected to affect any of IRWD's currently available groundwater supplies listed in this assessment, which are subject to a contractually-set equivalent basin production percentage as described or are exempt from the basin production percentage.

Basin in dry years, as producers reduce their use of imported supplies, and the Basin is "mined" in anticipation of the eventual availability of replenishment water. (OCWD MPR, section 14.6.)

See also, Figures 1-8 hereto. IRWD assesses sufficiency of supplies on an aggregated basis, as neither groundwater nor other supply sources are allocated to particular projects or customers. Under the Irvine Subbasin Agreement, IRWD is contractually obligated to attribute the Subbasin supply only to TIC development projects for assessment purposes; however, the agreement does not allocate or assign rights in the Subbasin supply to any project.

Sustainable Groundwater Management Act. Pursuant to the Sustainable Groundwater Management Act ("SGMA"), the DWR has designated the Orange County groundwater basin, Basin 8-1, as a medium priority basin for purposes of groundwater management. The SGMA specifically calls for OCWD, which regulates the Orange County groundwater basin, to serve as the groundwater sustainability agency or "GSA". The SGMA allows Special Act Districts created by statute, such as OCWD, to prepare and submit an alternative to a Groundwater Sustainability Plan ("GSP") that is "functionally equivalent" to a GSP. Basin 8-1 includes the OCWD service area and several fringe areas outside of OCWD that are within the Basin 8-1 boundary. Per the requirements of SGMA, an Alternative Plan must encompass the entire groundwater basin as defined by DWR. On January 1, 2017, OCWD and the overlying agencies within Basin 8-1, including IRWD, jointly prepared and submitted an alternative plan in compliance with SGMA (Basin 8-1 Alternative). The Basin 8-1 Alternative was updated in January 2022.

5. ☐ This Water Supply Assessment is being completed for a project included in a prior water supply assessment. Check all of the following that apply:

☐ Changes in the Project have substantially increased water demand.

☐ Changes in circumstances or conditions have substantially affected IRWD's ability to provide a sufficient water supply for the Project.

☐ Significant new information has become available which was not known and could not have been known at the date of the prior Water Supply Assessment.

6. References

Water Resources Master Plan, Irvine Ranch Water District, Updated 2017

Water Shortage Contingency Plan, Irvine Ranch Water District, June 2021

2020 Urban Water Management Plan, Irvine Ranch Water District, June 2021

Proposed Framework for Metropolitan Water District's Delta Action Plan, Metropolitan Water District of Southern California, May 8, 2007

2007 IRP Implementation Report, Metropolitan Water District of Southern California, October 7, 2007

2010 Integrated Resources Plan Update, Metropolitan Water District of Southern California, October 2010

2015 Integrated Resources Plan Update, Metropolitan Water District of Southern California, January 2016

2020 Integrated Water Resources Plan Regional Needs Assessment, Metropolitan Water District of Southern California, April 2022

2020 Urban Water Management Plan, Metropolitan Water District of Southern California, June 2021

2020 Urban Water Management Plan, Municipal Water District of Orange County, May 2021

Climate Action Plan, Metropolitan Water District of Southern California, May 2022

Climate Action Plan Phase 2: Climate Change Analysis Guidance, California Department of Water Resources, September 2018

Master Plan Report, Orange County Water District, April 1999

Groundwater Management Plan 2015 Update, Orange County Water District, June 2015

Final Draft Long-Term Facilities Plan, Orange County Water District, January 2006

Long-Term Facilities Plan 2014 Update, Orange County Water District, November 2014

2021-2022 Engineer's Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District, Orange County Water District, February 2023

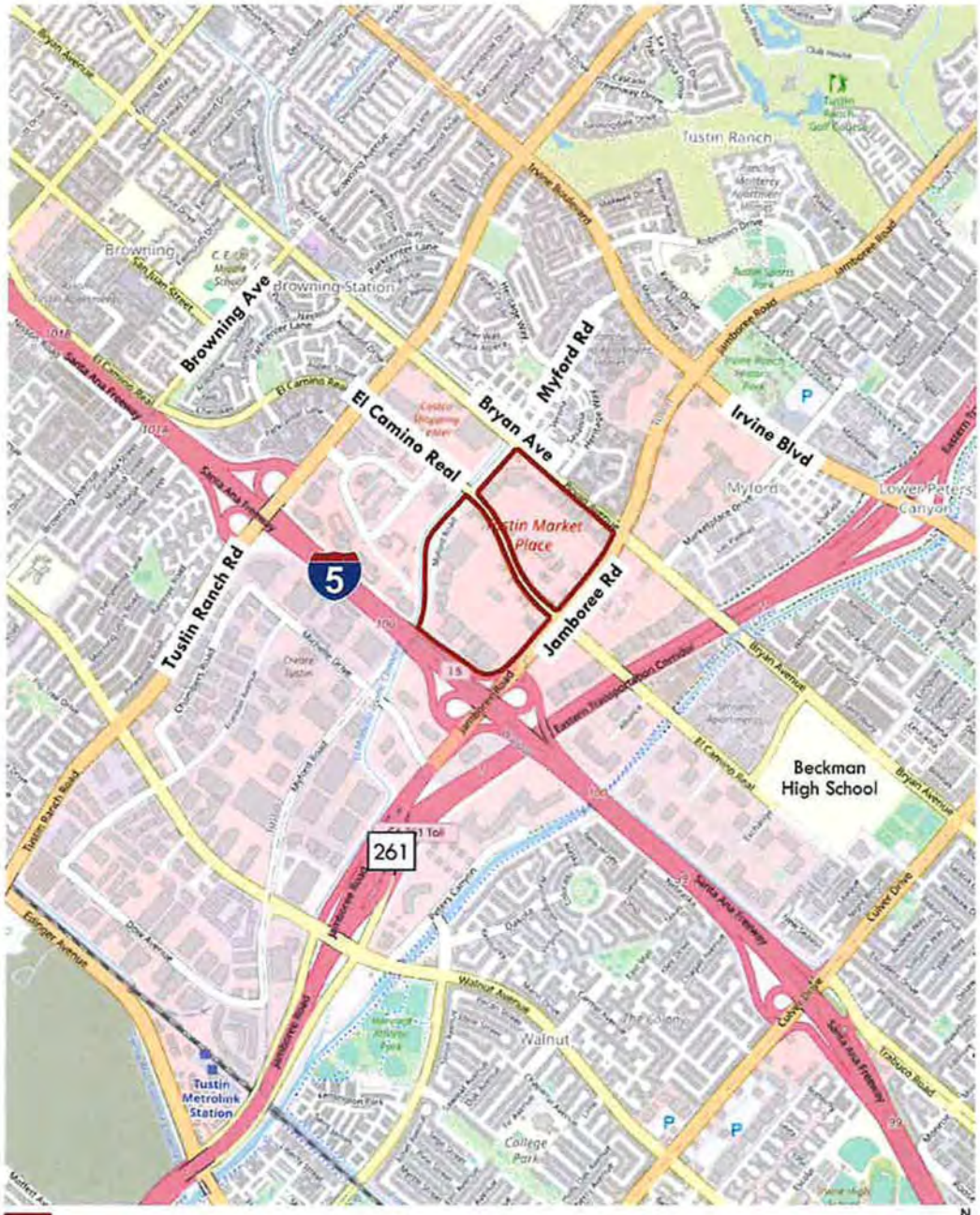
Basin 8-1 Alternative, Orange County Water District, January 2017

Basin 8-1 Alternative 2022 Update, Orange County Water District, January 2022

Exhibit A

Depiction of Project Area

Local Vicinity



The Tustin Marketplace Housing Overlay
City of Tustin

Figure 1

Exhibit B

Uses Included in Project

Public Works / Engineering

Date November 14, 2023

WATER RESOURCES

NOV 16 2023

IRVINE RANCH WATER DISTRICT

Kellie Welch
Irvine Ranch Water District
15600 Sand Canyon Avenue
P.O. Box 57000
Irvine, CA 92619-7000

Re: Request for Water Supply Availability Assessment (Water Code §10910 *et seq.*) for Tustin Market Place in the City of Tustin

The City of Tustin hereby requests an assessment of water supply availability for the below-described project. The City has determined that the project is a "project" as defined in Water Code §10912, and has determined that a supplemental environmental impact report is required for the project.

Proposed Project Information

Project Title: Housing Zone at Tustin Market Place to meet the objectives of the 2021-2029 Housing Element

Location of project: The Project site is approximately 18 acres in size and currently used as surface parking within an approximately 76.93 acre shopping center, all under common ownership (The Market Place). The Project site is generally bounded by Myford Road to the northwest, Bryan Avenue to the northeast, Jamboree Road to the southeast and I-5 (Santa Ana Freeway) to the southwest.

☐ (For projects requiring a new assessment under Water Code §10910 (h).) Previous Water Supply Assessment including this project was approved on N/A. This application requests a new Water Supply Assessment, due to the following (check all that apply):

☐ Changes in the project have substantially increased water demand

☐ Changes in circumstances or conditions have substantially affected IRWD's ability to provide a sufficient water supply for the project

☐ Significant new information has become available which was not known and could not have been known at the date of the prior Water Supply Assessment (Enclose maps and exhibits of the project)

Type of Development:

☒ *Residential*: No. of dwelling units: 900 units

☐ *Shopping center or business*: No. of employees N/A Sq. ft. of floor space 756,791 square feet total (no change)

☐ *Commercial office*: No. of employees N/A Sq. ft. of floor space N/A

300 Centennial Way, Tustin, CA 92780 • P: (714) 573-3150 • F: (714) 734-8991 • www.tustinca.org

☐ *Hotel or motel*: No. of rooms N/A
☐ *Industrial, manufacturing, processing or industrial park:* No. of employees N/A
No. of acres N/A Sq. ft. of floor space N/A
☐ *Mixed use* (check and complete all above that apply)
☐ *Other*: N/A

Total acreage of project: 18 acres

Acreage devoted to landscape:

Greenbelt N/A golf course N/A parks N/A
Agriculture N/A other landscaped areas N/A

Number of schools N/A
Number of public facilities one (no change)

Other factors or uses that would affect the quantity of water needed, such as peak flow requirements or potential uses to be added to the project to reduce or mitigate environmental impacts: none

What is the current land use of the area subject to a land use change under the project?
The Market Place contains existing commercial and institutional uses

Is the project included in the existing General Plan? Yes If no, describe the existing General Plan Designation N/A

The City acknowledges that IRWD's assessment will be based on the information hereby provided to IRWD concerning the project. If it is necessary for corrected or additional information to be submitted to enable IRWD to complete the assessment, the request will be considered incomplete until IRWD's receipt of the corrected or additional information. If the project, circumstances or conditions change or new information becomes available after the issuance of a Water Supply Assessment, the Water Supply Assessment may no longer be valid. The City will request a new Water Supply Assessment if it determines that one is required.

The City acknowledges that the Water Supply Assessment shall not constitute a "will-serve" or in any way entitle the project applicant to service or to any right, priority or allocation in any supply, capacity, or facility, and that the issuance of the Water Supply Assessment shall not affect IRWD's obligation to provide service to its existing customers or any potential future customers including the project applicant. In order to receive service, the project applicant shall be required to file a completed Application(s) for Service and Agreement with the Irvine Ranch Water District on IRWD's forms, together with all fees and charges, plans and specifications, bonds and conveyance of necessary easements, and meet all other requirement as specified therein.

CITY OF TUSTIN

By: _____
Ken Nishikawa,
Deputy Director of Public Work/Engineering

REQUEST RECEIVED:

Date: 11/16/23

By: _____
Irvine Ranch Water District

REQUEST COMPLETE:

Date: 11/27/23

By: _____
Irvine Ranch Water District