Amáre Apartment Homes Project

Draft Environmental Impact Report

SCH#2018052045

prepared by

City of Martinez
Planning Division, Department of Community and Economic Development
525 Henrietta Street
Martinez, California 94553
Contact: Hector Rojas, AICP, Planning Manager

prepared with the assistance of

Rincon Consultants, Inc.
449 15th Street, Suite 303
Oakland, California 94612

July 2022

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Environmental Scientists | Planners | Engineers
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Executive Summary

This document is an Environmental Impact Report (EIR) analyzing the environmental effects of the proposed Amáre Apartment Homes Project (proposed project). This section summarizes the characteristics of the proposed project, alternatives to the proposed project, and the environmental impacts and mitigation measures associated with the proposed project.

Project Synopsis

Project Applicant

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Project Description

This EIR has been prepared to examine the potential environmental effects of Amáre Apartment Homes Project. The following is a summary of the full project description, which can be found in Section 2, *Project Description*.

The project would involve the construction of 183 rental (apartment) units within the City of Martinez in Contra Costa County. The project site is approximately 6.06 acres and located in-between Arnold Drive and State Route 4 (SR 4) on assessor parcel numbers (APNs) 161-400-009 and 161-400-010. The site grades down slope from west to east, with an approximately 20-foot hill on the southwest corner of the site. Generally, the project site is vacant and dominated by annual grasses with trees scattered throughout the site.

Project Characteristics

The proposed project would involve the construction of six buildings that would include 104 one bedroom/one-bathroom residential units and 79 two bedroom/two bathroom units, for a total of 183 rental residential units. Nine of the units would be below market rate, qualifying it as a California Density Bonus Project. Figure 3 shows the proposed site plan. The proposed apartment complex would also include on-site amenities such as a workout facility, business center, children's play area, outdoor kitchen area, and parking areas. Three of the buildings, Buildings 1, 2, and 4, would be three stories and up to 35 feet, 2 inches above adjacent grade. The other three buildings, Buildings 3, 5, and 6, would be four stories and up to 44 feet, 2 inches above adjacent grade.

Landscaping

Landscaping would include approximately 178 new trees and 28 standards, as well as shrubs and ground cover throughout the project site. High planting densities would be used along the southern and eastern boundaries of the project site to create a visual screen between the site and SR 4 and adjacent uses. Landscaping would be irrigated using a fully automatic, water-conserving irrigation system consisting of drip and bubbler fixtures; a weather-based controller would regulate the system and include a rain sensor control to minimize watering during and after rain events. Three bioretention areas would be located on site: one in the southeastern corner and two along Arnold Drive on either side of the existing pump station. Flow-through planters would also be located along the parking area in the center of the site and north of the three western structures.

Parking and Site Access

Access to the project site would be provided through two proposed driveways from Arnold Drive. The main project driveway would align with the existing intersection of Arnold Drive and Starflower Drive and would allow for left and right turn movements into and out of the project site from Arnold Drive. The second project driveway would be located near the eastern boundary of the project site and would provide right turn access onto and from Arnold Drive. Interior drive aisles would connect all six of the proposed buildings to both driveways on the project site. Parking areas would be provided in surface parking stalls and garages underneath the proposed residences.

The project would provide 275 parking spaces, of which 87 would be covered and 188 would be uncovered. Pursuant to state density bonus law, the project exceeds the required 223 parking spaces. The project includes a request for reduced aisle width and parking space depth as allowed under State Density Bonus law, and would reduce the number of parking spaces required under City of Martinez Municipal Code (MMC) Chapter 22.36.030 from 458 spaces to 275 required spaces.

Utilities

One connection would be made to existing water infrastructure within Arnold Drive for domestic water use. The connection would consist of an 8-inch line that would split into multiple 4-inch water lines to serve the proposed apartment structures. Two additional connections would be made for fire water supply through the project site. Wastewater service would be provided by 8-inch sanitary sewer lines connecting to the proposed apartment structures. The 8-inch sewer lines would transport wastewater to the existing sewer pump station located adjacent to Arnold Drive.

Public storm drainage infrastructure currently exists in the eastern and northern portions of the project site, and a drainage swale exists on the northeastern portion of the project site. The public storm drain systems would be replaced and rerouted to run within the drive aisles of the project site. Proposed public storm drain infrastructure would include multiple sizes of piping, ranging from 60-inches to 24-inches. The existing drainage swale on the project site would be piped, and extensive stormwater infrastructure, such as bioretention areas and storm water planters, would be incorporated throughout the project site prior to connection with proposed stormwater infrastructure.

Construction and Grading

Construction would take approximately 24 months. Grading would occur over approximately four months, and the project would require import of 12,673 cubic yards of soil. Of the on-site trees, 43 would be removed and 17 would be retained.

Project Objectives

- **Housing**: Provide multi-family housing on an identified Housing Opportunity Site in the City's 2015-2023 Housing Element and assist the City in meeting its housing obligations by providing a 183 rental unit project
- **Implementation of City Plans**: Provide housing on an identified Housing Opportunity Site from the City's 2015-2023 Housing Element
- **Mobility**: Efficiently connect the proposed project uses to freeway access and proximate retail uses, while providing safe spaces for pedestrians, cyclists, transit, and motor vehicles along Arnold Drive

Alternatives

As required by the California Environmental Quality Act (CEQA), this EIR examines alternatives to the proposed project. Studied alternatives include the following four alternatives. Based on the alternatives analysis, Alternative 1, the No Project Alternative was determined to be the Environmentally Superior Alternative. Alternative 3 was determined to be the Environmentally Superior Build Alternative, although it would not meet the purpose and need to the same extent as the proposed project.

- Alternative 1: No Project
- Alternative 2: Mixed Use Alternative
- Alternative 3: Reduced Density Alternative
- Alternative 4: Alternative Site

Alternative 1 (No Project) The No Project Alternative assumes that the six proposed apartment buildings, 275 parking spaces, and other components of the proposed project are not constructed. The project site would continue to consist of undeveloped land under this alternative. The No Project Alternative would not fulfill any of the project objectives. Alternative 1 would not fulfill the project objectives compared to the proposed project as it would not develop residential units and would not help the City in meeting its state-mandated housing obligations.

Alternative 2 (Mixed Use Alternative) Similar to the proposed project, this alternative would involve the construction of six apartment buildings on the project site. Three of the buildings, Buildings 1, 2, and 4, would be three stories and up to 35 feet, 2 inches above adjacent grade. The other three buildings, Buildings 3, 5, and 6, would be four stories and up to 44 feet, 2 inches above adjacent grade. Under Alternative 2, however, the ground floor of Building 3 would have a commercial day care use. The proposed residential units in Building 3 would be smaller in size to accommodate the same number of units as the proposed project. The other five buildings would be the same as the proposed project. Alternative 2 would meet the project objectives by providing additional multifamily housing units on an identified Housing Opportunity Site from the City's 2015-2023 Housing Element and integrating a commercial day care use that would support the mobility of the project area by reducing vehicle trips.

Alternative 3 (Reduced Density Alternative) This alternative would involve the construction of six three-story apartment buildings on the project site. The three building would accommodate a total of 153 total residential units, 30 fewer residential units than included in the proposed project. Alternative 3 would not fulfill the project objectives compared to the proposed project by developing fewer residential units and would not help the City in meeting its state-mandated

housing obligations. Alternative 3 may also not be feasible as the reduction in units may be inconsistent with the applicant's rights under the state density bonus law.

Alternative 4 (Alternative Site) This alternative would involve the construction of six apartment buildings with 183 units on an alternative site south of the Martinez Amtrak Station near the intersection of Foster Street and Berrellesa Street on APN 372-400-006. The alternative site is a 6.1-acre lot within the City of Martinez Downtown Specific Plan area and is designated as Downtown Shoreline. The applicant does not own or control this site. This alternative is analyzed as a project alternative for CEQA purposes but may not be feasible because the applicant's ability to purchase the property cannot be assured. Similar to the proposed project, three of the buildings, Buildings 1, 2, and 4, would be three stories and up to 35 feet, 2 inches above adjacent grade. Buildings 3, 5, and 6, would be four stories and up to 44 feet, 2 inches above adjacent grade. Alternative 4 would fulfill the project objective to provide housing on an identified Housing Opportunity Site from the City's 2015-2023 Housing Element. It would also fulfill the project objective of mobility connections to a greater extent than the proposed project, as the alternative site is within walking distance of a range of services and the Amtrak station and has access to more robust bicycle and pedestrian facilities than the proposed project site.

Refer to Section 6, *Alternatives*, for the complete alternatives analysis.

Areas of Known Controversy

The project has two areas of known controversy regarding biological resources and transportation. There were issues raised by the public regarding project review and approval by the Regional Water Quality Control Board due to the potential presence of wetlands, jurisdictional delineation, and impacts to State Waters. There were also issues raised by the public regarding traffic impacts due to increased residents in the area.

Required Approvals

The following approvals would be required from the City of Martinez for the project:

- **Density Bonus Request** for the number of residential units proposed
  - **Height Concession** to allow a maximum height of 44 feet, 2 inches for proposed buildings 3, 5, and 6
  - **Hillside Density Waiver**
  - **Building Separation Waiver**
  - **Parking Waiver** for relief from the required dimension of exterior pad parking spaces and driveway width
  - **Rear Building Setback Waiver**
  - **Drive Aisle Width Waiver** to allow reduced drive aisle width and parking space depth, as allowed by State Density Bonus law
  - **Parking Lot Landscaping Waiver**
- **Design Review Permit** for the design of the apartments

Issues Not Studied in Detail in the EIR

Section 1.4 summarizes issues from the environmental checklist that were addressed in the Initial Study (Appendix IS). As indicated in the Initial Study, there is no substantial evidence that significant impacts would occur to the following issue areas: agricultural resources, air quality, energy, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, utilities and service systems, and wildfire. Impacts to aesthetics, biological resources, cultural resources, geology and soils, noise, transportation, and tribal and cultural resources were found to be potentially significant and are addressed in this EIR.

Summary of Impacts and Mitigation Measures

Table ES-1 summarizes the environmental impacts of the proposed project, proposed mitigation measures, and residual impacts (the impact after application of mitigation, if required). Impacts are categorized as follows:

- **Significant and Unavoidable.** An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved pursuant to Section 15093 of the *CEQA Guidelines*.
- **Less than Significant with Mitigation Incorporated.** An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings under Section 15091 of the *CEQA Guidelines*.
- **Less than Significant.** An impact that may be adverse, but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.
- **No Impact:** The proposed project would have no effect on environmental conditions or would reduce existing environmental problems or hazards.

Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Residual Impacts

Impact	Mitigation Measure (s)	Residual Impact
Aesthetics		
Impact AES-1. The proposed project would not substantially block public views to a Visually Significant Hilltop. Impacts on scenic vistas would be less than significant.	None required.	Less than Significant
Impact AES-2. There are no designated State Scenic Highways within or near the project site, and the project would not be visible from a State Scenic Highway. Impacts on State Scenic Highways would be less than significant.	None required.	Less than Significant
Impact AES-3. The proposed project would be subject to design review, which would help ensure that the	None required.	Less than Significant

Impact	Mitigation Measure (s)	Residual Impact
project design is consistent with City design guidelines for the John Muir Parkway Specific Area Plan Area. Although, the buildings' massing and height would conflict with applicable regulations, such as MMC Chapter 22.34, governing scenic quality, State Density Bonus Law allows for an inconsistency with development standards because there would be no adverse impact to public health and safety. Impacts would be less than significant.		
Impact AES-4. The proposed project would introduce new sources of light and glare to an undeveloped site with no lighting or glare-producing features. However, the site is surrounded by roadways and development with existing light and glare sources, and compliance with existing regulations would ensure that light and glare from the project would be similar to that of surrounding uses. Impacts would be less than significant.	None required.	Less than Significant
Biological Resources		
Impact BIO-1. Implementation of the proposed project may impact special-status species and their habitat during construction. Impacts would be less than significant with mitigation.	*BIO-1a Worker Environmental Awareness Program* Prior to initiation of construction activities (including staging and mobilization) all personnel associated with project construction shall attend a Worker Environmental Awareness Program (WEAP) training, conducted by a qualified biologist, to aid workers in recognizing special-status resources that may occur in the construction area. The specifics of this program shall include identification of the sensitive species and habitats, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of construction and mitigation measures required to reduce impacts to biological resources within the work area. A qualified biologist shall prepare a fact sheet conveying this information for distribution to all contractors, their employers, and other personnel involved with construction. All employees shall sign a form provided by the trainer indicating they have attended the WEAP and understand the information presented to them. The form shall be submitted to the City to document compliance following each training. *BIO-1b Nesting Bird Survey* If construction requires any vegetation trimming or tree removals that are scheduled to occur during the nesting bird season (February 1 through September 15), the project applicant shall retain a qualified biologist shall conduct pre-construction surveys no more than 14 days prior to the start of construction to determine the presence/absence of nesting birds and special-status raptors within the project	Less than Significant with Mitigation Incorporated

Impact	Mitigation Measure (s)	Residual Impact
	site. If active nests are found, the qualified biologist shall establish an appropriate buffer, considering the species sensitivity and physical location of the nest (line of site to the work area), to comply with CFGC 3503 and 3503.5. In no cases shall the buffer be smaller than 50 feet for non-raptor bird species and 250 feet for raptor species. To prevent encroachment, the established buffer(s) shall be clearly marked by high visibility material installed by the contractor. The established buffer(s) shall remain in effect until the young have fledged or the nest has been abandoned as confirmed by the qualified biologist. The City shall review and approve the biologists' findings and buffer during construction as appropriate.	
Impact BIO-2. The project would impact sensitive natural communities during construction. Impacts would be less than significant with mitigation.	*BIO-2 Sensitive Community Mitigation* The project applicant shall offset impacts to riparian habitat (i.e., willow riparian woodlands) through purchase of credits at a RWQCB- and CDFW-approved mitigation bank for creation or enhancement of sensitive natural communities at a 2:1 ratio. Impacts to the seasonal drainage ditch shall be offset through purchase of credits at a RWQCB- and CDFW-approved mitigation bank at a ratio of 1:1. If the project falls outside of RWQCB- and CDFW-approved mitigation bank service areas, impacts to sensitive natural communities shall be offset through habitat restoration and/or enhancement at an off-site location at a ratio of 2:1 (habitat restored and/or enhanced to habitat impacted) for riparian woodlands and ratio of 1:1 for seasonal drainage ditch. The location of restoration and/or enhancement shall be determined by a qualified biologist. The restoration and/or enhancement shall include locally native species approved by the City. The restoration and/or enhancement shall be incorporated into an Off-Site Habitat Restoration/Enhancement Plan to be developed by a qualified biologist pursuant to the requirements listed below. Upon final project design, a qualified biologist shall determine the final impacts to sensitive communities and the subsequent amount of acreage needed for restoration and/or enhancement for the project. The project applicant shall implement restoration and/or enhancement for a period of not less than 5 years, or until restoration and/or enhancement has been completed successfully as determined by a qualified biologist in coordination with City Planning. The Off-Site Habitat Restoration/Enhancement Plan shall include, at a minimum, the following components: a) Description of the project/impact site (i.e., location, responsible parties, areas to be impacted by habitat type) b) Goal(s) of the compensatory mitigation project (i.e., the type/types and area/areas of habitat to be established, restored, enhanced, and/or preserved; specific functions and values of habitat type/types to be established, restored, enhanced, and/or preserved) c) Description of the proposed compensatory mitigation-site (i.e., location and size, ownership status, existing	Less than Significant with Mitigation Incorporated

Impact	Mitigation Measure (s)	Residual Impact
	functions and values of the compensatory mitigation-site) d) Implementation plan for the compensatory mitigation-site (the plan will include rationale for expecting implementation success, responsible parties, schedule, site preparation, planting plan, including plant species to be used, container sizes, and seeding rates) e) Maintenance activities during the monitoring period, including weed removal and irrigation as appropriate (the plan will include activities, responsible parties, and schedule) f) Monitoring plan for the compensatory mitigation-site, including no less than quarterly monitoring for the first year and performance standards, target functions and values, target acreages to be established, restored, enhanced, and/or preserved, annual monitoring reports g) Success criteria based on the goals and measurable objectives; said criteria to be, at a minimum, at least 80 percent survival of container plants and 30 percent relative cover by vegetation type h) An adaptive management program and remedial measures to address negative impacts to restoration efforts i) Notification of completion of compensatory mitigation and agency confirmation j) Contingency measures (e.g., initiating procedures, alternative locations for contingency compensatory mitigation, funding mechanism)	
Impact BIO-3. The project would impact potentially jurisdictional state or federally protected wetlands during construction and/or operation. Impacts would be less than significant with mitigation.	*BIO-3a Aquatic Resources Delineation* Prior to issuance of a grading permit, the project applicant shall retain a qualified biologist to complete an aquatic resources delineation to identify areas where the project will result in fill to wetlands, drainages, riparian habitats, or other areas that may fall under the jurisdiction of the USACE, CDFW, and/or RWQCB. The delineation shall determine the extent of the jurisdiction for each of these agencies and shall be conducted in accordance with the requirement set forth by each agency. The results shall be a delineation report that shall be submitted to the appropriate implementing agency (USACE, CDFW, and/or RWQCB). The City shall review the delineation prior to submittal to regulatory agencies. *BIO-3b Compensatory Mitigation* If the delineation required in Mitigation Measure BIO-3a identifies a potential impact, prior to issuance of a grading permit, impacts to the seasonal drainage ditch shall be offset through purchase of wetland/waters mitigation credits at a USACE, CDFW and RWQCB-approved mitigation bank for creation or enhancement of wetlands/waters at a minimum 1:1 ratio. Additional mitigation may be required under specific agency permits.	Less than Significant with Mitigation Incorporated
Impact BIO-4. The project would not impact wildlife movement because the project site is in an area surrounded largely by existing	None required.	Less than Significant

Impact	Mitigation Measure (s)	Residual Impact
development. Impacts would be less than significant.		
Impact BIO-5. The project would be subject to the City's ordinances and requirements protecting biological resources, such as trees. Impacts would be less than significant.	None required.	Less than Significant
Cultural Resources		
Impact CR-1. The project site is located in an area with low potential for unrecorded historical resources to occur. Furthermore, the site has been previously disturbed with agricultural activities. Impacts would be less than significant.	None required.	Less than Significant
Impact CR-2. The project site does not contain known archaeological resources. Nonetheless, project ground-disturbing activities have the potential to impact unrecorded archaeological resources. Impacts would be less than significant with mitigation.	*CR-1 Unanticipated Discoveries* Prior to the issuance of a grading permit, the developer shall note on the plans for review and approval by the City Engineer that if historic and/or cultural resources are encountered during site grading or other site work, all such work shall be halted immediately within 50 feet of discovery and the developer shall immediately notify the Planning Division of the discovery. In such case, the developer shall be required, at its own expense, to retain the services of a qualified archaeologist for the purpose of recording, protecting, or curating the discovery as appropriate. The archaeologist shall be required to submit to the Planning Division, for review and approval, a report of the findings and method of curation or protection of the resources. Further grading or site work within 50 feet of discovery shall not be allowed until the preceding work has occurred.	Less than Significant with Mitigation Incorporated
Impact CR-3. Ground-disturbing activities associated with the proposed project could disturb human remains. Impacts would be less than significant.	None required.	Less than Significant
Geology and Soils		
Impact GEO-1. project construction and operation could result in exposure of people or structures to a risk of loss, injury, or death from seismic events. Adherence to the requirements of the California Building Code and City Building Code would reduce this impact to a less-than-significant level.	None required.	Less than Significant
Impact GEO-2. The project site is in an area prone to earthquakes and ground shaking. Implementation of Mitigation Measure GEO-1, in addition to compliance with General Plan Policies and the CBC,	*GEO-1 Design-Level Geotechnical Investigation* A design-level geotechnical investigation which includes additional subsurface exploration, laboratory testing and engineering analysis shall be performed to further evaluate the potential for post-construction settlement in the vicinity of buildings 4, 5, 6, and the podium garage, shallow slope	Less than Significant with Mitigation Incorporated

Impact	Mitigation Measure (s)	Residual Impact
would reduce potential impacts related to seismic ground shaking to a less-than-significant level. Impacts would be less than significant with mitigation incorporated.	creep or erosion, and shallow groundwater. This evaluation shall be used to confirm the preliminary recommendations found in the Preliminary Geotechnical Investigation conducted by Cornerstone Earth Group in December 2009 and updated in May 2022 develop detailed mitigation techniques. A qualified geologist shall oversee earthwork operations to check that the site is properly prepared, and that all grading or fill activity on the site accounts for post-construction settlement and has been performed in accordance with geotechnical recommendations and project specifications. The City shall review and approve the geotechnical investigation prior to issuing building permits and ensure that all geotechnical recommendations are implemented during construction.	
Impact GEO-3. The project site may potentially experience shallow soil creep or erosion during periods of heavy rainfall. However, potential impacts related to soil erosion or the loss of topsoil would be reduced to less than significant with compliance to existing regulatory requirements, including implementation of applicable BMPs related to wind and water erosion control, and mitigation. Impacts would be less than significant with mitigation incorporated.	*GEO-1 Design-Level Geotechnical Investigation*	Less than Significant with Mitigation Incorporated
Impact GEO-4. There is potential for expansive soils to occur on the project site. Impacts would be less than significant with mitigation incorporated.	*GEO-1 Design-Level Geotechnical Investigation*	Less than Significant with Mitigation Incorporated
Impact GEO-5. The project would be served by the City's sewer system and no on-site septic or alternative wastewater systems are proposed. There would be no impact.	None required.	No Impact
Impact GEO-6. Project construction could result in impacts to paleontological resources. Impacts would be less than significant with mitigation incorporated.	*GEO-2 Paleontological Resources Monitoring* Before the start of construction, the project applicant shall retain a qualified paleontological monitor (i.e., a paleontologist who meets the SVP [2010] standards as a Paleontological Resource Monitor) to conduct paleontological monitoring during excavation to estimated depths of 10 feet or more below the existing ground surface of intact (i.e., previously undisturbed) Qoa, Tkm, Tkn, and Tds geologic units. Full-time monitoring shall be conducted for all ground-disturbing activities exceeding 10 feet below ground surface, excluding pile driving and drilling with an auger diameter of less than 3 feet, that impact native previously undisturbed geologic units mapped at the surface as early Holocene to late Pleistocene alluvium [Qoa], Kreyenhagen Formation [Tkm, Tkn], Domengene Sandstone [Tds]), which have a	Less than Significant with Mitigation Incorporated

Impact	Mitigation Measure (s)	Residual Impact
	high-paleontological sensitivity. Ground-disturbing activities that impact previously disturbed sediments only do not require paleontological monitoring. The Qualified Paleontologist shall determine the duration and timing of the monitoring. If the Qualified Paleontologist determines that full-time monitoring is no longer warranted, he or she may recommend reducing monitoring to periodic spot-checking or may recommend that monitoring cease entirely. Monitoring shall be reinstated if any new ground disturbances are required, and the Qualified Paleontologist shall reconsider reduction or suspension at that time. If a paleontological resource is discovered, the monitor shall have the authority to temporarily divert construction equipment within 50 feet the find, until it is assessed for scientific significance and collected. Once salvaged, significant fossils shall be prepared to a curation-ready condition and curated in a scientific institution with a permanent paleontological collection (such as the UCMP). Curation fees are the responsibility of the project owner. A final report shall be prepared describing the results of the paleontological monitoring efforts associated with the project. The report shall include a summary of the field and laboratory methods, an overview of the project geology and paleontology, a list of taxa recovered (if any), an analysis of fossils recovered (if any) and their scientific significance, and recommendations. The report shall be submitted to the City. If the monitoring efforts produced fossils, then a copy of the report shall also be submitted to the designated museum repository.	
Noise		
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. Impacts would be less than significant.	None required.	Less than Significant
Impact NOI-2. The project would not result in generation of excessive ground-borne vibration or ground-borne noise levels. Impacts would be less than significant.	None required.	Less than Significant
Impact NOI-3. The project would not expose people residing or working in the project area to excessive noise levels. Impacts would be less than significant.	None required.	Less than Significant
Impact NOI-4. Noise levels at the residential building façades on the southernmost building that face SR	None required.	Less than Significant

Impact	Mitigation Measure (s)	Residual Impact
4 may conflict with the City's interior noise standard because they are estimated to be higher than the 45 dBA Ldn threshold. Other building façades of the project would not exceed noise standards. Implementation of Recommendation NOI-1, documentation of exterior-to-interior noise reduction, would achieve compliance with the interior noise standard.		
Transportation		
Impact TRA-1. The proposed project would not conflict with applicable policies addressing transit, roadway, bicycle, and pedestrian facilities. Impacts would be less than significant.	None required.	Less than Significant
Impact TRA-2. The project would generate an estimated average daily VMT per capita of 16.5, which exceeds the VMT threshold for the traffic analysis zone in which the project would be located. Transportation Demand Management strategies would be implemented as mitigation but are unlikely to reduce project impacts to VMT to less-than-significant levels. Impacts would be significant and unavoidable.	*TRA-1: TDM Program* Prior to issuance of a building permit, the applicant shall submit a TDM program for the project for City review and approval. Strategies that could be incorporated into a TDM program could include, but are not limited to: ▪ Incorporating electric vehicle facilities ▪ Providing bicycle parking facilities ▪ Providing car sharing, bike sharing, and ride sharing programs ▪ Shifting single occupancy vehicle trips to carpooling or vanpooling ▪ Providing incentives or subsidies that increase the use of modes other than single-occupancy vehicles ▪ Implementing a commute trip reduction program ▪	Significant and Unavoidable
Impact TRA-3. The project would involve the construction of two driveways on Arnold Drive that would not substantially increase hazards due to design features or incompatible uses for vehicles. Implementation of mitigation measures would ensure that pedestrian crossings on Arnold Drive would not substantially increase hazards due to dangerous intersections. Impacts would be less than significant with mitigation incorporated.	*Mitigation Measure TRA-2 Pedestrian Safety* In order to ensure safe pedestrian crossings at the project site, the applicant shall work with the City of Martinez to provide on-street parking along the south side of Arnold Drive along the project boundary in a manner that would not obstruct views of pedestrians and would not introduce any hazards for bicyclists. Final plans for on-street parking shall be approved by the City prior to the issuance of a building permit. The presence of on-street parking can help reduce motorist speeds, which would enhance pedestrian safety. The applicant shall work with the City and pay a fair-share fee, as determine by the City, to implement on-street parking and other potential measures to improve safety for pedestrian crossings. Such measures could include but are not limited to the following: ▪ Improved street lighting at the intersection of Starflower Drive and Arnold Drive. The risk of pedestrian injuries and fatalities increases at night or under low-light conditions, and adding additional lighting would reduce this risk.	Less than Significant with Mitigation Incorporated

Impact	Mitigation Measure (s)	Residual Impact
	▪ Construction of a median to provide pedestrian refuge. Providing a median between opposing lanes of traffic would allow pedestrians to cross Arnold Drive one direction of traffic at a time, which would reduce the complexity of the crossing. ▪ Striping of a marked crosswalk across Arnold Drive at Starflower Drive and installation of rectangular rapid flashing beacons. Although flashing beacons are typically used at intersections with a significant number of pedestrian crossings, the installation of flashing beacons across Arnold Drive would draw attention to the marked crosswalk and encourage motorists to yield to pedestrians in the crosswalk. Use of flashing beacons would be subject to applicable regulations in the California Manual of Uniform Traffic Control Devices. ▪ Striping of a marked crosswalk across Arnold Drive at Starflower Drive and installation of a pedestrian hybrid beacon. A pedestrian hybrid beacon is a type of hybrid traffic signal that is used to warn and stop traffic at an unsignalized intersection to assist pedestrians in crossing the street. A hybrid beacon would draw attention to the marked crosswalk and encourage motorists to yield to pedestrians in the crosswalk. Use of a hybrid beacon would be subject to applicable regulations in the California Manual of Uniform Traffic Control Devices. ▪ Installation of radar speed signs. The presence of a radar speed sign that displays the speeds of vehicle approaching Starflower Drive would encourage motorists to slow down near the marked crosswalk. ▪ Installation of all-way stop sign at Arnold Drive and Starflower Drive. Stop sign would be subject to a traffic engineer's findings subject to applicable regulations in the California Manual of Uniform Traffic Control Devices.	
Impact TRA-4. The project would involve the construction of two driveways and a surface parking lot that would provide adequate emergency access to the project site. Impacts would be less than significant.	None required.	Less than Significant
Tribal Cultural Resources		
Impact TCR-1. The project site does not contain known TCRs. Nonetheless, project ground-disturbing activities have the potential to impact unrecorded TCRs. Impacts would be less than significant with mitigation.	*TCR-1 Unanticipated Discovery of Tribal Cultural Resources* If cultural resources of Native American origin are identified during project construction, earth-disturbing work within 50 feet of the vicinity of the find must be temporarily suspended or redirected until an archaeologist has evaluated the nature and significance of the find and an appropriate Native American representative, based on the nature of the find, is consulted. If the City determines that the resource is a tribal cultural resource and thus significant under CEQA, a mitigation plan shall be prepared and implemented in accordance with State guidelines and in consultation with Native American groups. The plan would include avoidance of the resource or, if avoidance of the	Less than Significant with Mitigation Incorporated

Impact	Mitigation Measure (s)	Residual Impact
	resource is infeasible, the plan would outline the appropriate treatment of the resource in coordination with the archeologist and the appropriate Native American tribal representative. At minimum, the treatment plan may include, but would not be limited to, steps to protect the cultural character and integrity of the resource, steps to protect traditional use of the resource, or excavation and reburial of the resource in a location not subject to further disturbance. The plan must be reviewed and approved by the City prior to implementation.	

1 Introduction

This document is an Environmental Impact Report (EIR) for a proposed residential development located on the south side of Arnold Drive, Contra Costa, California. The proposed Amáre Apartment Homes Project (hereafter referred to as the "proposed project" or "project") would be constructed on an approximately 6-acre site that is currently vacant. The project would involve the construction of an apartment complex containing six buildings, with 183 rental residential units. Nine of the units would be below market rate, qualifying it as a California Density Bonus Project. Three of the buildings would be three stories in height and the other three would be four stories. The total building footprint would be approximately 55,758 square feet, or 21 percent of the site. 77,855 square feet of open space would be provided at the project site. The complex would include a workout facility, business center, children's play area, outdoor kitchen area and parking areas.

This section discusses 1) the project and EIR background, 2) the legal basis for preparing an EIR, 3) the scope and content of the EIR, 4) issue areas found not to be significant by the Initial Study, 5) the lead, responsible, and trustee agencies, and 6) the environmental review process required under the California Environmental Quality Act (CEQA). The proposed project is described in detail in Section 2, *Project Description*.

1.1 Environmental Impact Report Background

The project application originally proposed construction of seven three-story buildings that would contain 174 rental residential apartment units. The City of Martinez prepared an Initial Study-Mitigated Negative Declaration (IS-MND) published in June 2018 for the project in the original application. Based on public comments received on the potential biological resources impacts analyzed in the 2018 IS-MND, the City determined that an EIR would be required for the proposed project.

Subsequently, the City distributed a Notice of Preparation (NOP) of the EIR for a 30-day agency and public review period starting on January 22, 2022 and ending on February 21, 2022. The City received letters from three agencies in response to the NOP during the public review period, as well as 72 public comments. The NOP is presented in Appendix NOP of this EIR, along with the revised Initial Study and the NOP responses received. Table 1-1 on the following page summarizes the content of the letters and where the issues raised are addressed in the EIR.

1.2 Purpose and Legal Authority

The proposed project requires the discretionary approval of the City of Martinez Planning Commission; therefore, the project is subject to the environmental review requirements of CEQA. In accordance with *CEQA Guidelines* Section 15121 (California Code of Regulations, Title 14), the purpose of this EIR is to serve as an informational document that:

> "will inform public agency decision makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project."

Table 1-1 NOP Comments and EIR Response

Commenter	Comment/Request	How and Where It was Addressed
Agency Comments		
Native American Heritage Commission (NAHC)	The commenter states that the proposed project is subject to the requirements and provisions under Assembly Bill (AB 52) for tribal cultural resources.	The City's AB 52 consultation period closed on May 11, 2016, and no responses were received from Tribes. This topic is discussed in Section 4.7, *Tribal Cultural Resources*, and a Cultural Resources Assessment is provided as Appendix CUL.
Mt. View Sanitary District	The comment summarizes the Initial Study conclusions regarding wastewater treatment facilities and advises that all developments are subject to hydraulic modeling and analysis before final District approval.	This topic is discussed in Section 17, *Utilities and Service Systems*, of the Initial Study (Appendix IS).
California Department of Transportation	The comment states that if a project meets the screening criteria established in the City's adopted Vehicle Miles Traveled (VMT) policy, and can be presumed to have a less-than-significant VMT impact, and therefore would be exempt from detailed VMT analysis, a justification to support the exempt status in align with the City's VMT policy should be provided. Projects that do not meet the screening criteria should include a detailed VMT analysis in the Focused Draft Environmental Impact Report (DEIR). Furthermore, the comment adds that the DEIR should include a robust Transportation Demand Management (TDM) Program to reduce VMT and greenhouse gas emissions from future development in this area if impacts are found to be potentially significant. Caltrans also requests information from the applicant and states the applicant must flag trees within Caltrans right-of-way for avoidance if the Caltrans fence must be removed for construction. Caltrans also provides information about equitable access and encroachment permits, if needed.	Transportation impacts, including a VMT analysis, are included in Section 4.6, *Transportation* and Appendix TRA.
Public Comments		
Aesthetics	Concerns that the project would cause a loss of the neighborhood's open space. Concerns regarding aesthetic impacts on the valley. Concerns regarding the project's proposed height and compatibility with the adjacent neighborhood. Concerns regarding privacy, rooftop materials, equipment, and glare from the windows.	This topic is addressed in Section 4.1, *Aesthetics*.
Biological Resources	Concerns regarding tree removal and replacement by saplings, and their time of growth. Concerns that several bird species, such as turkeys, eagles, and hawks, nest in the area and would be impacted by the removal of trees and open space. Concerns about wildlife, plant life, and the wetland/drainage ditch on-site.	This topic is discussed in Section 4.2, *Biological Resources*.

Commenter	Comment/Request	How and Where It was Addressed
Cultural and Tribal Cultural Resources	Concerns that project construction may disturb cultural or tribal cultural resources on the site.	This topic is discussed in Section 4.3, *Cultural Resources* and Section 4.7, *Tribal Cultural Resources*.
Transportation	Excessive speeding along Arnold Drive (existing condition). Suggests putting a stop sign at the corner of Arnold Drive and Starflower Drive in front of the Sunrise Hills development for pedestrian safety. Concerns about traffic congestion concerns for Arnold Drive at the intersection region of Arnold Drive and Starflower Drive. Concerns about the project's traffic. Concerns about traffic congestion along Arnold Drive, Glacier Drive, Pacheco Boulevard, and Morello Avenue. Safety concerns given existing conditions. Concerns regarding availability of parking for current and new residents and concerns regarding home deliveries. Concerns that the traffic analysis is outdated and does not reflect current or future traffic impacts caused by the project. Concerns that there are unsuitable transit options in the project area. Concerns that the increase in traffic would create inadequate emergency vehicle access. Concerns that VMT should be analyzed. Request to extend comment period to get a comment letter from Caltrans.	This topic is discussed in Section 4.6, *Transportation*. Parking is not a CEQA topic. The EIR contains an updated traffic report that includes VMT (Appendix TRA). Caltrans submitted a comment letter on the project within the comment period.
Geology and Soils	Topography of the site may result in soil instability.	This topic is discussed in Section 4.4, *Geology and Soils*.
Noise	Concerns related to project construction and operation noise.	This topic is discussed in Section 4.5, *Noise*.
Utilities and Service Systems	Concerns related to sewer capacity. Concerns regarding water capacity and water supply.	This topic is discussed in Section 10, *Hydrology and Water Quality* and Section 17, *Utilities and Service Systems*, of the Initial Study (Appendix IS).
Recreation	Concerns about impacts to public parks	This topic is discussed in Section 15, *Public Services*, in the Initial Study (Appendix IS).
Public Services	Concerns about project's effect on schools. Concerns regarding driveway widths, potential safety issues, and fire access and fire safety.	This topic is discussed in Section 15, *Public Services*, in the Initial Study (Appendix IS).

Commenter	Comment/Request	How and Where It was Addressed
Land Use and Planning	Proposed height and setbacks would be inconsistent with the John Muir Specific Plan Policy 33.319, and the parking ratio would be inconsistent with policies in the transportation element of the General Plan. Request that the City describe how the proposed development fits with the John Muir Parkway Specific Area Plan.	This topic is discussed in Section 11, *Land Use and Planning*, of the Initial Study (Appendix IS). Additionally, the City's memo on consistency with the General Plan and John Muir Specific Area Plan is included as an appendix to the Initial Study (Appendix IS).
General Comments	Questions if soils are stable, noise during construction, and states that the buildings would block views of Mt. Diablo. Concerns about construction impacts. Concerns about wildfire. Concerns regarding cumulative impacts in the area related to traffic, pollution, and water supply. Concerns about the number of units in the project. EIR must contain alternatives. Concerns about open space area. Concerns regarding the age of reports. Concerns regarding the acreage of the site.	This topic is discussed in Section 4.1, *Aesthetics*, Section 4.5, *Noise*, and Section 4.6, *Transportation*. Geology and Soils impacts are discussed in Section 4.4, *Geology and Soils*. Impacts related to pollution, water supply, and wildfire are discussed in the Initial Study (Appendix IS). The site acreage is 6.06 acres. Alternatives are presented in Section 6, *Alternatives*. The EIR contains updated traffic and noise reports (Appendices TRA and NOI, respectively).
Not CEQA Related	Concerns regarding the number of concessions/exemptions requested from the City. Concerns about the effect on property values. Suggestion that the City develops and enforces local ordinances to clarify how the city evaluates exemptions, variances and concessions that bypass mature land use policies that are based on residents' needs and desired qualities.	These comments do not pertain to potential environmental impacts of the project, so are not discussed in the EIR.

This EIR has been prepared as a Project EIR pursuant to *CEQA Guidelines* Section 15161. A Project EIR is appropriate for a specific development project. As stated in the *CEQA Guidelines*:

> "This type of EIR should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project, including planning, construction, and operation."

This EIR is to serve as an informational document for the public and City of Martinez decision-makers. The process will include public hearings before the Planning Commission to consider certification of a Final EIR and approval of the proposed project.

1.3 Scope and Content

This EIR addresses impacts identified by the Initial Study to be potentially significant. The following issues were found to include potentially significant impacts and have been studied in the EIR:

- Aesthetics
- Biological Resources
- Cultural Resources
- Geology and Soils

- Noise
- Transportation
- Tribal Cultural Resources

In preparing the EIR, use was made of pertinent City policies and guidelines, certified EIRs and adopted CEQA documents, and other background documents. A full reference list is contained in Section 7, *References*.

The alternatives section of the EIR (Section 6) was prepared pursuant to *CEQA Guidelines* Section 15126.6 and focuses on alternatives that are capable of eliminating or reducing significant adverse effects associated with the project while feasibly attaining most of the basic project objectives. In addition, the alternatives section identifies the "environmentally superior" alternative among the alternatives assessed. The alternatives evaluated include the CEQA-required "No Project" alternative, two alternative development scenarios for the project site, and one alternative site location.

The level of detail contained throughout this EIR is consistent with the requirements of CEQA and applicable court decisions. *CEQA Guidelines* Section 15151 provides the standard of adequacy on which this document is based. The *Guidelines* state:

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

1.4 Issues Not Studied in Detail in the EIR

The environmental checklist addressed in the Initial Study (Appendix IS) identified issues that are not addressed in this EIR. As indicated in the Initial Study, there is no substantial evidence that significant impacts would occur in any of the following issue areas:

- Agriculture and Forestry Resources
- Air Quality
- Energy
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Population and Housing
- Public Services
- Recreation
- Utilities and Service Systems
- Wildfire

1.5 Lead, Responsible, and Trustee Agencies

The *CEQA Guidelines* define lead, responsible and trustee agencies. The City of Martinez is the lead agency for the project because it holds principal responsibility for approving the project.

A responsible agency refers to a public agency other than the lead agency that has discretionary approval over the project. There are no responsible agencies for the proposed project.

A trustee agency refers to a State agency having jurisdiction by law over natural resources affected by a project. The California Department of Fish and Wildlife and the Regional Water Quality Control Board may be trustee agencies for the project.

1.6 Environmental Review Process

The environmental impact review process, as required under CEQA, is summarized below and illustrated in Figure 1-1. The steps are presented in sequential order.

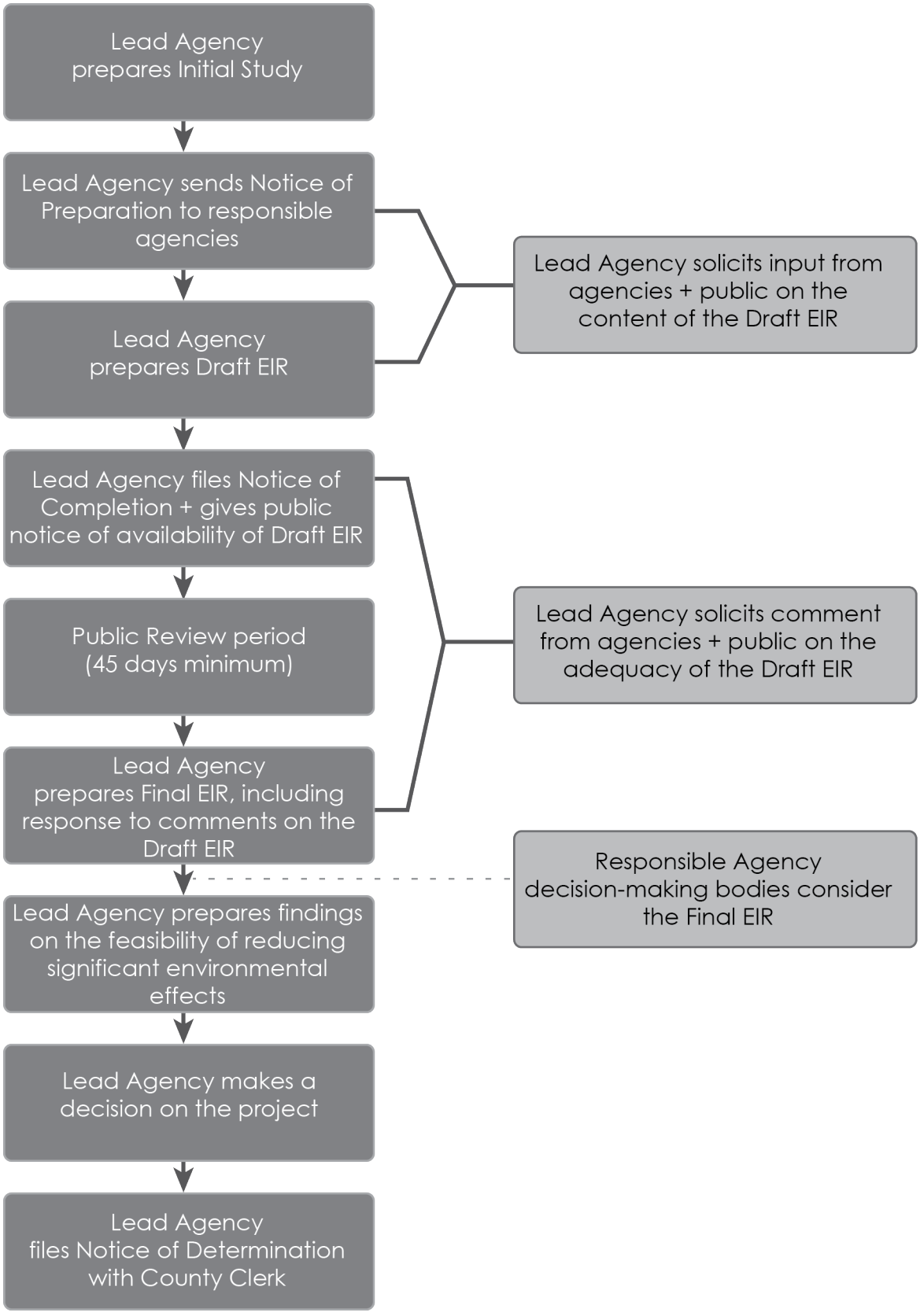
1. **Notice of Preparation (NOP) and Initial Study**. After deciding that an EIR is required, the lead agency (City of Martinez) must file a NOP soliciting input on the EIR scope to the State Clearinghouse, other concerned agencies, and parties previously requesting notice in writing (*CEQA Guidelines* Section 15082; Public Resources Code Section 21092.2). The NOP must be posted in the County Clerk's office for 30 days. The NOP may be accompanied by an Initial Study that identifies the issue areas for which the project could create significant environmental impacts.
2. **Draft EIR Prepared.** The Draft EIR must contain a) table of contents or index, b) summary, c) project description, d) environmental setting, e) discussion of significant impacts (direct, indirect, cumulative, growth-inducing and unavoidable impacts), f) a discussion of alternatives, g) mitigation measures, and h) discussion of irreversible changes.
3. **Notice of Completion (NOC).** The lead agency must file a NOC with the State Clearinghouse when it completes a Draft EIR and prepare a Public Notice of Availability of a Draft EIR. The lead agency must place the NOC in the County Clerk's office for 30 days (Public Resources Code Section 21092) and send a copy of the NOC to anyone requesting it (*CEQA Guidelines* Section 15087). Additionally, public notice of Draft EIR availability must be given through at least one of the following procedures: a) publication in a newspaper of general circulation, b) posting on and off the project site, and c) direct mailing to owners and occupants of contiguous properties. The lead agency must solicit input from other agencies and the public and respond in writing to all comments received (Public Resources Code Sections 21104 and 21253). The minimum public review period for a Draft EIR is 30 days. When a Draft EIR is sent to the State Clearinghouse for review, the public review period must be 45 days unless the State Clearinghouse approves a shorter period (Public Resources Code 21091).
4. **Final EIR.** A Final EIR must include a) the Draft EIR, b) copies of comments received during public review, c) list of persons and entities commenting, and d) responses to comments.
5. **Certification of Final EIR.** Prior to making a decision on a proposed project, the lead agency must certify that: a) the Final EIR has been completed in compliance with CEQA, b) the Final EIR was presented to the decision-making body of the lead agency, and c) the decision-making body reviewed and considered the information in the Final EIR prior to approving a project (*CEQA Guidelines* Section 15090).

6. **Lead Agency Project Decision.** The lead agency may a) disapprove the project because of its significant environmental effects, b) require changes to the project to reduce or avoid significant environmental effects, or c) approve the project despite its significant environmental effects, if the proper findings and statement of overriding considerations are adopted (*CEQA Guidelines* Sections 15042 and 15043).
7. **Findings/Statement of Overriding Considerations**. For each significant impact of the project identified in the EIR, the lead agency must find, based on substantial evidence, that either: a) the project has been changed to avoid or substantially reduce the magnitude of the impact, b) changes to the project are within another agency's jurisdiction and such changes have or should be adopted, or c) specific economic, social, or other considerations make the mitigation measures or project alternatives infeasible (*CEQA Guidelines* Section 15091). If an agency approves a project with unavoidable significant environmental effects, it must prepare a written Statement of Overriding Considerations that sets forth the specific social, economic, or other reasons supporting the agency's decision.
8. **Mitigation Monitoring Reporting Program.** When the lead agency makes findings on significant effects identified in the EIR, it must adopt a reporting or monitoring program for mitigation measures that were adopted or made conditions of project approval to mitigate significant effects.
9. **Notice of Determination (NOD).** The lead agency must file a NOD after deciding to approve a project for which an EIR is prepared (*CEQA Guidelines* Section 15094). A local agency must file the NOD with the County Clerk. The NOD must be posted for 30 days and sent to anyone previously requesting notice. Posting of the NOD starts a 30-day statute of limitations on CEQA legal challenges (Public Resources Code Section 21167[c]).

1.7 Discussion of Other Laws

The City's consideration of the proposed project is also subject to several other State planning and zoning laws, including, but not limited to the Housing Accountability Act (Gov. Code Section 65589.5) and the State Density Bonus Law (Gov. Code Section 65915). The Housing Accountability Act generally provides that a city may not deny a housing development project that is consistent with objective planning and zoning standards (including standards subject to a density bonus concession or waiver), or approve a housing development project at a lower density, unless it finds that such denial or reduction is necessary to avoid a threat to public health and safety that is cannot be mitigated. The State Density Bonus Law requires a city to grant a density bonus (i.e., allow more units that is otherwise allowed by the general plan and zoning designations) if the developer includes a requisite amount of affordable housing. Projects that qualify for a density bonus are also granted one or more "concession" that can be used, among other things, to relax certain development standards, to generate cost savings, as well as "waivers" of development standards that would physically preclude construction of the project with the bonus units and concession(s).

Figure 1-1 Environmental Review Process



2 Project Description

This section describes the proposed project, including the project applicant, the project site and surrounding land uses, major project characteristics, project objectives, and discretionary actions needed for approval.

2.1 Project Applicant

William Schrader
The Austin Group LLC
164 Oak Road, Alamo, California 94507

2.2 Lead Agency Contact Person

Hector J. Rojas, AICP, Planning Manager
City of Martinez
Community Development Department
525 Henrietta Street
Martinez, California 94553
(925) 372-3524

2.3 Project Location

The project site is located within the City of Martinez in Contra Costa County. The project site is approximately 6.06 acres in size and is located between Arnold Drive near its intersection with Starflower Drive and State Route (SR) 4 on Assessor's Parcel Number (APN) 161-400-009 and 161-400-010. Figure 2-1 shows the regional location of the project site, and Figure 2-2 shows the location of the site in its neighborhood context.

Figure 2-1 Regional Project Location

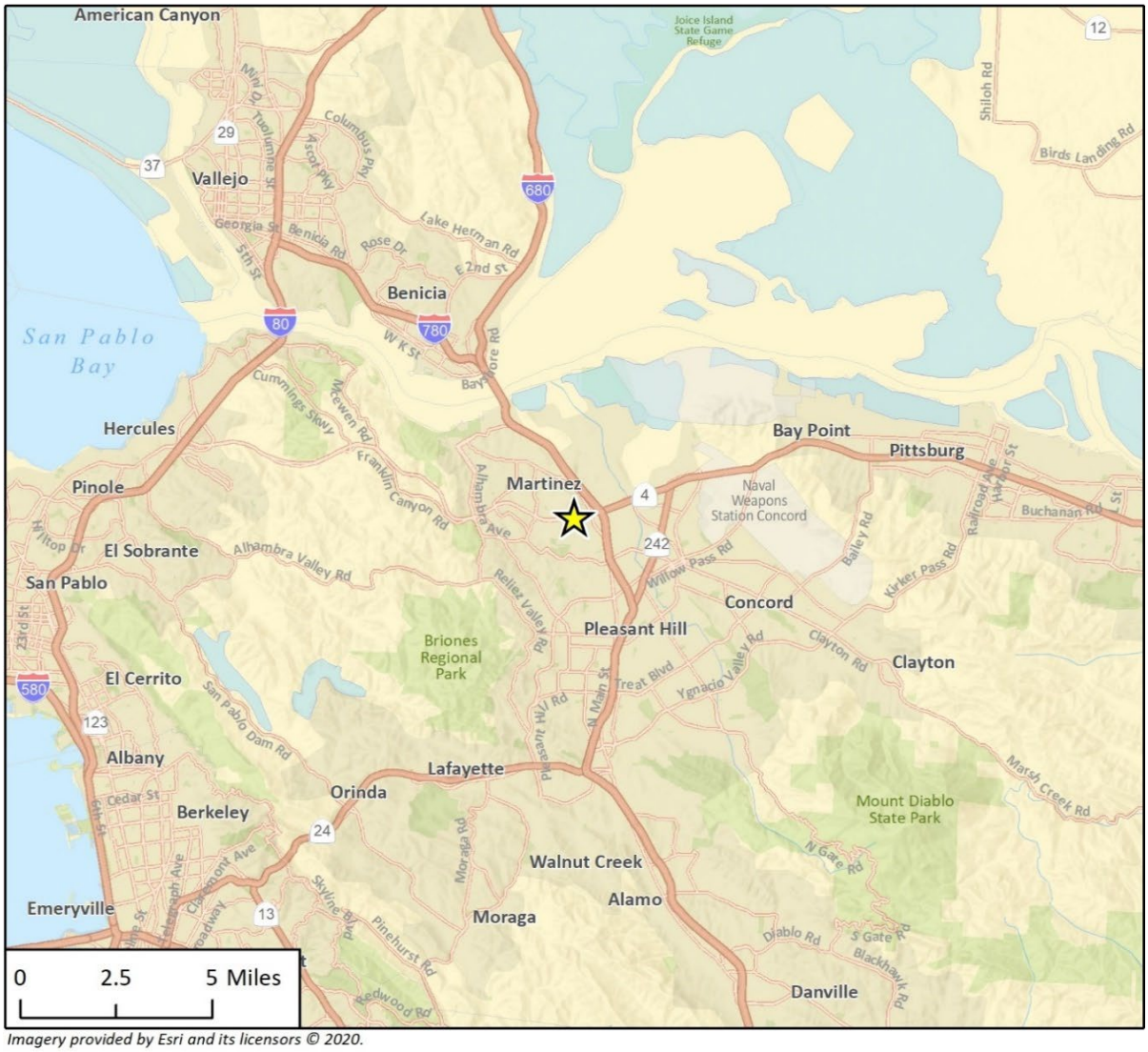


Figure 2-2 Project Site Location

2.4 Existing Site Characteristics

2.4.1 Current Land Use Designation and Zoning

The City of Martinez General Plan land use designation of the project site is Mixed Residential (up to 29 units/acre)/Office (MR/O). The site is in a Mixed Use District: Multi-Family Residential/Professional and Administrative Offices (M-R-1.5/PA), as defined by the City's Zoning Ordinance. The proposed project would be consistent with the General Plan designation and zoning.

2.4.2 Surrounding Land Uses and Setting

The project site is surrounded by a mix of land uses. It is bordered by undeveloped land and SR 4 to the south, Arnold Drive to the north, the Contra Costa County Assessor's Office to the east, and single-family residences to the west. Single-family neighborhoods are located north of Arnold Drive and to the west of the site. Mountain View Sanitary District operates and maintains a sanitary sewer lift station (pump station) on a small parcel that fronts Arnold Drive and is surrounded by the project site on the other three sides. The parcel containing the pump station is not included in the project site, and the applicant is not proposing any changes to the existing pump station.

The site grades down slope from west to east, with an approximately 20-foot hill on the southwest corner of the site. The project site is undeveloped and contains non-native annual grassland and approximately 60 trees, primarily native valley and coast live oaks and Italian stone pines, with redwoods and African sumac trees occurring along Arnold Drive (Traverso Tree Service 2022, Appendix ARB). A 48-inch storm drain traverses the site alongside a man-made ditch that traverses a portion of the site, running southeast from a point just off Arnold Drive. The man-made ditch is roughly 735 feet long and 17 to 35 feet wide when measured between the top of bank on each side.

2.5 Project Characteristics

The project applicant is seeking design review approval and has requested a density bonus. The proposed project would involve the construction of six buildings that would include 104 one bedroom/one-bathroom residential units and 79 two bedroom/two-bathroom units, for a total of 183 rental residential (apartment) units. Figure 2-3 shows the proposed site plan. Nine of the units would be below market rate, qualifying it as a California Density Bonus Project. The proposed apartment complex would also include on-site amenities such as a workout facility, business center, children's play area, outdoor kitchen area, and parking areas. The project would include 77,855 square feet of open space. Three of the proposed buildings, buildings 1, 2, and 4, would be three stories and up to 35 feet, 2 inches above adjacent grade. The other three buildings, buildings 3, 5, and 6, would be four stories and up to 44 feet, 2 inches above adjacent grade.

2.5.1 Density Bonus Request

The applicant is requesting a density bonus pursuant to Government Code Section 65915. The Density Bonus Law allows the applicant an increase in density over the maximum allowable density in exchange for the construction of affordable housing. This law requires a city to grant a density bonus and a certain number of concessions and/or waivers depending on the level and number of affordable housing units provided. To deny a concession or waiver, the city must find: 1) for a concession, that it does not result in identifiable and actual cost reductions to provide affordable

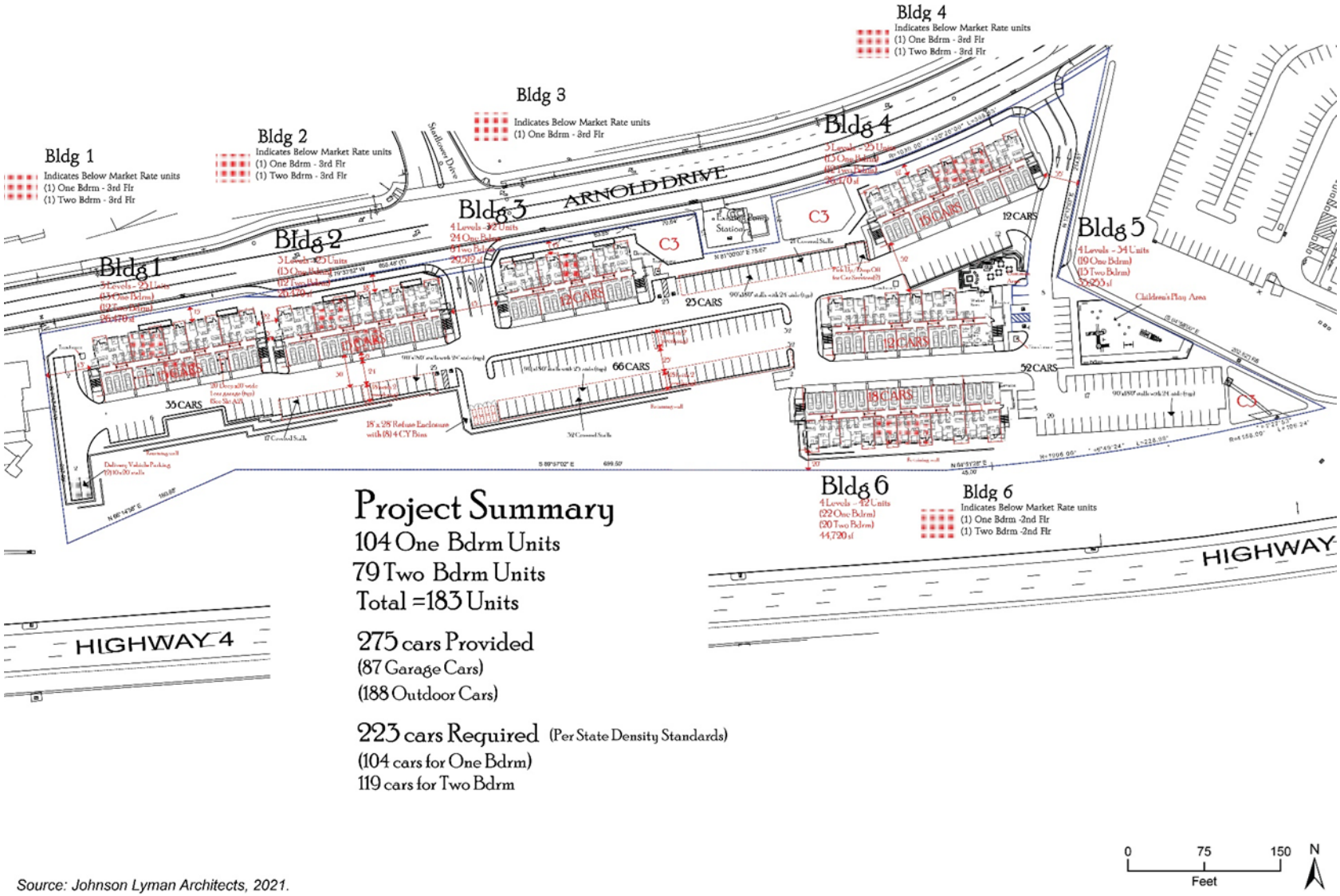
housing costs and, for a waiver, that the waiver is not necessary for the developer to physically build its project at the density and with the concessions permitted, 2) would threaten public health and safety, the physical environmental, or a historic structure or, 3) would be contrary to state or federal law. A resulting inconsistency with the general plan or zoning ordinance from a concession or waiver does not qualify as a threat to public health or safety (Gov. Code Section 65589.5(d)(2)(A)).

The base density for the project is 176 units on the 6.06-acre site. The applicant proposes to provide 5 percent of the units to very low income households (9 units), which would result in a 20 percent density bonus, i.e., up to 36 units (Gov. Code Sections 65915(b), (f)(2)). The applicant proposes to construct 7 bonus units for a total unit count of 183 units. Because the applicant proposes to provide 5 percent very low income units, the project qualifies for one density bonus concession, and development standard waivers (Gov. Code Sections 65915(d)(2)(A), 65915(e)).

2.5.2 Proposed Site Plan

Figure 2-3 shows the proposed site plan, including the location of each of the proposed buildings, parking areas and circulation, the common area, and the children's play area. The architecture would be cottage/craftsman vernacular, with multiple forms and materials. A total of three palettes of materials and colors would be incorporated throughout the site. Figure 2-4 shows renderings of the proposed project and palettes.

Figure 2-3 Proposed Project Site Plan



Source: Johnson Lyman Architects, 2021.

Figure 2-4 Project Renderings

Material Palette A ~ View from Arnold Drive ~ Building One

Material Palette B ~ View from Arnold Drive ~ Building Two

Material Palette C ~ View from Arnold Drive ~ Building Three

2.5.3 Landscaping

Landscaping would include approximately 206 trees, as well as shrubs and ground cover throughout the project site.[1] High planting densities would be used along the southern and eastern boundaries of the project site to create a visual screen between the site and SR 4 and adjacent uses. Landscaping would be irrigated using a fully automatic, water-conserving irrigation system consisting of drip and bubbler fixtures; a weather-based controller would regulate the system and include a rain sensor control to minimize watering during and after rain events. Three bioretention areas would be located on-site: one in the southeastern corner and two along Arnold Drive on either side of the existing pump station. Flow-through planters would also be located along the parking area in the center of the site and north of the three western buildings.

2.5.4 Site Access and Parking

Access to the project site would be provided via two proposed driveways from Arnold Drive (see Figure 2-3). The main project driveway would align with the existing intersection of Arnold Drive and Starflower Drive and would allow for left and right turn movements into and out of the project site from Arnold Drive. The second project driveway would be located near the eastern boundary of the project site and would provide right-turn-only access onto and from Arnold Drive. Interior drive aisles would connect all six of the proposed buildings to both driveways on the project site. Parking areas would be provided in surface parking stalls and garages underneath the proposed residences. The proposed parking lot is sized appropriately for emergency vehicle access.

The project would provide 275 parking spaces, of which 87 would be covered and 188 would be uncovered. State density bonus law requires 223 parking spaces. The project includes a request for reduced aisle width and parking space depth as allowed under State Density Bonus law. Parking locations are shown on Figure 2-3.

Pedestrian access would be provided by internal circulation paths. The project also includes construction of 7-foot-wide sidewalks along the Arnold Drive frontage.

2.5.5 Utility Infrastructure

The project would connect to existing water infrastructure within Arnold Drive for domestic water use. The connection would consist of an 8-inch line that would split into multiple 4-inch water lines to serve the proposed apartment buildings. Two additional connections would be made for fire water supply through the project site. Wastewater service would be provided by 8-inch sanitary sewer lines connecting to the proposed apartment buildings. The 8-inch sewer lines would transport wastewater to the existing sewer pump station located adjacent to Arnold Drive.

Public storm drainage infrastructure currently exists in the eastern and northern portions of the project site, and a drainage swale exists on the northeastern portion of the project site. The public storm drain systems would be replaced and rerouted to run within the drive aisles of the project site. Proposed public storm drain infrastructure would include multiple sizes of piping, ranging from 24 inches to 60 inches. The existing drainage swale on the project site would be piped, and new stormwater infrastructure, such as bioretention areas and storm water planters, would be

[1] Standards refer to the secondary street trees known as crape myrtle (lagerstroemia “tuscarosa”) in the applicant-provided landscape plans.

incorporated throughout the project site prior to connection with proposed stormwater infrastructure.

2.5.6 Site Preparation and Construction

Construction would take approximately 24 months. Grading would occur over approximately 4 months, and the project would require import of 12,673 cubic yards of soil. The maximum depth of excavation would be 15 feet below ground surface. Of the on-site trees, 43 would be removed and 17 would be retained (Appendix ARB).

2.6 Project Objectives

The project has the following objectives:

- **Housing**: Provide multi-family housing on an identified Housing Opportunity Site in the City's 2015-2023 Housing Element and assist the City in meeting its housing obligations by providing a 183 rental unit project
- **Implementation of City Plans**: Provide housing on an identified Housing Opportunity Site from the City's 2015-2023 Housing Element
- **Mobility**: Efficiently connect the proposed project uses to freeway access and proximate retail uses, while providing safe spaces for pedestrians, cyclists, transit, and motor vehicles along Arnold Drive

2.7 Required Approvals

The following approvals would be required from the City of Martinez for the project:

- **Density Bonus Request** for the number of residential units proposed
  - **Height Concession** to allow a maximum height of 44 feet, 2 inches for proposed buildings 3, 5, and 6
  - **Hillside Density Waiver**
  - **Building Separation Waiver**
  - **Parking Waiver** for relief from the required dimension of exterior pad parking spaces and driveway width
  - **Rear Building Setback Waiver**
  - **Drive Aisle Width Waiver** to allow reduced drive aisle width and parking space depth, as allowed by State Density Bonus law
  - **Parking Lot Landscaping Waiver**
- **Design Review Permit** for the design of the apartments

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3 Environmental Setting

This section provides a general overview of the environmental setting for the proposed project. More detailed descriptions of the environmental setting for each environmental issue area can be found in Section 4, *Environmental Impact Analysis*.

3.1 Regional Setting

The project site is in the City of Martinez, which is located in northern Contra Costa County adjacent to Suisun Bay in the east Bay Area. Martinez covers an area of approximately 13.6 square miles and is bordered by the cities of Concord, Pleasant Hill, and Walnut Creek, and the unincorporated communities of Vine Hill and Pacheco.

A grid system of roadways aligned with the Carquinez Strait to the north, including arterials, collectors, and local streets, provide vehicular access throughout the city. Major roadways in Martinez include Interstate 680 (I-680), State Route (SR) 4, Alhambra Avenue, Pine Street, Pacheco Boulevard, Howe Road, and Morello Avenue. Regional access to Martinez is provided by I-680 and SR 4. I-680 is approximately 0.3 mile east of the project site, and SR-4 is approximately 0.4 mile east of the project site. The city is also served by the Bay Area Rapid Transit (BART) rail network and an Amtrak rail stop. Figure 2-1 in Section 2, *Project Description*, shows the regional context of the project.

The Mediterranean climate of the region and the coastal influence produce moderate to cool temperatures year-round, with rainfall concentrated in the winter months. Although air quality in the area has steadily improved in recent years, the entirety of Contra Costa County remains an Environmental Protection Agency (EPA) nonattainment area for ozone (urban smog) and particulate matter ($PM_{2.5}$). The City of Martinez is located approximately 14 miles inland from the San Francisco Bay and 24 miles inland of the Pacific Ocean.

3.2 Project Site Setting

The project site is approximately 6.06 acres in size and is located between Arnold Drive near its intersection with Starflower Drive and SR 4 on Assessor's Parcel Number (APN) 161-400-009 and 161-400-010. The site grades down slope from west to east, with an approximately 20-foot hill on the southwest corner of the site. Generally, the project site is vacant and dominated by annual grasses with trees scattered throughout the site. Figure 2-1 in Section 2, *Project Description*, shows the project location in the region. Figure 2-2 shows the project location in relationship to the surrounding neighborhood.

The project site is currently undeveloped. The site is zoned Mixed Use District: Multi-Family Residential/Professional and Administrative Offices (M-R-1.5/PA), as defined by the City's Zoning Ordinance. The General Plan land use designation of the project site is Mixed Residential (up to 29 units/acre)/Office (MR/O).

3.3 Cumulative Development

In addition to the specific impacts of individual projects, CEQA requires EIRs to consider potential cumulative impacts of the proposed project. CEQA defines "cumulative impacts" as two or more individual impacts that, when considered together, are substantial or will compound other environmental impacts. Cumulative impacts are the combined changes in the environment that result from the incremental impact of development of the proposed project and other nearby projects. For example, traffic impacts of two nearby projects may be less than significant when analyzed separately but could have a significant impact when analyzed together. Cumulative impact analysis allows the EIR to provide a reasonable forecast of future environmental conditions and can more accurately gauge the effects of a series of projects.

CEQA requires cumulative impact analysis in EIRs to consider either a list of planned and pending projects that may contribute to cumulative effects or a forecast of future development potential. Currently planned and pending projects in the City of Martinez are listed in Table 3-1. These projects are considered in the cumulative analyses in Section 4, *Environmental Impact Analysis*.

Table 3-1 Cumulative Projects List

Project No.	Project Status	Project Name	Project Location	Land Use
1	Under Construction	Contra Costa County Satellite Administration Building	651 Pine Street	83,000-Square-Foot Government Offices
2	Reasonably Foreseeable	DeNova Homes	Benham Drive/Chatswood Drive	10-Lot Single-Family Residential Detached
3	Entitled	Alhambra Highlands	Alhambra Avenue/Wildcroft Drive	109-Lot Single-Family Residential Detached
4	Under Construction	Traditions at the Meadows	Center Avenue/Vine Hill Way	65-Lot Single-Family Residential Detached
5	Under Construction	Muir Heights	Muir Station Road/Laurel Knoll Drive	75 Townhomes Single-Family Residential Attached
6	Entitled	Bay's Edge	Howe Road (APNs: 375-311-001; -003)	30 Townhomes Single-Family Residential Attached
7	Entitled	Portside Apartments	600-610 Ferry Street	13 Apartments and 1,800 Square-Foot Mixed-Use
8	Reasonably Foreseeable	Telfer Property	211 Foster Street	60-Lot Single-Family Detached
9	Under Review	Brookside Assisted Living Facility	4110 Alhambra Avenue	82-Bed Convalescent Facility
10	Entitled	Sunrise Self-Storage	Sunrise Drive between Pacheco Boulevard and Arnold Drive	Two Buildings Totaling 160,450 Square Feet

Note: Cumulative projects are based on applications the City has either received or processed at the time of preparation of this EIR.

Source: City of Martinez Community Development Department, February 2022

4 Environmental Impact Analysis

This section discusses the possible environmental effects of the proposed project for specific issue areas that were identified through the scoping process as having the potential to experience significant effects. “Significant effect” is defined by the *CEQA Guidelines* Section 15382 as:

> a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment but may be considered in determining whether the physical change is significant.

The assessment of each issue area begins with a discussion of the environmental setting related to the issue, which is followed by the impact analysis. In the impact analysis, the first subsection identifies the methodologies used and the “significance thresholds,” which are those criteria adopted by the City and other agencies, universally recognized, or developed specifically for this analysis to determine whether potential effects are significant. The next subsection describes each impact of the proposed project, mitigation measures for significant impacts, and the level of significance after mitigation. Each effect under consideration for an issue area is separately listed in bold text with the discussion of the effect and its significance. Each bolded impact statement also contains a statement of the significance determination for the environmental impact as follows:

> **Significant and Unavoidable**. An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved per *CEQA Guidelines* Section 15093.
>
> **Less than Significant with Mitigation Incorporated**. An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings under *CEQA Guidelines* Section 15091.
>
> **Less than Significant**. An impact that may be adverse but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.
>
> **No Impact.** The proposed project would have no effect on environmental conditions or would reduce existing environmental problems or hazards.

Following each environmental impact discussion is a list of mitigation measures (if required) and the residual effects or level of significance remaining after implementation of the measure(s). In cases where the mitigation measure for an impact could have a significant environmental impact in another issue area, this impact is discussed and evaluated as a secondary impact. The impact analysis concludes with a discussion of cumulative effects, which evaluates the impacts associated with the proposed project in conjunction with other planned and pending developments in the area listed in Section 3, *Environmental Setting*.

The Executive Summary of this EIR summarizes all impacts and mitigation measures that apply to the proposed project.

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4.1 Aesthetics

This section analyzes potential impacts related to aesthetics from project implementation, including the proposed project's potential impacts on scenic vistas, scenic resources, visual character and quality, and light and glare.

4.1.1 Setting

a. Existing Conditions

The project site is an undeveloped parcel within the City of Martinez and is surrounded by a mix of land uses. As shown in Figure 4.1-1, the site is bordered by undeveloped land and State Route (SR) 4 to the south, Arnold Drive to the north, the Contra Costa County Assessor's Office to the east, and a single-family residence to the west. Single-family neighborhoods are located north of Arnold Drive and to the west of the site. Mountain View Sanitary District operates and maintains a sanitary sewer lift station on a small parcel that fronts Arnold Drive and is surrounded by the project site on the other three sides.

The site slopes downward from west to east, with an approximately 20-foot hill on the southwest corner of the site. The project site contains non-native annual grassland and approximately 60 trees, primarily native valley and coast live oaks and Italian stone pines, with redwoods and African sumac trees occurring along Arnold Drive (Traverso Tree Service 2022, Appendix ARB). A 48-inch storm drain crosses the site alongside a straight, man-made ditch that runs southeast from a point just off Arnold Drive for approximately 600 feet through the project site.

4.1.2 Regulatory Setting

a. Federal Regulations

No federal regulations pertain to the visual resources for the proposed project.

b. State Regulations

California Scenic Highway Program

Recognizing the value of scenic areas and view from roads in such areas, the State Legislature established the California Scenic Highway Program in 1963 (Streets and Highways Code Sections 260 et seq). This legislation preserves and protects scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to highways. The goal of the Scenic Highway Program is to preserve and enhance the natural beauty of California. Under this program, a number of State Routes have been designated as eligible for inclusion as scenic routes. Once the local jurisdiction through which the roadway passes has established a corridor protection program and the Departmental Transportation Advisory Committee recommends designation of the roadway, the State may officially designate roadways as scenic routes. Interstate highways, State Routes and county roads may be designated as scenic under the program. The Master Plan of State Highways Eligible for Official Scenic Highway Designation maps designated highway segments, as well as those that are eligible for designation.

Figure 4.1-1 Site Photographs

Photograph 1. Southeast view of the project site from Arnold Drive.

Photograph 2. Property frontage looking west from Arnold Drive.

The nearest designated state scenic highways are Interstate 680 (I-680), from the Alameda County line to the junction with SR 24, and SR 24 from the east portal of the Caldecott tunnel to I-680 near Walnut Creek (Caltrans 2019).

California Building Energy Efficiency Standards

California Code of Regulations Title 24, Part 6 contains California's Energy Efficiency Standards for Residential and Non-residential Buildings. California Building Energy Efficiency Standards were established by the California Energy Commission (CEC) in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy efficiency standards for residential and nonresidential buildings. The 2019 Energy Code contains standards to reduce energy consumption for outdoor lighting application in residential and non-residential developments. Mandatory measures for outdoor lighting and glare are specified in Sections 110.9, 130.0, and 130.2 of the 2019 Energy Code.

c. Local Regulations

City of Martinez General Plan

The following goals, policies, and programs in the City of Martinez General Plan (1973) are intended to protect aesthetic and visual resources in the city. At the time of this document, the City is in the process of updating their General Plan but does not have a projected timeline for adoption.

27 Scenic Roadways Element Policies

SRE-27.22 California State Highway Route 4, from its eastern junction with Route 680 to its western terminus with Interstate 80 should be developed to scenic highway standards. The visual quality of the portion of the highway within the City will aid greatly in distinguishing Martinez from the subregion.

SRE-27.35 Where luminaries are provided they should be consistent in scale with neighborhood buildings or landscape features. The basic intent shall be to subordinate these vertical elements to surrounding conditions.

SRE-27.36 Buildings sited along the scenic roadways shall be placed at a sufficient distance from the roadway to ensure retention of the major scenic attributes associated with the respective roadway section. The selection of building materials, colors and signing shall also be consistent with this aim.

The project site is designated in the City's General Plan as Mixed Residential/Office (MR/O) (City of Martinez 1973). The site is zoned as Mixed Use District: Multi-Family Residential/Professional and Administrative Offices (M-R-1.5/PA) (City of Martinez 2018). Surrounding and adjacent parcels are developed with single-family residences to the north, south, and west, and a business park to the east.

The City's General Plan Land Use Element identifies views of ridgelines and open space areas as important visual resources to be preserved. The City's General Plan does not contain policies that specifically address scenic vistas. However, the City's General Plan designates visual resources in Martinez that include major visual gateways and visually significant hilltops and ridges.

The City's General Plan identifies the project site as being located within a Major Visual Gateway and adjacent to a Major Scenic Route (SR 4). The City of Martinez Municipal Code (MMC) Section

22.34.030 requires that projects within areas designated as a Major Visual Gateway and/or along a Major Scenic Route be subject to design review.

The General Plan identifies an open space preserve area to the south of the project site, across SR 4, on the south side of Muir Road. The open space preserve is mostly grassland with scattered trees along an isolated hillside in an urban residential area of Martinez. The preserve is identified as a visually significant hilltop in the visual environment of the City's General Plan (City of Martinez 2013).

John Muir Parkway Specific Area Plan

The project site is located within the John Muir Parkway Specific Area Plan (Appendix SAP), which sets forth urban design standards "by which to ensure a superior level of site amenity and architectural quality in new residential, shopping and work environments." Major Objectives 33.21 through 33.28 focus on achieving an urban development pattern, a cohesive sense of community, developing high-density residential land uses, and improving the aesthetic appeal of entrances to the City, among other goals. Residential Land Use Policies (33.311 through 33.319) relate to the type, location and intensity of development, and Design Review Policies are outlined in Section 33.4. Guidelines 2.10 Overall Urban Design Objective and 2.30 Multi-Unit Residential Project Design Standards apply to the proposed project (see Appendix SAP). In addition, Policy 1.04 recognizes the importance of long and short views of local hills.

4.1.3 Impact Analysis

a. Methodology and Significance Thresholds

This section evaluates the anticipated changes in the visual environment from existing conditions to construction of the proposed project. Based on *CEQA Guidelines* Appendix G, the proposed project would have a significant impact if it would:

1. Have a substantial adverse effect on a scenic vista;
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
3. Substantially degrade the existing visual character or quality of public views of the site and its surroundings in non-urbanized areas. Or, if the project is in an urbanized area, would conflict with applicable zoning and other regulations governing scenic quality; or
4. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area.

a. Project Impacts and Mitigation Measures

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

Impact AES-1 THE PROPOSED PROJECT WOULD NOT SUBSTANTIALLY BLOCK PUBLIC VIEWS TO A VISUALLY SIGNIFICANT HILLTOP. IMPACTS ON SCENIC VISTAS WOULD BE LESS THAN SIGNIFICANT.

As described in 4.1.2, *Regulatory Setting*, the preserve south of SR 4 is identified as a Visually Significant Hilltop. A small section of the preserve is visible from the easternmost end of the project site; however, site topography and existing trees currently block most of the open space views throughout the project site.

As shown in Figure 4.1-1, the project site's northern frontage is visible from Arnold Drive. The project would involve the development of six residential buildings, with intermittent open space and parking areas that would break up the massing on the site, as shown in the project renderings (refer to Figure 2-5). Pursuant to MMC Section 22.34.030, projects within areas designated as a Major Visual Gateway require approval from the City's Planning Commission for proposed massing, which could reduce blockage of public views. The project's design would be approved prior to final project approval. John Muir Parkway Specific Plan Area Policy 1.04 also recognizes the importance of long and short views of local hills; the project would be consistent with this policy, because the public views of the significant hilltop are long views, and the project would not block public views of the top of the hilltop.

The massing and height of the proposed structures would not substantially block public views of the significant hilltop that is part of the open space preserve, because it is barely visible under existing conditions. Therefore, this impact would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold:	Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway?

Impact AES-1 THERE ARE NO DESIGNATED STATE SCENIC HIGHWAYS WITHIN OR NEAR THE PROJECT SITE, AND THE PROJECT WOULD NOT BE VISIBLE FROM A STATE SCENIC HIGHWAY. IMPACTS ON STATE SCENIC HIGHWAYS WOULD BE LESS THAN SIGNIFICANT.

The project site is not located in or near a designated State Scenic Highway. The project would not substantially damage scenic resources associated with State-designated scenic highways. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

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

Impact AES-2 THE PROPOSED PROJECT WOULD BE SUBJECT TO DESIGN REVIEW, WHICH WOULD HELP ENSURE THAT THE PROJECT DESIGN IS CONSISTENT WITH CITY DESIGN GUIDELINES FOR THE JOHN MUIR PARKWAY SPECIFIC AREA PLAN AREA. ALTHOUGH, THE BUILDINGS' MASSING AND HEIGHT WOULD CONFLICT WITH APPLICABLE REGULATIONS, SUCH AS MMC CHAPTER 22.34, GOVERNING SCENIC QUALITY, STATE DENSITY BONUS LAW ALLOWS FOR AN INCONSISTENCY WITH DEVELOPMENT STANDARDS BECAUSE THERE WOULD BE NO ADVERSE IMPACT TO PUBLIC HEALTH AND SAFETY. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

The project is located in an urbanized area. Residential use of the project site would be consistent with its General Plan land use and City zoning designations. However, as stated in Chapter 2.5.1, *Density Bonus Request*, the project has requested a height concession pursuant to California Density Bonus law, to allow a maximum height of 44 feet 2 inches, exceeding the City's height limit by over 8 feet. Under the Density Bonus Law, an inconsistency with development standards or zoning standards is not a specific, adverse impact to public health or safety. The project site is a Housing Opportunity Site, as identified by the City's 2015 – 2023 Housing Element, and increased building height is required to accommodate the site density as established by the Housing Element. The project would be consistent with the neighborhood character in that it would employ building forms and colors that reflect surrounding residential uses, while articulating building mass and creating scale that would be compatible with other development located south of Arnold Drive. The proposed buildings would include eave overhangs, exterior decks, and window details to create shadow lines that articulate the building. The first floor has been designed to use roof forms and masonry details to create a foundational feel for the building while increasing interest at street level. The proposed structures' colors and materials would include earth tones and faux finishes that would help them blend in with the natural setting, and balconies and façades would appear as residential structures similar to the adjacent neighborhood. The project has also been designed to include three exterior building materials (masonry, shingle, and plaster) in different colors that are used to provide highlight vertical elements and break up the linear massing.

Pursuant to MMC Chapter 22.34, the project would require design review and approval from the Planning Commission. This approval would help ensure that the project's colors, materials, landscaping and architectural features (Figure 4.1-2) would be in keeping with the City's character and the surrounding neighborhoods.

Mitigation Measures

No mitigation measures would be required.

Significance After Mitigation

Impacts would be less than significant.

Figure 4.1-2 Proposed Material Palettes

Material Palette A – View from Arnold Drive – Building One

Material Palette B – View from Arnold Drive – Building Two

Material Palette C – View from Arnold Drive – Building Three

Threshold 4:	Would the project create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

Impact AES-3 THE PROPOSED PROJECT WOULD INTRODUCE NEW SOURCES OF LIGHT AND GLARE TO AN UNDEVELOPED SITE WITH NO LIGHTING OR GLARE-PRODUCING FEATURES. HOWEVER, THE SITE IS SURROUNDED BY ROADWAYS AND DEVELOPMENT WITH EXISTING LIGHT AND GLARE SOURCES, AND COMPLIANCE WITH EXISTING REGULATIONS WOULD ENSURE THAT LIGHT AND GLARE FROM THE PROJECT WOULD BE SIMILAR TO THAT OF SURROUNDING USES. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

The project site is in a suburban area with low to moderate levels of existing lighting from exterior structure lighting, light visible through windows at adjacent residential uses, street lighting along Arnold Drive, and light from the headlights of vehicular traffic traveling at night along SR 4 to the south of the site and Arnold Drive to the north of the site. The proposed project would continue the existing development pattern of residential and office land uses in the surrounding area and thus would not substantially change the existing light environment.

The primary sources of glare in the project area are the sun's reflection off light colored and reflective building materials and finishes, and from metallic and glass surfaces of parked vehicles on site. The proposed project's windows could generate glare from reflected sunlight during certain times of the day. As shown in Figure 4.1-2 and Figure 2-5, windows would be largely shielded by landscaping and other design features that break up massing and reduce the potential for excessive glare from reflected light. In addition, with implementation of required measures for outdoor lighting and glare in the 2019 Energy Code, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

4.1.4 Cumulative Impacts

A project's environmental impacts are "cumulatively considerable" if the "incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects" (*CEQA Guidelines* Section 15065(a)(3)). Table 3-1 lists cumulative development projects in Martinez, and the closest project is the Sunrise Self-Storage project, located on Sunrise Drive between Pacheco Boulevard and Arnold Drive, approximately 0.3-mile northeast on Arnold Drive. However, this project is not within the same viewshed due to area topography. The geographic scope for cumulative aesthetics impacts includes the project site and adjacent properties. This geographic scope is appropriate for aesthetics because intervening topography and buildings limit the extent of views of scenic areas, and lighting and glare generally affects adjacent properties.

The planned and pending projects in the project site vicinity are listed in Table 3-1 of Section 3, *Environmental Setting*. Cumulative projects considered in this analysis include 10 projects, including residential, industrial, and commercial uses. Potential aesthetic impacts are typically project-level impacts and are not cumulative in nature. Individual development proposals are reviewed separately by the City and undergo environmental review when it is determined that the potential for significant impacts exist. In the event that future cumulative development would result in

impacts related to aesthetic impacts, those potential impacts would be addressed on a case-by-case basis in accordance with the requirements of the CEQA. However, compliance with the MMC and General Plan policies and programs, other laws and regulations mentioned above would ensure that project-specific impacts associated with aesthetics would be less than significant, with the exception of the project's conflict with a regulation governing scenic quality. As discussed under Impact AES-3, the proposed project would have significant and unavoidable effects due to conflicts with the height limitation. However, potential impacts from cumulative development would be addressed on a case-by-case basis, including their adherence to regulations governing scenic quality. Therefore, potential impacts associated with aesthetics would not be cumulatively considerable, and cumulative impacts related to aesthetics would be less than significant.

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4.2 Biological Resources

This section evaluates the potential for significant impacts to biological resources resulting from project construction and operation. The analysis in this section is based on the *Biological Resources Assessment* (BRA) conducted by Rincon Consultants, Inc. (Rincon) in September 2020 (Appendix BIO). Site conditions were verified in January 2022, and Rincon confirmed that the site has not changed substantially from 2020, when the BRA was conducted.

4.2.1 Setting

The City of Martinez is located on the southern side of the Carquinez Strait in central Contra Costa County. Martinez is bordered by the Carquinez Strait and Solano County to the north, the cities of Pleasant Hill and Concord to the southeast, and unincorporated Contra Costa County to the west and northwest. In Martinez, areas of open space and natural habitat are found along the western border in the Alhambra Valley with the Alhambra Creek feeding into the Carquinez Strait, as well as to the northwest at the Carquinez Strait Regional Shoreline. The city limits include portions of six watersheds. Most of Martinez (including downtown) belongs to the lower third of the Alhambra Creek Watershed, which originates in Briones Regional Park to the west. The headwaters and upper watersheds of the Hidden Lakes, Virginia Creek, Vine Hill Creek, and Peyton Creek watersheds originate within Martinez. The Shell-West Watershed lies both within the city limits and on PBF energy property in the County.

a. Topography and Soils

At an elevation range of approximately 100 feet above mean sea level, the site's topography slopes downward from west to east, with a hill rising approximately 20 feet in the southwest corner. The project site is depicted on the *Walnut Creek, California* USGS 7.5-minute quadrangle. Adjacent land uses include residential development, institutional uses, and undeveloped land. The project site occurs primarily along the northwestern edge of the Ygnacio Valley floor.

The project site contains the following three soil map units (USDA 2020): Each is defined below:

- **Gaviota sandy loam, 15 to 30 percent slopes:** a somewhat excessively drained sandy soil that occurs on mountain slopes. It is formed in residuum weathered from sandstone. A typical profile consists of sandy loam to 12 inches.
- **Positas loam, 2 to 9 percent slopes:** a moderately well drained loamy soil that occurs on terraces. It is formed from alluvium derived from igneous and sedimentary rock. A typical profile consists of loam to 21 inches and clay at 21 to 60 inches.
- **Lodo clay loam, 9 to 30 percent slopes:** a somewhat excessively drained soil that is found on hills. It is formed in Residuum weathered from sandstone and shale. A typical profile consists of clay loam to 18 inches and unweathered bedrock from 18 to 22 inches.

None of the soils mapped within the project site are listed as hydric soils.

b. Vegetation Communities and Land-Cover Types

Four terrestrial vegetation communities or other land-cover types were identified within the project site during the field survey conducted on May 21, 2020, by Rincon Biologist Anastasia Ennis (see Appendix BIO for more information on survey efforts). A map approximating the types and acreages

of the various vegetation communities and land-cover types that occur within the project site is shown in Figure 4.2-1 below.

The vegetation community characterizations for this analysis were based on the classification systems presented in *A Manual of California Vegetation, Second Edition* (Sawyer et al. 2009) but have been modified slightly to reflect the existing site conditions most accurately.

Willow Riparian Woodland

The project site contains approximately 0.07 acre of red willow (*Salix laevigata)* riparian woodland. This vegetation community most closely corresponds with the *Salix gooddingii – Salix laevigata* Forest and Woodland Alliance in the *Manual of California Vegetation* system (Sawyer et al. 2009). It occurs toward the western end of a seasonal drainage ditch that traverses a portion of the site from east to west, described further below. This community consists of a canopy dominated by red willow with coast live oak (*Quercus agrifolia*). The understory includes toyon (*Heteromeles arbutifolia*), poison oak (*Toxicodendron diversilobum*), and thistle (*Carduus* sp.).

Landscaped

The project site contains approximately 1.99 acres of landscaped areas. This land-cover type is not naturally occurring and does not appear in the classification systems described in Holland (1986) or Sawyer et al. (2009). It consists of non-native ornamental trees, although some native vegetation is re-establishing itself amidst the ornamental plantings. Landscaped cover occurs primarily in the southwestern portion of the project site, where the dominant tree species is the non-native Italian stone pine (*Pinus pinea*). Coast live oak, valley oak (*Quercus lobata*), and toyon are also present as parts of both the canopy and the understory. Poison oak is also common in the understory. A small patch of five coast live oaks with no understory shrubs occurs along Arnold Drive to the east of the pump station. Ornamental trees are also planted around the pump station, including redwood (*Sequoia sempervirens*) and African sumac (*Searsia lancea*).

Coast live oak and valley oak are native species; however, individuals present within the project site are small and recently established, growing in and among ornamental plantings in a disturbed area and are not part of the natural community.

Ruderal

The project site contains approximately 3.52 acres of ruderal lands. Habitats that have been heavily disturbed or altered such that natural vegetation has largely been removed are mapped as ruderal areas. These sites do not correspond well with either the Holland (1986) or Sawyer et al. (2009) classification systems. Ruderal areas have had visible disturbance of soil or vegetation and are mostly bare and colonized by weeds and disturbance-tolerant natives. These include field bindweed (*Convolvulus arvensis*), hairy vetch (*Vicia villosa*), prickly lettuce (*Lactuca serriola*), curly dock (*Rumex crispus*), wild radish (*Raphanus sativa*), field mustards (*Hirschfeldia* spp., *Brassica* spp.), narrowleaf milkweed (*Asclepius fascicularis*), rose clover (*Trifolium hirtum*), Italian thistle (*Carduus pycnocephalus*), and non-native annual grasses (*Avena fatua*, *Hordeum* sp., *Bromus* sp.). Trees also occur throughout this land-cover type, individually or in low density, including coast live oak, valley oak, and red willow. Ruderal areas within the project site shows evidence of mowing or disking.

Figure 4.2-1 Vegetation Communities and Land Cover

Seasonal Drainage Ditch

A man-made ditch with in-channel riparian vegetation occurs on roughly 0.45 acre of the site and was likely constructed to drain storm water from adjacent properties and roadways. This ditch contains concrete culverts that are partially buried at each end. The west end contains dense, annual weedy vegetation as well as a patch of willow riparian vegetation (see Willow Riparian Woodland described above). To the east of the willow grove, wetland vegetation is present in the bottom of the ditch, including rabbit's foot grass (*Polypogon monspeliensis*), saltgrass (*Distichlis spicata*), and curly dock. A single, small stem of bulrush (*Schoenoplectus* sp.) was growing in the ditch. Senescent cattail (*Typha latifolia*) and cocklebur (*Xanthium strumarium)* were observed, but no new growth of these obligate wetland species was observed in the ditch. The ditch was dry, but cracking did occur where sediment was present, and wet soils were found 2 inches below the surface, likely due to rains earlier in the week when the site visit was conducted. The far west end of the ditch has a storm drain maintenance access point.

c. Special-Status Biological Resources

Special-status biological resources include those plants, animals, vegetation communities, potentially jurisdictional aquatic features, and other sensitive biological resources that are governed under federal, State, and local laws and regulations. Information regarding the occurrences of special-status species in the vicinity of the project site was obtained from searching the California Department of Fish and Wildlife (CDFW) *California Natural Diversity Data Base* (CNDDB) (CDFW 2020a), *Biogeographic Information and Observation System* (CDFW 2020b), U.S. Fish and Wildlife Service (USFWS) *National Wetlands Inventory* (USFWS 2020a), USFWS *Information for Planning and Consultation* (USWFS 2020b), and USFWS *Critical Habitat Portal* (USFWS 2020c) for the U. S. Geological Survey (USGS) *Walnut Creek* and eight surrounding 7.5-minute quadrangles. Other resources included the California Native Plant Society's (CNPS) online *Inventory of Rare and Endangered Plants of California* (CNPS 2020), CDFW's *Special Animals List* (August 2019a), and CDFW's *Special Vascular Plants, Bryophytes, and Lichens List* (January 2020b). These databases contain records of reported occurrences of federal- or State-listed endangered, threatened, rare, or proposed endangered or threatened species, federal species of concern, state species of special concern, or otherwise sensitive species or habitat that may occur within the nine-quad search radius of the project site. This search range encompasses a sufficient distance to accommodate for regional habitat diversity and to overcome the limitations of the CNDDB as the CNDDB is based on reports of actual occurrences and does not constitute an exhaustive inventory of every resource. See Appendix BIO for detailed species lists.

Special-Status Species

Local, State, and federal agencies regulate special-status species and may require an assessment of their presence or potential presence to be conducted prior to the approval of development on a property. Assessments for the potential occurrence of special-status species are based upon known ranges, habitat preferences for the species, species occurrence records from the CNDDB, species occurrence records from other sites in the project vicinity (2020a), and previous reports for the project site. The potential for each special-status species to occur within the project site was evaluated according to the following criteria:

- **Not expected.** Habitat on and adjacent to the site is clearly unsuitable for the species' requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- **Low Potential.** Few of the habitat components meeting the species' requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- **Moderate Potential.** Some of the habitat components meeting the species' requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- **High Potential.** All of the habitat components meeting the species' requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- **Present.** Species is observed on the site or has been recorded (e.g., CNDDB, other reports) on the site recently (within the last 5 years).

For the purpose of this EIR, special-status species are those plants and animals listed, proposed for listing, or candidates for listing as Threatened or Endangered by the USFWS or National Marine Fisheries Service (NMFS) under the Federal Endangered Species Act (FESA), those listed or candidates for listing as Rare, Threatened, or Endangered under the California Endangered Species Act (CESA) or Native Plant Protection Act, those identified as Fully Protected by the California Fish and Game Code (CFGC; Sections 3511, 4700, 5050, and 5515), those identified as Species of Special Concern (SSC) or Watch List species by the CDFW, and plants occurring on lists 1 and 2 of the CNPS California Rare Plant Rank (CRPR) system per the following definitions:

- **Rank 1A**: Plants presumed extinct in California
- **Rank 1B.1**: Rare or endangered in California and elsewhere; seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)
- **Rank 1B.2**: Rare or endangered in California and elsewhere; fairly endangered in California (20-80 percent occurrences threatened)
- **Rank 1B.3**: Rare or endangered in California and elsewhere; not very endangered in California (<20 percent of occurrences threatened, or no current threats known)
- **Rank 2:** Rare, threatened or endangered in California but more common elsewhere

Based on the query of the CNDDB and CNPS online *Inventory of Endangered Plants* (CDFW 2020a, CNPS 2020), there are 61 special-status plant species, 52 special-status wildlife species, and four sensitive natural communities documented within the *Walnut Creek, California* USGS 7.5-minute quad and the eight surrounding quads. The 113 special-status species have been evaluated for potential to occur within the project site (Appendix BIO).

Special-Status Plant Species

Sixty-one special-status plant species known to occur in the region were evaluated for their potential to occur in the project site (see Appendix BIO). None of these 61 species were observed during the site survey or would be expected to occur within the project site. Species could be excluded based on known range and elevation, the lack of the species' specific habitat requirements within the project site (e.g., chaparral and serpentine substrate) or due to the disturbed nature of the site and its lack of connectivity to natural vegetation communities.

Special-Status Wildlife Species

Rincon identified 52 special-status wildlife species that have been documented within the nine-quadrangle search radius (see Appendix BIO). None of these special-status wildlife species were observed during the reconnaissance survey. These species were reviewed for potential to occur within the project site (see Appendix BIO). Due to the level of human presence and developed areas surrounding the site, as well as species-specific requirements, 51 of these species could be eliminated from evaluation. Special-status species in the vicinity are associated generally with oak woodlands, riparian, and aquatic habitats. The site is largely surrounded by development including single-family residences to the north and west, SR 4 to the south, and office space immediately to the east, which pose a substantial barrier for wildlife movement from these habitats. One species was found to have low potential to occur in the project site. Cooper's hawk, due to the level of human presence and developed areas surrounding the site, has a low potential to nest in trees within the project site or project vicinity. This species was not evaluated because of the low potential to occur.

NESTING BIRDS

Non-game migratory birds and native birds protected under the CFGC Section 3503 and the Federal Migratory Bird Treaty Act (MBTA), such as native avian species common to developed and ruderal areas, have the potential to breed and forage in the project site and vicinity. Species of birds common to the area that typically occur in the region, such as red-tailed hawk (*Buteo jamaicensis*), California scrub jay (*Aphelocoma californica*), and Anna's hummingbird (*Calypte anna*), may nest in the project site. Nesting by a variety of common birds protected by CFGC Section 3503 and MBTA could occur in virtually any location throughout the project site containing native or non-native vegetation.

Sensitive Natural Communities and Critical Habitat

Sensitive Natural Communities

Plant communities are also considered sensitive biological resources if they have limited distributions, a high-wildlife value, include sensitive species, or are particularly susceptible to disturbance. CDFW ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in CNDDB. CNDDB vegetation alliances are ranked 1 through 5 based on NatureServe's methodology (Jennings 2009), with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Some alliances with the rank of 4 and 5 have also been included in the 2020 sensitive natural communities list under CDFW's revised ranking methodology (2020). Four sensitive natural communities were identified within the nine-quadrangle search radius:

- Coastal Brackish Marsh
- Northern Coastal Salt Marsh
- Northern Maritime Chaparral
- Serpentine Bunchgrass

None of these sensitive communities were observed in the project site.

The willow riparian natural community (Figure 3, Appendix BIO) falls under the Goodding's willow (*Salix gooddingii*) – red willow riparian woodlands alliance, which is considered a sensitive natural

community (G4, S3) by CDFW (2019b). A small patch of this habitat, established recently, is present at the western end of the seasonal drainage ditch, as discussed in the Section 4.2.1.c above. The seasonal drainage ditch is also considered sensitive as a riparian habitat.

American bulrush marsh (*Schoenoplectus americanus*) is considered a sensitive natural community by CDFW (2019b). This species was observed during previous biological field visits in 2016 (Patterson 2016a); however, only one small stem of bulrush was observed in the seasonal drainage ditch in May 2020 (Appendix BIO).

Critical Habitat

Three federally designated critical habitat units occur within 5 miles of the project site. These include delta smelt (*Hypomesus transpacificus*), Alameda whipsnake (*Masticophis lateralis euryxanthus*), and California red-legged frog (*Rana draytonii*). Critical habitat for delta smelt occurs approximately 3.5 miles to the north of the project site in the Carquinez Strait. Critical habitat for Alameda whipsnake and California Red-legged frog occur approximately 1.8 miles and 2.6 miles to the southwest, respectively, at Briones Regional Park.

Jurisdictional Waters and Wetlands

One potential jurisdictional feature was mapped within the project site—namely, a man-made ditch identified in the *Request for a Jurisdictional Determination* (Patterson 2016b). This feature was also mapped by Rincon as a seasonal drainage ditch including willow riparian woodland (Figure 3, Appendix BIO). This ditch is roughly 735 feet long and 17 to 35 feet wide when measured between top of bank on each side (reported by Patterson as 600 feet long and 3 to 12 feet wide); it is located along the east side of the project site. The ditch only channels surface water from the site itself and drains into the storm drain system at the southeastern corner of the project site. Slopes within the ditch allow for ponding of runoff within the channel bottom and support hydrophytic vegetation. Patterson observed wetland vegetation and soils along the ditch, including rabbit's-foot grass, American bulrush, cattail, and rush (*Juncus* sp.) (Patterson 2016b). Rincon found fewer wetland obligate plant species in May 2020 (see *Seasonal Drainage Ditch* description above in section 4.2.1.c).

Patterson (2016b) also identified a concrete ditch that channels runoff from developed areas to the east and drains into the storm drain system. This concrete ditch was determined to be outside of the project site during Rincon's site reconnaissance survey. Rincon also observed the "4-foot diameter buried drainpipe" to the north of the seasonal drainage ditch that Patterson noted in his report. The soil on top of the drainpipe has eroded, exposing approximately 200 feet of its length. A small stand of red willow and coast live oak occurs at its east end, but no wetland vegetation or soils were observed within the eroded area.

Because the seasonal drainage ditch (including willow riparian woodland) drains upland areas and is not adjacent to any traditionally navigable water, the feature is unlikely to be under U.S. Army Corps of Engineers (USACE) jurisdiction. However, it is likely to be Regional Water Quality Control Board (RWQCB) jurisdictional as a seasonal wetland under the Porter-Cologne Water Quality Control Act. In addition, this ditch meets the definition of a CDFW streambed jurisdictional feature and likely falls under CDFW jurisdiction pursuant to CFGC Section 1600 et seq.

A request for a preliminary jurisdictional determination (PJD) was submitted to the USACE on March 31, 2016, for the seasonal drainage ditch. The USACE issued a PJD indicating the seasonal drainage

ditch may be subject to USACE jurisdiction under Section 404 of the Clean Water Act (CWA) on February 6, 2017 (USACE 2017).

Wildlife Movement

Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Other corridors may be important as dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network.

Habitats within a habitat linkage do not necessarily need to be identical to those habitats being linked. Rather, the linkage needs only to contain sufficient cover and forage to allow temporary utilization by species moving between core habitat areas. Habitat linkages are typically contiguous strips of natural areas, though dense plantings of landscape vegetation can be used by certain disturbance-tolerant species. Some species may require specific physical resources (such as rock outcroppings, vernal pools, or oak trees) within the habitat link for the linkage to serve as an effective movement corridor, while other more mobile or aerial species may only require discontinuous patches of suitable habitat to permit effective dispersal and/or migration. Wildlife movement corridors may occur at either large or small scales.

The project site is surrounded by development and therefore does not function as a large- or small-scale corridor for wildlife movement.

Tree Removal

According to the updated arborist report, the project site contains 61 trees, all of which are considered “protected” under Martinez Municipal Code Section 8.12.020. Due to the grading required during project construction, 43 of the on-site trees would require removal, while the remaining 17 trees located along the southern property line could be retained assuming that the protection measures provided within the arborist report are followed (Traverso Tree Service 2022).

4.2.2 Regulatory Setting

Federal, State, and local authorities under a variety of statutes and guidelines share regulatory authority over biological resources. The primary authority for general biological resources lies within the land use control and planning authority of local jurisdictions, which in this instance is the City of Martinez. The CDFW is a trustee agency for biological resources throughout the state under the California Environmental Quality Act (CEQA) and has direct jurisdiction under the CFGC, which includes, but is not limited to, resources protected by the State of California under the CESA.

a. Federal Regulations

Endangered Species Act

Under the FESA, authorization is required to “take” a listed species. Take is defined under FESA Section 3 as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Under federal regulation (50 CFR Sections 17.3, 222.102), “harm” is further defined to include habitat modification or degradation where it would be

expected to result in death or injury to listed wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Critical habitat is a specific geographic area(s) that is essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical habitat may include an area that is not currently occupied by the species but that will be needed for its recovery. FESA Section 7 outlines procedures for federal interagency cooperation to conserve federally listed species and designated critical habitat.

Section 7(a)(2) of FESA and its implementing regulations require federal agencies to consult with USFWS or NMFS to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species, or result in the destruction or adverse modification of critical habitat. For projects where federal action is not involved and take of a listed species may occur, the project proponent may seek to obtain an incidental take permit under FESA Section 10(a). Section 10(a) allows USFWS to permit the incidental take of listed species if such take is accompanied by a Habitat Conservation Plan that includes components to minimize and mitigate impacts associated with the take.

The USFWS and NMFS share responsibility and regulatory authority for implementing FESA (7 USC Section 136, 16 USC Section 1531 et seq.).

Migratory Bird Treaty Act

MBTA authorizes the Secretary of the Interior to regulate the taking of migratory birds. The act provides that it is unlawful, except as permitted by regulations, "to pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, […] any migratory bird, or any part, nest, or egg of any such bird" (16 USC Section 703(a)). The Bald and Golden Eagle Protection Act is the primary law protecting eagles, including individuals and their nests and eggs. The USFWS implements MBTA (16 United States Code [USC] Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668). Under the Act's Eagle Permit Rule (50 CFR 22.26), USFWS may issue permits to authorize limited, non-purposeful take of bald eagles and golden eagles.

Clean Water Act

Under Section 404 of the CWA, the USACE, with EPA oversight, has authority to regulate activities that result in discharge of dredged or fill material into wetlands or other "waters of the United States." Perennial and intermittent creeks are considered waters of the United States if they are hydrologically connected to other jurisdictional waters. In achieving the goals of the CWA, the USACE seeks to avoid adverse impacts and offset unavoidable adverse impacts on existing aquatic resources. Any discharge of dredged or fill material into jurisdictional wetlands or other jurisdictional "waters of the United States" would require a Section 404 permit from the USACE prior to the start of work. Typically, when a project involves impacts to waters of the United States, the goal of no net loss of wetlands is met by compensatory mitigation; in general, the type and location options for compensatory mitigation should comply with the hierarchy established by the USACE/EPA 2008 Mitigation Rule (in descending order): 1) mitigation banks, 2) in-lieu fee programs, and 3) permittee-responsible compensatory mitigation. Also, in accordance with Section 401 of the CWA, applicants for a Section 404 permit must obtain water quality certification from the appropriate RWQCB.

b. State Regulations

Endangered Species Act and Fully Protected Species

CESA (CFGC 2050 et. seq.) prohibits take of State-listed threatened and endangered species without a CDFW incidental take permit. Take under CESA is restricted to direct harm of a listed species and does not prohibit indirect harm by way of habitat modification.

Protection of fully protected species is described in CFGC 3511, 4700, 5050 and 5515. These statutes prohibit take or possession of fully protected species. Incidental take of fully protected species may be authorized under an approved Natural Communities Conservation Plan.

California Fish and Game Code Sections 3503, 3503.5 and 3511

CFGC sections 3503, 3503.5 and 3511 describe unlawful take, possession, or destruction of birds, nests, and eggs. Fully protected birds (CFGC Section 3511) may not be taken or possessed except under specific permit. Section 3503.5 of the Code protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs.

California Fish and Game Code Sections 1360-1372

CFGC Sections 1360 through 1372 comprise the Oak Woodlands Conservation Act. The act was enacted to protect oak woodland habitats that were being diminished by development, firewood harvesting, and agricultural conversions. The Oak Woodlands Conservation Program was established as a result of the act and is intended to provide project funding opportunities for private landowners, conservation organizations, and cities and counties to conserve and restore oak woodlands. The program authorizes the Wildlife Conservation Board to purchase oak woodland conservation easements and provide grants for land improvements and oak restoration efforts. CEQA Section 21083.4 requires counties to determine if a project within their jurisdiction may result in conversion of oak woodlands that would have a significant adverse effect on the environment. If the lead agency determines that a project would result in a significant adverse effect on oak woodlands, mitigation measures to reduce the significant adverse effect of converting oak woodlands to other land uses are required.

Native Plant Protection Act

The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (CFGC Section 1900 et seq.). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under NPPA Section 1913(c), the owner of land where a rare or endangered native plant is growing is required to notify the department at least 10 days in advance of changing the land use to allow for salvage of the plant(s).

California Fish and Game Code Section 1600 et seq.

CFGC Section 1600 et seq. prohibits, without prior notification to CDFW, the substantial diversion or obstruction of the natural flow of, or substantial change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. In order for these activities to occur, the CDFW must receive written notification regarding the activity in the manner prescribed by the department and may require a lake or streambed alteration

agreement. Lakes, ponds, perennial, and intermittent streams and associated riparian vegetation, when present, are subject to this regulation.

Natural Community Conservation Planning Act

The Natural Communities Conservation Planning (NCCP) Act was established by the California Legislature, is directed by the CDFW, and is implemented by the State, as well as public and private partnerships to protect habitat in California. The NCCP Act takes a regional approach to preserving habitat. An NCCP identifies and provides for the regional protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity. Once an NCCP has been approved, CDFW may provide take authorization for all covered species, including fully protected species, CFGC Section 2835.

Porter-Cologne Water Quality Control Act

The State Water Resources Control Board (SWRCB) and each of nine local RWQCBs has jurisdiction over "waters of the State" pursuant to the Porter-Cologne Water Quality Control Act which are defined as any surface water or groundwater, including saline waters, within the boundaries of the state. SWRCB adopted a State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures), for inclusion in the forthcoming Water Quality Control Plan for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California. The Procedures consist of four major elements: 1) a wetland definition, 2) a framework for determining if a feature that meets the wetland definition is a water of the State, 3) wetland delineation procedures, and 4) procedures for the submittal, review, and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities (SWRCB 2021).

c. Local Regulations

Martinez General Plan

The current Martinez General Plan (2010) includes open space policies to protect natural resources, such as limiting tree removal (Policy 22.45) and protection of oak tree root systems during construction (22.46).

Martinez Municipal Code

Some resources are afforded protection through local ordinances, such as those that protect trees, riparian corridors, and environmentally sensitive habitats. The Martinez Municipal Code (MMC) Chapter 8.12 – requires a permit for the removal of "protected" trees on private property proposed for development. According to MMC Section 8.12.020, protected trees are defined as all oak trees and indigenous trees measuring 20 inches or larger in circumference (approximately 6.5 inches in diameter), measured 4.5 feet from ground level. Protected oak and indigenous tree species requiring a permit for removal include, but are not limited to:

- *Quercus agrifolia* (California or Coast Live Oak)
- *Quercus douglasi* (Blue Oak)
- *Quercus kelloggii* (California Black Oak)
- *Quercus lobata* (Valley Oak)
- *Sequoia sempervirens* (Coast Redwood)

- *Alnus rhombifolia* (White Alder)
- *Alnus oregona* (Red Alder)
- *Acer macrophyllum* (Bigleaf Maple)
- *Aesculus californica* (California Buckeye)
- *Arbutus menziesii* (Madrone)
- *Umbellularia californica* (California Bay or Laurel)
- *Juglans hindsii* (California Black Walnut)
- *Platanus racemosa* (California Sycamore)
- *Sambucus calliarpa* (Coast Red Elderberry)

Additionally, protected trees include any tree to be preserved on an approved tentative map and any replacement tree. On undeveloped properties, a tree removal permit is also required for:

- Any tree measuring 20 inches or larger in circumference (approximately 6.5 inches diameter), measured 4.5 feet from ground level, including the oak trees listed above)
- Any multi-stemmed tree with the sum of the circumferences measuring 40 inches or larger, measured 4.5 feet from ground level
- Any significant grouping of trees, including groves of four or more trees

4.2.3 Impact Analysis

a. Methodology and Significance Thresholds

Methodology

The analysis presented in this section is based on the BRA conducted for the project site in September 2020 and the project site surveys conducted in May 2020 and January 2022 (Appendix BIO). Project impacts to flora and fauna are focused upon rare, threatened, endangered species, as defined under *CEQA Guidelines* Section 15380. A substantial adverse effect as defined under CEQA Threshold 1 to federal- or State-listed, or fully protected species would be considered significant if any individual animal or plant would be affected. A substantial adverse effect as defined under CEQA Threshold 1 to CRPR 1B and 2B plants is generally considered significant under CEQA if the loss of individuals on represented a population-level impact that resulted in a loss of a local or regional population or risked the long-term viability of a local or regional population.

Significance Thresholds

Pursuant to *CEQA Guidelines* Appendix G, the project may have a significant adverse impact in respect to biological resources if it would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service

3. 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
4. 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
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan

b. Project Impacts and Mitigation Measures

Threshold 6 is discussed in the Initial Study for the proposed project (Appendix NOP). Analysis in the Initial Study determined that the project would have no impact with regards to conflicts with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plan. Therefore, Threshold 6 is not discussed in this section. All other thresholds are discussed below.

Threshold 1:	Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Impact BIO-1 IMPLEMENTATION OF THE PROPOSED PROJECT MAY IMPACT SPECIAL-STATUS SPECIES AND THEIR HABITAT DURING CONSTRUCTION. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION.

Special-Status Plants

The literature review and database searches identified 61 special-status plant species that have the potential to occur within the nine-quad search radius. However, the reconnaissance survey did not identify any special-status plants or habitat for these species within the project site, and therefore, no impacts to special-status plant species would occur.

Special-Status Wildlife

As described above under *Setting*, 51 of the 52 special-status wildlife species with the potential to occur within the nine-quad search radius were evaluated for their potential to occur on the site. These species are not expected to occur as none were identified during the reconnaissance survey and associated habitats were not present within the project site. One special-status wildlife species, the Cooper's hawk, has a low potential to occur within the project site based upon known ranges, habitat preferences, species occurrence records in the vicinity of the project site, and presence of suitable habitat. This species was not evaluated because of the low potential to occur. Non-game migratory birds and native birds protected by CFGC Section 3503 and the MBTA, are likely to nest within the project site. Impacts may occur through removal of vegetation if active nests are present. Impacts may also occur if active nests are present in undeveloped and landscaped areas adjacent to active construction or staging through disturbance and nest abandonment. Therefore, impacts would be potentially significant and mitigation measures would be required.

Mitigation Measures

BIO-1a Worker Environmental Awareness Program

Prior to initiation of construction activities (including staging and mobilization), the applicant shall submit evidence to the City that all personnel associated with project construction have attended a Worker Environmental Awareness Program (WEAP) training, conducted by a qualified biologist, to aid workers in recognizing special-status resources that may occur in the construction area. The specifics of this program shall include identification of the sensitive species and habitats, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of construction and mitigation measures required to reduce impacts to biological resources within the work area. A qualified biologist shall prepare a fact sheet conveying this information for distribution to all contractors, their employers, and other personnel involved with construction. All employees shall sign a form provided by the trainer indicating they have attended the WEAP and understand the information presented to them. The form shall be submitted to the City to document compliance following each training.

BIO-1b Nesting Bird Survey

Prior to construction that requires any vegetation trimming or tree removals scheduled to occur during the nesting bird season (February 1 through September 15), the project applicant shall submit evidence to the City that a qualified biologist conducted pre-construction surveys no more than 14 days prior to the start of construction to determine the presence/absence of nesting birds and special-status raptors within the project site. If active nests are found, the qualified biologist shall establish an appropriate buffer, considering the species sensitivity and physical location of the nest (line of site to the work area), to comply with CFGC 3503 and 3503.5. In no cases shall the buffer be smaller than 50 feet for non-raptor bird species and 250 feet for raptor species. To prevent encroachment, the established buffer(s) shall be clearly marked by high visibility material installed by the contractor. The established buffer(s) shall remain in effect until the young have fledged or the nest has been abandoned as confirmed by the qualified biologist. The City shall review and approve the biologists' findings and buffer during construction as appropriate.

Significance After Mitigation

Implementation of Mitigation Measures BIO-1a and BIO-1b would reduce potential impacts to special-status species to less-than-significant levels by requiring pre-construction nesting bird surveys and avoidance and minimization measures, as well as worker awareness training for special-status species and their habitats.

Threshold 2:	Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Impact BIO-2 THE PROJECT WOULD IMPACT SENSITIVE NATURAL COMMUNITIES DURING CONSTRUCTION. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION.

The riparian habitat onsite includes 0.45 acre of seasonal drainage ditch, including 0.07 acre of willow riparian woodland. In addition, the willow riparian woodland is a sensitive natural community (Goodding's willow – red willow riparian woodlands) by CDFW (2019b). The seasonal drainage ditch would be removed during project construction, which would be constitute a potentially significant impact to riparian habitat. However, this man-made seasonal drainage ditch is relatively small, isolated from other natural habitats, and is adjacent to a heavily trafficked freeway and therefore does not represent high-quality riparian habitat. The restored or created riparian habitat required through off-site mitigation under Mitigation Measure BIO-2 would provide higher quality habitat, and therefore would reduce impacts to on-site riparian habitat to less-than-significant levels.

Mitigation Measure

BIO-2 Sensitive Community Mitigation

Prior to grading and/or building permit issuance and prior to vegetation removal, the project applicant shall provide evidence to the City that offset impacts to riparian habitat (i.e., willow riparian woodlands) have been provided through purchase of credits at a RWQCB- and CDFW-approved mitigation bank for creation or enhancement of sensitive natural communities at a 2:1 ratio. Impacts to the seasonal drainage ditch shall be offset through purchase of credits at a RWQCB- and CDFW-approved mitigation bank at a ratio of 1:1. If the project falls outside of RWQCB- and CDFW-approved mitigation bank service areas, impacts to sensitive natural communities shall be offset through habitat restoration and/or enhancement at an off-site location at a ratio of 2:1 (habitat restored and/or enhanced to habitat impacted) for riparian woodlands and ratio of 1:1 for seasonal drainage ditch. The location of restoration and/or enhancement shall be determined by a qualified biologist. The restoration and/or enhancement shall include locally native species approved by the City. The restoration and/or enhancement shall be incorporated into an Off-Site Habitat Restoration/Enhancement Plan to be developed by a qualified biologist pursuant to the requirements listed below.

Upon final project design, a qualified biologist shall determine the final impacts to sensitive communities and the subsequent amount of acreage needed for restoration and/or enhancement for the project. The project applicant shall implement restoration and/or enhancement for a period of not less than 5 years, or until restoration and/or enhancement has been completed successfully as determined by a qualified biologist in coordination with City Planning. The Off-Site Habitat Restoration/Enhancement Plan shall include, at a minimum, the following components:

a. Description of the project/impact site (i.e., location, responsible parties, areas to be impacted by habitat type)
b. Goal(s) of the compensatory mitigation project (i.e., the type/types and area/areas of habitat to be established, restored, enhanced, and/or preserved; specific functions and values of habitat type/types to be established, restored, enhanced, and/or preserved)

c. Description of the proposed compensatory mitigation-site (i.e., location and size, ownership status, existing functions and values of the compensatory mitigation-site)
d. Implementation plan for the compensatory mitigation-site (the plan will include rationale for expecting implementation success, responsible parties, schedule, site preparation, planting plan, including plant species to be used, container sizes, and seeding rates)
e. Maintenance activities during the monitoring period, including weed removal and irrigation as appropriate (the plan will include activities, responsible parties, and schedule)
f. Monitoring plan for the compensatory mitigation-site, including no less than quarterly monitoring for the first year and performance standards, target functions and values, target acreages to be established, restored, enhanced, and/or preserved, annual monitoring reports
g. Success criteria based on the goals and measurable objectives; said criteria to be, at a minimum, at least 80 percent survival of container plants and 30 percent relative cover by vegetation type
h. An adaptive management program and remedial measures to address negative impacts to restoration efforts
i. Notification of completion of compensatory mitigation and agency confirmation
j. Contingency measures (e.g., initiating procedures, alternative locations for contingency compensatory mitigation, funding mechanism)

Significance After Mitigation

Implementation of Mitigation Measure BIO-2 would reduce potential impacts to riparian habitat to a less-than-significant level by requiring the offset of lost habitat on-site through the purchase of mitigation credits or through habitat restoration and monitoring of restored or created habitats.

Threshold 3:	Would the project have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Impact BIO-3 THE PROJECT WOULD IMPACT POTENTIALLY JURISDICTIONAL STATE OR FEDERALLY PROTECTED WETLANDS DURING CONSTRUCTION AND/OR OPERATION. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION.

The project would result in fill within the potentially jurisdictional seasonal drainage ditch, including willow riparian woodland. A discussion of the potential impacts related to loss of riparian habitat resulting from removal of the willow riparian woodland within the seasonal drainage ditch is presented above under Impact BIO-2. Because the seasonal drainage ditch drains upland areas and is not adjacent to, or tributary of, any traditionally navigable water, the feature is unlikely to be under USACE jurisdiction. Although the PJD has been verified by the USACE for the project site, it is dated February 6, 2017, and is now more than 5 years old.

The seasonal drainage ditch may also be considered waters of the State and thus may fall under the jurisdiction of the RWQCB under the Porter-Cologne Act. As such, impacts to the drainage ditch would require a Waste Discharge Requirements (WDRs) permit and/or Section 401 Water Quality Certification from the RWQCB (depending upon whether or not the feature falls under federal jurisdiction). Areas up to the top of bank, as well as riparian vegetation to the outer dripline of the riparian community, would also be subject to jurisdiction of the CDFW pursuant to CFGC Section 1600 et seq. As such, impacts to the seasonal drainage ditch, including the willow riparian woodland, would likely require a CDFW Lake or Streambed Alteration Agreement. As the project is

currently proposed, the seasonal drainage ditch, and willow riparian woodland area, would be removed, which would be a potentially significant impact and compensatory mitigation for loss of this feature would be required, at a ratio described in Mitigation Measure BIO-3b. Therefore, Mitigation Measures BIO-2, BIO-3a, and BIO-3b to fully delineate the extent of RWQCB and CDFW jurisdictional areas, update USACE jurisdictional areas, and mitigate for lost waters and/or wetlands are required to reduce impacts to State and federally protected waters and wetlands to less-than-significant levels.

Mitigation Measure

BIO-3a Aquatic Resources Delineation

Prior to issuance of a grading permit, the project applicant shall retain a qualified biologist to complete an aquatic resources delineation to identify areas where the project will result in fill to wetlands, drainages, riparian habitats, or other areas that may fall under the jurisdiction of the USACE, CDFW, and/or RWQCB. The delineation shall determine the extent of the jurisdiction for each of these agencies and shall be conducted in accordance with the requirement set forth by each agency. The results shall be a delineation report that shall be submitted to the appropriate implementing agency (USACE, CDFW, and/or RWQCB). The City shall review the delineation prior to submittal to regulatory agencies.

BIO-3b Compensatory Mitigation

If the delineation required in Mitigation Measure BIO-3a identifies a potential impact, prior to issuance of a grading permit, impacts to the seasonal drainage ditch shall be offset through purchase of wetland/waters mitigation credits at a USACE, CDFW and RWQCB-approved mitigation bank for creation or enhancement of wetlands/waters at a minimum 1:1 ratio. Additional mitigation may be required under specific agency permits.

Significance After Mitigation

Implementation of Mitigation Measure BIO-3a and BIO-3b would reduce potential impacts to State and federally protected waters and wetlands to less-than-significant levels by requiring additional aquatic resources delineation reporting and compensatory mitigation as required by associated permitting agencies prior to construction.

Threshold 4:	Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Impact BIO-4 THE PROJECT WOULD NOT IMPACT WILDLIFE MOVEMENT BECAUSE THE PROJECT SITE IS IN AN AREA SURROUNDED LARGELY BY EXISTING DEVELOPMENT. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

No significant wildlife movement corridors or habitat linkages are present in the project site. Due to the project's footprint and its location surrounded by existing development, the project would not interfere substantially with the movement of wildlife species. Impacts to wildlife movement would be less than significant.

Mitigation Measures

Impacts would be less than significant without mitigation.

Threshold 5:	Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Impact BIO-5 THE PROJECT WOULD BE SUBJECT TO THE CITY'S ORDINANCES AND REQUIREMENTS PROTECTING BIOLOGICAL RESOURCES, SUCH AS TREES. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

The study area is in the City of Martinez and is subject to the Martinez General Plan (2010) policies and MMC. General Plan policies 22.45 and 22.46 limit tree removal and thinning to a selective basis and require avoidance of oak species root systems, respectively. Removal of the 43 protected trees on the project site is subject to review, approval, and permit issuance by the Community Development Department, as required by the Martinez General Plan and MMC. Additionally, for the 17 protected trees on the southern property line planned for retention, the project applicant would be required by MMC Section 8.12.060, *Tree Protection,* to follow the tree preservation standards outlined in the arborist report. These standards have been listed in current project plans as the Tree Protection Plan (Traverso Tree Service 2022).

Because permits would be required to remove protected trees, no conflicts with local policies or ordinances protecting biological resources would occur. Impacts would be less than significant.

Mitigation Measures

Impacts would be less than significant without mitigation.

4.2.4 Cumulative Impacts

A project's environmental impacts are "cumulatively considerable" if the "incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects" (*CEQA Guidelines* Section 15065[a][3]). The geographic scope for cumulative biological resources impacts includes the areas surrounding the project site, including incorporated City of Martinez lands and unincorporated Contra Costa County lands. This geographic scope is appropriate for biological resources because it encompasses the mosaic of representative land cover and habitat types (and associated biological resources) affected by the project, including primarily urban, residential, commercial, and industrial development with areas of natural habitats.

The planned and pending projects in the project vicinity are listed in Table 3-1 of Section 3, *Environmental Setting*. Cumulative projects considered in this analysis include 10 projects, including residential, industrial, and commercial uses. Cumulative development in the area could contribute to the loss of habitat for special-status species and the decline of special-status species, cause further fragmentation of habitat and isolation of populations, and decrease movement opportunities. Together, cumulative projects (both individual projects and full buildout of the City of Martinez General Plan) cover a substantial area, primarily within or along the edges of previously developed areas. Cumulative impacts to biological resources would be potentially significant.

Project implementation would alter the undeveloped nature of the site to residential uses and alter the intensity of existing land uses, although development in natural habitats would be low. Furthermore, cumulative project sites may support other special-status species that could also be impacted by the project, such as migratory nesting birds or special-status bat species. Specifically, construction of the cumulative projects could result in:

- Trampling, and degradation of sensitive habitats
- Disruption of habitat values associated with edge habitat
- Degradation of wetlands, creeks, drainages, riparian habitat, water quality, associated habitat values and functions, and ecosystems services, including channelization of storm runoff that may increase stream flow, erosion, and sedimentation
- Disruption of wildlife utilization of biological resources for foraging, hydration, cover, shelter, aestivation/hybernacula, nesting and breeding, movement, dispersal, and migration, sensitive and native nesting birds, and special-status bats.
- Loss of sensitive natural communities, including seasonal wetlands
- Introduction of litter (including human foods), urine and fecal matter, illegal off-leash dogs (causing harassment and mortality of wildlife)

Taken cumulatively, these impacts would result in degradation of the suite of habitat types and associated biological resources that occur within the cumulative setting in the City of Martinez and could result in overall diminished regional ecological functions and values. However, impacts to biological resources would be considered and mitigated on a project-by-project basis. Permanent losses of sensitive habitats, including sensitive natural communities and listed species, associated with cumulative development would be mitigated to a less-than-significant level. As such, the project's contribution to cumulative impacts would be significant but mitigable, and after mitigation, would not be cumulatively considerable.

Mitigation measures for biological resources identified in this EIR would reduce project-level impacts to a less-than-significant level. Mitigation Measured BIO-1a and BIO-1b would reduce project-level impacts to a less-than-significant level through pre-construction surveys, direct avoidance, and minimization. Furthermore, project-level impacts on any riparian habitat or sensitive natural community would be reduced to a less-than-significant level with the implementation of Mitigation Measure BIO-2, which requires offsets for sensitive natural community loss. Similarly, projects would not result in impacts to State or federally protected wetlands, following implementation of Mitigation Measure BIO-3a, which requires delineation of potentially jurisdictional wetlands and adherence to any permit conditions issued by resource agencies. Lastly, the proposed project and the projects listed in Table 3-1 would be required to comply with tree protection ordinances and requirements, as discussed under Impact BIO-3b. Implementation of these mitigation measures outlined in this section and above would reduce project-level impacts associated with the proposed project and the projects listed in Table 3-1 to a less-than-significant level and would ensure that the project's contribution to cumulative biological resources impacts would not be cumulatively considerable.

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4.3 Cultural Resources

The analysis in this section has been prepared pursuant to *CEQA Guidelines* Section 15064.5 and considers potential impacts to archaeological and historic resources. This section includes a summary of cultural resources background information, a review of archaeological, historic resources, human remains, and discussion of the potential impacts to these resources with project implementation. Potential impacts to paleontological resources are addressed in Section 4.4 *Geology and Soils,* while tribal cultural resources are addressed in Section 4.7, *Tribal Cultural Resources*.

4.3.1 Setting

a. Prehistoric Context

The proposed project lies in the San Francisco Bay Area archaeological region (Milliken et al. 2007, Moratto 1984). Milliken et al. (2007) generally divided the prehistoric chronology of the Bay Area into five periods: The Early Holocene (8,000-3,500 BCE), Early Period (3,500-500 BCE), Lower Middle Period (500 BCE to CE 430 CE), the Upper Middle Period (430-1050 CE), and the Late Period (1050 CE-contact).

It is presumed that early Paleoindian groups lived in the area prior to 8,000 BCE; however, no evidence for that period has been discovered in the Bay Area to date (Milliken et al. 2007). Sites dating to this period may be submerged or deeply buried as a result of rising sea levels and widespread sediment deposition that has occurred since the Terminal Pleistocene (Byrd et al. 2017). For this reason, the Terminal Pleistocene Period (ca. 11,700-8,000 BCE) is not discussed here.

The earliest intensive study of archaeology of the San Francisco Bay Area began with N.C. Nelson of the University of California, Berkeley, between 1906 and 1908. He documented over 400 shell mounds throughout the area. Nelson was the first to identify the Bay Area as a discrete archaeological region (Moratto 1984).

Early Holocene (8000-3500 BCE)

Archaeological evidence from the early Holocene is limited as many sites dating to this period are likely buried under Holocene alluvial deposits (Moratto 1984, Ragir 1972). The available data suggest that the Early Holocene in the San Francisco Bay Area is characterized by a mobile forager pattern and the presence of millingslabs, handstones, and a variety of leaf-shaped projectile points. Two archaeological sites (CA-CCO-696 and CA-CCO-637) that date to this period have been identified in Contra Costa County at the Los Vaqueros Reservoir. The earliest date for the Early Holocene comes from the CA-CCO-696, approximately 7000 BCE (Milliken et al. 2007).

Early Period (3500-600 BCE)

The Early Period saw increased sedentism with the introduction of new ground stone technologies (i.e., mortar and pestle), an increase in regional trade, and the first cut shell beads. The earliest evidence for the use of the mortar and pestle dates to 3800 BCE and comes from CA-CCO-637. By 1500 BCE, mortars and pestles had almost completely replaced millingslabs and handstones. The advent of the mortar and pestle indicates a greater reliance on processing nuts, especially acorns. Faunal evidence from various sites indicates a diverse faunal exploitation pattern based on mussel and other shellfish, marine mammals, terrestrial mammals, and birds (D'Oro 2009).

The earliest cut bead horizon is also associated with this period. Rectangular *Haliotis* spp. (abalone) and *Olivella (Callianax biplicata) (*Vellanoweth et al. 2014) (snail) beads have been identified at several Early Period sites, including CA-CCO-637, CA-SCL-832 in Sunnyvale, and CA-ALA-307 in Berkeley (Milliken et al. 2007). These early examples of cut beads were recovered from mortuary contexts.

Lower Middle Period (500 BCE-430 CE)

The Lower Middle Period saw numerous changes from the previous period. The presence of chipped stone points and bone tools became typical. Rectangular shell beads, common during the Early Period, disappear completely and are replaced by split-beveled and saucer *Olivella* beads. In addition to the changes in beads, *Haliotis* spp. ornaments, bone tools and ornaments, and basketry awls also became typical, indicating the development of coiled basketry technology. Mortars and pestles continued to be the dominant grinding tool (Luby and Gruber 1999, Milliken et al. 2007).

Evidence for the Lower Middle Period in the Bay Area comes from sites such as the Emeryville shell mound (CA-ALA-309) and Ellis Landing (CA-CCO-295). CA-ALA-309 is one of the largest shell mounds in the Bay Area and contains multiple cultural sequences. The lower levels of the site, which date to the Middle Period, contain flexed burials with bone implements, chert bifaces, charmstones, and oyster shells (Moratto 1984).

Upper Middle Period (430-1050 CE)

Around 430 CE, *Olivella* saucer bead trade networks that had been established during earlier periods collapsed and over half of known sites occupied during the Lower Middle Period were abandoned. *Olivella* saucer beads were replaced with *Olivella* saddle beads. New types of material culture appear within these sites, including elaborate, decorative blades, fishtail charmstones, new Haliotis ornament forms, and mica ornaments. Sea otter bones became more abundant, while salmon and other fish became less abundant, suggesting changes in faunal exploitation patterns from earlier periods (Milliken et al. 2007, Simons and Carpenter 2009). Excavations at CA-ALA-309 indicate that a shift from mussels to oysters to clams may have occurred (Gifford 1916), and isotopic analysis confirms that San Francisco Bay individuals shifted from hunting higher-trophic-level foods in the Early Period to gathering foods like plants and shellfish in the Middle and Upper Periods (Burns et al. 2012). Subsistence analyses at various sites dating to this period indicate a diverse diet that included numerous species of fish, mammals, birds, shellfish, and plant resources that varied by location in the Bay Area (Hylkema 2002).

Late Period (1050 CE-contact)

The Late Period saw an increase in social complexity, indicated by differences in burials and an increased level of sedentism relative to preceding periods, as evidenced by mortars weighing up to 90.7 kg (Lentz 2012: 198). An increase in imported Napa Valley obsidian occurred during this time for the production of smaller points, preforms, and simple flake tools. Small, finely worked projectile points of the Stockton Serrated series associated with bow and arrow technology appear around 1250 CE. *Olivella* shell beads disappeared and were replaced with *Olivella* lipped and spire-lopped beads in the south bay and clamshell disk beads in the north bay, where thicker and larger beads indicated higher affluence. The toggle harpoon, hopper mortar, and magnesite tube beads also appeared during this period (Milliken et al. 2007, Lentz 2012, Von Der Porten et al. 2014). This period saw an increase in the intensity of resource exploitation that correlates with an increase in population (Moratto 1984). Many of the well-known sites of earlier periods, such as the Emeryville

shell mound (CA-ALA-309) and the West Berkeley site (CA-ALA-307), were abandoned, as indicated by the lack of Late Period elements. Researchers have suggested that the abandonment of these sites may have resulted from fluctuating climates and drought that occurred throughout the Late Period (Lightfoot and Luby 2002).

b. Historic Context

Post-European contact history for California is generally divided into three periods: the Spanish Period (1769–1822), the Mexican Period (1822–1848), and the American Period (1848–present), summarized below.

Spanish Period (1769–1822)

In 1542, Juan Rodriguez Cabrillo led the first European expedition to observe what was known by the Spanish as Alta (upper) California. For more than 200 years, Cabrillo and other Spanish, Portuguese, British, and Russian explorers sailed the coast of Alta California. They made limited inland expeditions but did not establish permanent settlements (Bean 1968, Rolle 2003). In 1769, Gaspar de Portolá and Franciscan Father Junipero Serra established the first Spanish settlement in Alta California at Mission San Diego de Alcalá. This was the first of 21 missions erected by the Spanish between 1769 and 1823. In addition to the missions, four presidios and three pueblos (towns) were established throughout the state (State Lands Commission 1982). During his expedition, Portola traveled to Sweeney Ridge, in present day Pacifica (San Mateo County) and was the first European to identify the San Francisco Bay.

During this period, Spain granted ranchos to prominent citizens and soldiers, though very few in comparison to the subsequent Mexican Period. To manage and expand herds of cattle on these large ranchos, colonists enlisted the labor of the surrounding Native American population, often forcibly (Engelhardt 1927a, Reséndez 2016). The missions were responsible for administrating to local Native American populations and for their conversion to Christianity (Engelhardt 1927b). The influx of European settlers brought Native American populations in contact with European diseases which they had no immunity against, resulting in a catastrophic reduction in native populations throughout the state (McCawley 1996).

Mexican Period (1822–1848)

The Mexican Period commenced when news of the success of the Mexican Revolution (1810-1821) against the Spanish crown reached California in 1822. This period saw the privatization of mission lands in California with the passage of the Secularization Act of 1833, which enabled Mexican governors in California to grant former mission lands to private individuals. Successive Mexican governors made more than 700 land grants between 1822 and 1846, putting much of the state's lands into private ownership for the first time (Shumway 2006). About 22 land grants (ranchos) were located in San Mateo County.

The Mexican Period ended in early January 1848, following several decisive battles against the United States. On January 10, leaders of the Pueblo of Los Angeles surrendered peacefully after Mexican General Jose Maria Flores withdrew his forces. Shortly thereafter, newly appointed Mexican Military Commander of California Andrés Pico surrendered all of Alta California to U.S. Army Lieutenant Colonel John C. Fremont in the Treaty of Cahuenga.

American Period (1848–Present)

The American Period officially began with the signing of the Treaty of Guadalupe Hidalgo in 1848, in which the United States agreed to pay Mexico $15 million for conquered territory, including the present-day states of California, Nevada, Utah, and parts of Colorado, Arizona, New Mexico, and Wyoming. Settlement of Southern California continued to increase during the early American Period. Ranchos were sold or otherwise acquired by Americans, with many subdivided into agricultural parcels or towns.

The discovery of gold in Northern California in 1848 led to the California Gold Rush (Guinn 1977, Workman 1935: 26) and California's population, particularly that of the bay area, grew exponentially. During this time, San Francisco became California's first true city, growing from a population of 812 to 25,000 in only a few years (Rolle 2003).

By 1853, the population of California exceeded 300,000. Thousands of settlers and immigrants continued to pour into the state, particularly after the completion of the transcontinental railroad in 1869. By the 1880s, the railroads had established networks throughout Northern California, resulting in fast and affordable shipment of goods and transporting new residents to the booming region (Dumke 1944).

City of Martinez

In 1842, a land grant was given to Don Ygnacio Martinez by the Mexican government for services rendered to the armies. The land grant included 17,000 acres, part of which is the present-day city of Martinez. Later, in 1847, dentist Dr. Robert Semple, was contracted to run a ferry service between current day Benicia and Martinez across the Carquinez Strait. During the Gold Rush, (starting in 1849) this ferry service was the primary crossing vessel along the Carquinez Strait to take passengers and goods to the destinations. Col. William Smith recognized the commercial benefits that the ferry service brought to the city of Martinez and sought an agreement with the Ygnacio Martinez property holders to establish a townsite near the ferry crossing in 1850. This aided in the city becoming the first town within the District of Contra Costa (now Contra Costa County), and Martinez was named the county seat in 1851. This led to the city growing rapidly, and by 1869, the city was booming with agricultural development and commerce, aided by the ferry service. The shipping of agricultural produce via ferry and sailing vessels continued until 1877, when the Santa Fe Railway was constructed through Martinez in 1899. This allowed product to ship to other markets via the railway. By 1930, the Southern Pacific Bridge was completed between Benicia and Martinez, replacing the ferry service and allowing Martinez to become a stop on the transcontinental rail line through the Shasta and Coastal routes. By the 1950s, however, commercial farming and agricultural shipping ceased as the city became inhabited by fishermen, wine production, and families looking to settle and create a home. This has continued and the population of Martinez has grown from approximately 875 in the 1880s (Martinez Historical Society n.d.) to over 38,000.

c. Background Research

A California Historic Resources Information System (CHRIS) was performed by the North Central Information Center (NWIC) for cultural resource site records and survey reports in the proposed project area (NWIC 2016, Appendix CUL). According to the CHRIS records search, the project site has not been the subject of previous site-specific cultural resource studies and there are no recorded archaeological resources at the project site. However, the records search indicates that Native American resources in this part of Contra Costa County have been found in areas that are near the

Carquinez Strait and Suisun Bay, and on inland ridges, midslope benches, in valleys, and near intermittent and perennial watercourses. Furthermore, the project site is approximately 0.5 mile from historic marshlands and creeks and is located at a drainage canyon between two hills. Thus, there is a moderate potential for the discovery of unrecorded Native American archaeological resources (NWIC 2016). Although there is approximately 2 to 10 feet of artificial fill sediments across the site (Appendix GEO), grading for the project is proposed at a depth of 15 feet below current surface; therefore, the grading would be below the previously deposited fill in certain areas and may impact unrecorded Native American archaeological resources.

4.3.2 Regulatory Setting

This regulatory framework section identifies the federal, State, and local laws, statutes, guidelines, and regulations that govern the identification and treatment of cultural resources, as well as the analysis of potential impacts to cultural resources. The lead agency must consider the provisions and requirements of this regulatory framework when rendering decisions on projects that have the potential to affect cultural resources.

a. Federal Regulations

National Register of Historic Places

The National Register of Historic Places (NRHP) was established by the National Historic Preservation Act (NHPA) of 1966 as "an authoritative guide to be used by federal, State, and local governments, private groups and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment" (CFR 36 Section 60.2). The NRHP recognizes properties that are significant at the national, state, and local levels. To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must also possess integrity of location, design, setting, materials, workmanship, feeling, and association. A property is eligible for the NRHP if it is significant under one or more of the following criteria:

Criterion A: Is associated with events that have made a significant contribution to the broad patterns of our history

Criterion B: Is associated with the lives of persons significant in our past

Criterion C: Embodies the distinctive characteristics of a type, period, or method of installation, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction

Criterion D: Has yielded, or may be likely to yield, information important in prehistory or history

In addition to meeting at least one of the above designation criteria, resources must also retain integrity. The National Park Service recognizes seven aspects or qualities that, considered together, define historic integrity. To retain integrity, a property must possess several, if not all, of these seven qualities, defined as follows:

Location: The place where the historic property was constructed or the place where the historic event occurred

Design:	The combination of elements that create the form, plan, space, structure, and style of a property
Setting:	The physical environment of a historic property
Materials:	The physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property
Workmanship:	The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory
Feeling:	A property's expression of the aesthetic or historic sense of a particular period of time
Association:	The direct link between an important historic event or person and a historic property

Certain properties are generally considered ineligible for listing in the NRHP, including cemeteries, birthplaces, graves of historical figures, properties owned by religious institutions, relocated structures, or commemorative properties. Additionally, a property must be at least 50 years of age to be eligible for listing in the NRHP. The National Park Service states that 50 years is the general estimate of the time needed to develop the necessary historical perspective to evaluated significance (National Park Service 1997: 41). Properties which are less than 50 years must be determined to have "exceptional importance" to be considered eligible for NRHP listing.

b. State Regulations

California Environmental Quality Act

CEQA requires that a lead agency determine whether a project could have a significant effect on historical resources (Public Resources Code [PRC], Section 21084.1), unique archaeological resources (PRC Section 21083.2 [g]), and tribal cultural resources (PRC Section 21074 [a][1][A]-[B]). A historical resource is a resource listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR) (PRC Section 21084.1), a resource included in a local register of historical resources (*CEQA Guidelines* Section 15064.5[a][2]), or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (*CEQA Guidelines* Section 15064.5[a][3]).

PRC Section 5024.1 requires an evaluation of historic-period resources to determine their eligibility for listing in the CRHR. The purpose of the CRHR is to maintain listings of the State's historic-period resources and to indicate which properties are to be protected from substantial adverse change. The criteria for listing resources in the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the NRHP, as enumerated according to CEQA and quoted below.

> **15064.5(a)(3)** […] Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (PRC Section 5024.1, Title 14 California Code of Regulations, Section 4852) including the following:
>
> (1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage
>
> (2) Is associated with the lives of persons important in our past

(3) 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

(4) Has yielded, or may be likely to yield, information important in prehistory or history

15064.5(a)(4) The fact that a resource is not listed in or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the PRC), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the PRC) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC sections 5020.1(j) or 5024.1.

15064.5(b) A project with an effect that may cause a substantial adverse change in the significance of an historic resource is a project that may have a significant effect on the environment.

In addition, if a project can be demonstrated to cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC Section 21083.2[a], [b], and [c]).

PRC Section 21083.2(g) defines a unique archaeological resource as an artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it does one or more of the following:

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

(2) Has a special and particular quality such as being the oldest of its type or the best available example of its type

(3) Is directly associated with a scientifically recognized important prehistoric or historic event or person

Impacts to significant cultural resources that affect the characteristics of any resource that qualify it for the NRHP or adversely alter the significance of a resource listed in or eligible for listing in the CRHR are considered a significant effect on the environment. These impacts could result from physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired (*CEQA Guidelines* Section 15064.5 [b][1]). Material impairment is defined as demolition or alteration in an adverse manner [of] those characteristics of an historical resource that convey its historical significance and that justify its inclusion or eligibility for inclusion in the CRHR (*CEQA Guidelines* Section 15064.5[b][2][A]).

Codes Governing Human Remains

The disposition of human remains is governed by Health and Safety Code Section 7050.5 and PRC Sections 5097.94 and 5097.98 and falls within the jurisdiction of the NAHC. If human remains are discovered, the County Coroner must be notified within 48 hours, and there should be no further disturbance to the site where the remains were found. If the remains are determined by the coroner to be Native American, the County Coroner is responsible for contacting the NAHC within 24 hours. The NAHC, pursuant to PRC Section 5097.98, will immediately notify those persons it

believes to be most likely descended from the deceased Native Americans, so they can inspect the burial site and make recommendations for treatment of the remains and associated grave goods.

c. Local Regulations

City of Martinez General Plan

The City of Martinez General Plan, which was adopted in 2016, identifies goals, policies, and implementation measures regarding cultural resources throughout the City (City of Martinez 2016). As presented in the Historic, Cultural & Art Element, these include:

Goal

HCA-G-1 Foster protection, preservation, and rehabilitation on of Martinez's historic and cultural heritage.

Policies

HCA-P-1.1 Promote community and visitor appreciation for the history of Martinez.

HCA-P-1.2 Strengthen and enhance the historic, natural, and cultural character of Martinez while promoting long-term sustainable economic development.

HCA-P-1.3 Encourage relocation of older buildings for preservation and restoration, rather than demolition.

HCA-P-1.4 Recognize the importance of protecting significant archaeological resources by identifying, when possible, archaeological resources and potential impacts on such resources.

HCA-P-1.5 Avoid damaging effects to any tribal cultural resource when feasible.

HCA-P-1.6 Treat any Native American and human remains with culturally dignity when discovered during development or otherwise.

HCA-P-1.7 Encourage new development to be compatible with adjacent historical structures in scale, massing, building materials, and general architectural treatment.

HCA-P-1.8 Through the design review process, encourage the adaptation and compatible reuse of historic buildings in order to preserve the historic resources that are part of Martinez's heritage.

HCA-P-1.9 Encourage upkeep, restoration, rehabilitation, and reconstruction of private historic structures to conserve the integrity of the buildings with respect to the character of the buildings and their settings in the best possible condition when possible and feasible.

HCA-P-1.10 Comply with State and Federal laws to preserve and protect archaeological resources by complying with assessment and recovery of the resources.

HCA-P-1.11 Coordinate historic preservation activities and historic preservation groups, community groups, non-profits, and grass root efforts to educate the community and visitors through tours, special events, and commemorative art.

Implementation

HCA-I-1.1a Encourage reuse and rehabilitation of historic buildings in accordance with the Secretary of the Interior's Standards for the Preservation of Historic Structures.

HCA-I-1.1b Encourage the use of the State Historical Building Code where applicable.

HCA-I-1.1c Put in place permanent conservation easements or other interests in real property with culturally appropriate management criteria for the purpose of preserving and protecting the resource in place.

HCA-I-1.1d Continue to update the comprehensive citywide inventory of historic resources and develop a citywide survey to identify structures that may be eligible for local, state, and national historic resource designation.

HCA-I-1.1e Continue to work with and support the Martinez Historical Society in their efforts to archive documents, maps and photographs to properly chronicle the history of Martinez.

4.3.3 Impact Analysis

a. Methodology and Significance Thresholds

For this discussion, the term cultural resource broadly includes historical and archaeological resources. The significance of a cultural resource impact is determined by whether that resource meets the criteria discussed above. Where the significance of a site is unknown, it is presumed to be a significant CEQA defined "historical resource" for the purpose of the impact evaluation in this EIR. Listings of historical resources in Contra Costa County near the proposed project site were obtained from the State Office of Historic Preservation.

Based on *CEQA Guidelines* Appendix G, the proposed project would have a significant impact on cultural resources if it would:

1. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5;
2. Cause a substantial adverse change in the significant of an archaeological resource pursuant to Section 15064.5; or
3. Disturb any human remains, including those interred outside of formal cemeteries.

b. Project Impacts and Mitigation Measures

Threshold 1:	Would the project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

Impact CR-1 THE PROJECT SITE IS LOCATED IN AN AREA WITH LOW POTENTIAL FOR UNRECORDED HISTORICAL RESOURCES TO OCCUR. FURTHERMORE, THE SITE HAS BEEN PREVIOUSLY DISTURBED WITH AGRICULTURAL ACTIVITIES. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

The project site does not contain structures or other built environment features that may be considered historical resources. The CHRIS records search found no recorded historic buildings or structures within the project site, with the closest historic-age built environment resource located 900 feet southwest of the project site. Therefore, the project would not impact built environment

historical resources. Archaeological resources that may be considered historical resources are addressed under Impact CR-2 below.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 2:	Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Impact CR-2 THE PROJECT SITE DOES NOT CONTAIN KNOWN ARCHAEOLOGICAL RESOURCES. NONETHELESS, PROJECT GROUND-DISTURBING ACTIVITIES HAVE THE POTENTIAL TO IMPACT UNRECORDED ARCHAEOLOGICAL RESOURCES. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION.

Although NWIC indicates that cultural resources of Native American origin may exist at the project site, it is unlikely that resources are present as ground disturbance during historic agricultural use of the site and construction of SR 4 resulted in topographical changes to the project site (Environmental Resources Group, Inc. 2015, Appendix ESA). Additionally, recent development of the surrounding area has resulted in further disturbance of the project site, including installation of below-ground storm drain infrastructure and the drainage ditch. Furthermore, the Preliminary Geotechnical Investigation prepared for the project identified roughly 2 to 10 feet of undocumented fill across much of the site, possibly associated with the construction of SR 4 (Appendix GEO). However, the proposed depth of grading is 15 feet below the current surface, which is 5 feet deeper than the fill depth, resulting in the possibility of unanticipated discoveries during ground disturbance.

Considering the previous uses and frequent disturbance of the project site, archaeological resources, including those that may qualify as unique archaeological resources and/or historical resources, are unlikely to occur there, but the potential remains for unanticipated discoveries during ground disturbance, which could cause a substantial adverse change in the significance of an archaeological resource pursuant to *CEQA Guidelines* Section 15064.5. Therefore, Mitigation Measure CR-1 would be required.

Mitigation Measure

CR-1 Unanticipated Discoveries

Prior to the issuance of a grading permit, the developer shall note on the plans for review and approval by the City Engineer that if historic and/or cultural resources are encountered during site grading or other site work, all such work shall be halted immediately within 50 feet of discovery and the developer shall immediately notify the Planning Division of the discovery. In such case, the developer shall be required, at its own expense, to retain the services of a qualified archaeologist for the purpose of recording, protecting, or curating the discovery as appropriate. The archaeologist shall be required to submit to the Planning Division, for review and approval, a report of the findings and method of curation or protection of the resources. Further grading or site work within 50 feet of discovery shall not be allowed until the preceding work has occurred.

Significance After Mitigation

Implementation of Mitigation Measure CR-1 would reduce potential impacts to unanticipated archeological resources to less than significant.

Threshold 3:	Would the project disturb any human remains, including those interred outside of formal cemeteries?

Impact CR-3 GROUND-DISTURBING ACTIVITIES ASSOCIATED WITH THE PROPOSED PROJECT COULD DISTURB HUMAN REMAINS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

No human remains are known to exist on the project site. However, the discovery of human remains is always a possibility during ground-disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner determined the origin and disposition, pursuant to PRC Section 5097.98. In the event of an unanticipated discovery of human remains, the Contra Costa County Coroner must be notified immediately. If the human remains are determined to be prehistoric, the County Coroner will notify the NAHC, which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of being granted access. With adherence to existing regulations, impacts to human remains would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

4.3.4 Cumulative Impacts

A project's environmental impacts are "cumulatively considerable" if the "incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects" (*CEQA Guidelines* Section 15065[a][3]). The geographic scope for cumulative cultural resources impacts includes the areas surrounding the project site, including in the incorporated City of Martinez and unincorporated Contra Costa County. The project, in conjunction with other planned and pending projects in the project site vicinity, would cumulatively increase the potential to encounter sensitive cultural, archaeological, and tribal cultural resources and human remains. In the event that cultural, archaeological, tribal cultural resources, and/or human remains are discovered, each individual project would be required to comply with the applicable regulatory requirements and mitigate any potential impacts to resources on the individual project site. Development that is considered part of the cumulative analysis includes buildout of the County and City General Plans, as well as buildout of nearby projects as shown in Table 3-1 in the Section 3, *Environmental Setting*.

The project's potential cultural resources impacts would be reduced to a less-than-significant level with implementation of Mitigation Measure CR-1, which would protect historic and/or cultural resources. Compliance with CEQA requirements, including the implementation of recommendations provided in project-specific cultural resource studies, on new development would ensure that cumulative impacts would not be significant. In the event that tribal cultural resources are discovered, each individual project would be required to comply with the applicable regulatory

requirements and the consultation requirements of AB 52 to determine and mitigate potential impacts to cultural resources. Such recommendations may include site avoidance, in-situ preservation, site salvage and documentation, and/or other measures determined to be necessary based on the resources identified. Therefore, cumulative impacts to cultural and tribal cultural resources would be less than significant.

4.4 Geology and Soils

This section evaluates the proposed project's potential impacts on geology and soils, including seismic ground shaking, erosion, geologic stability, and paleontological resources. The analysis is based primarily on a Preliminary Geotechnical Investigation Report prepared for the site by Cornerstone Earth Group in 2009 and peer-reviewed by Cal Engineering & Geology in 2016. The Preliminary Geotechnical Investigation Report was updated by Cornerstone Earth Group in 2022 following the peer review, and was again peer-reviewed by Cal Engineering & Geology. The original and updated Geotechnical Investigation Report, as well as the first and second peer-review of these reports, is included in Appendix GEO.

4.4.1 Setting

a. Geologic Setting

According to the Preliminary Geotechnical Investigation prepared by Cornerstone Earth Group (Appendix GEO), the project site is located in the western Diablo Range of the Coast Ranges structural and geomorphic province of California. This represents one mountain range in a series of northwesterly aligned mountains forming the Coast Ranges geomorphic province of California that stretches from the Oregon border nearly to Point Conception. In the San Francisco Bay area, most of the Coast Ranges have developed on a basement of tectonically mixed Cretaceous- and Jurassic-age (70- to 200-million years old) rocks of the Franciscan Complex. Locally younger sedimentary and volcanic rocks cap these basement rocks while younger surficial deposits that reflect geologic conditions for the last million years or so cover most of the Coast Ranges.

The geology of the region is influenced by its setting within the active tectonic boundary between the Pacific and North American plates. The overall relative movement between these two plates is ideally represented by horizontal right slip of about 6 centimeters per year (cm/yr) on a vertical interface oriented to the northwest. Throughout coastal California, the surface expression of this interface is the San Andreas Fault, including its principal northwest-aligned branches. In the San Francisco Bay region, the San Andreas Fault system includes several major branches, in addition to maintaining a relatively continuous main trace. The study site is near one such branch, the Concord-Green Valley Fault, crossing through the Walnut Creek area. The Hayward Fault, roughly 14 miles west of the site, is a well-known, active feature exhibiting abundant geologic evidence of recurring movement and are the sources of both nearly continuous micro-seismicity and also of several large historic earthquakes.

In addition to the deformation and sporadic large earthquakes resulting from predominately right-lateral shear movements along major branches of the San Andreas Fault system, the Coast Ranges are also affected by tectonic compression acting normal to the tectonic boundary. This compression drives the uplift and much of the internal deformation within the fault system.

The Preliminary Geotechnical Investigation identified bedrock of the site area as Muir sandstone of Weaver, which is described as non-marine sandstone, massive, yellow, weathering arkosic sandstone.[1] This unit is thought to be Miocene or Pliocene in age (Appendix GEO). Appendix GEO includes a map showing bedding dipping roughly 60 to 75 degrees to the southwest in the hills north, south, and east of the site. A splayed trace of a Concord-Green Valley fault covered by

[1] Arkosic sandstone is a detrital sedimentary rock, specifically a type of sandstone containing at least 25 percent feldspar.

Quaternary alluvium is shown east of the site, crossing the Concord area. Numerous smaller unnamed, inactive faults cross the site vicinity, including one mapped near the east end of the site.

Subsurface Conditions

The site is bounded by Arnold Drive and existing residential development to the north, Highway 4 to the south, and existing institutional and residential developments to the east and west, respectively. An existing sanitary sewer pump station and parking lot is located adjacent to Arnold Drive, just east of the Starflower Avenue intersection. A sewer force main pipeline reportedly extends from the pump station along the Arnold Drive. A man-made ditch with in-channel riparian vegetation occurs on roughly 0.45 acre of the site and was likely constructed to drain storm water from adjacent properties and roadways. This ditch contains concrete culverts that are partially buried at each end.

The project site has undergone several significant changes in the past 40 years. According to the Preliminary Geotechnical Investigation, most of the site had recently been tilled to a depth of about 8 to 12 inches that exposed loose surficial soils. Borings encountered approximately 8 to 10 feet of artificial (undocumented) fill consisting of soft to hard lean clay with varying amounts of sand and gravel and medium dense to dense clayey sand. The fill was underlain by native alluvial soils consisting of stiff to very stiff lean clay to a depth of approximately 12 to 22 feet. The alluvial clay was interbedded with thin layers of medium dense clayey sand. The alluvial clay was underlain by 4 to 6 feet of medium dense silty sand (possibly residual soil derived from the underlying sandstone bedrock), with fines contents ranging from approximately 26 to 40 percent.

Shrink-Swell Potential

Certain types of soil are inherently expansive, meaning they expand and contract significantly as their water content fluctuates. This dynamic, known as “shrink-swell potential,” can cause seasonal uplifting of structural foundations and roads, accompanied by significant and often dangerous cracking. Therefore, soils with high shrink-swell potential have limitations as substrates for engineering and construction purposes. Soil on the project site was determined to have a low expansion potential to wetting and drying cycles.

Soils at the project site have a low plasticity index, indicating low expansion potential to wetting and drying cycles (Appendix GEO). However, the peer review conducted by Cal Engineering & Geology noted that the Preliminary Geotechnical Investigation only tested one sample and that the report found clay and silt-containing soils on portions of the project site that were not tested for plasticity. Often clayey and silty soils can have higher expansion potential (Cal Engineering & Geology 2016).

Erosion Potential

The potential for erosion generally increases with steepness of slope, rainfall, and in areas where the protective soil and/or vegetation cover has been removed by fire or grading. The project site has numerous mature trees and low bushes and moderate slope inclinations which make the erosion potential low. However, the sandy topsoil along the top of the site’s slopes may be susceptible to shallow sloughing or erosion during periods of heavy rainfall.

Wastewater Disposal Systems

The project site would be served by the municipal sewer system and would not require the installation of an on-site septic tank or alternate wastewater treatment systems. See Section 19 in the Initial Study (Appendix NOP) for further discussion related to wastewater.

b. Regional Seismicity

The San Francisco Bay area is one of the most seismically active areas in the United States. While seismologists cannot predict earthquake events, the US Geological Survey's Working Group on California Earthquake Probabilities 2007 estimates there is a 63 percent chance of at least one magnitude 6.7 or greater earthquake occurring in the Bay Area region between 2007 and 2036. As seen with damage in San Francisco and Oakland due to the 1989 Loma Prieta earthquake that was centered about 50 miles south of San Francisco, significant damage can occur at considerable distances. Higher levels of shaking and damage would be expected for earthquakes occurring at closer distances.

Regional Geology, Faulting, and Seismicity

Generally defined, an earthquake is an abrupt release of accumulated energy in the form of seismic waves when movement occurs along a fault. Faults are categorized as active, potentially active, and inactive. A fault is classified as active if it has moved during the Holocene time (during the last 11,000 years). A fault is classified as potentially active if it has experienced movement within Quaternary time (during the last 1.8 million years). Faults that have not moved in the last 1.8 million years are generally considered inactive.

The site is located within proximity of several major faults including the Calaveras and Hayward faults. Both of these faults, shown on Figure 4.4-1, have been responsible for several large historic earthquakes with significant ground rupture. Table 4.4-1 shows the State-considered active faults within 30 kilometers of the site.

Table 4.4-1 Faults within Regional Proximity to the Project Site

Fault Name	Distance (miles)
Concord-Green Valley	1.7
Greenville	8.0
Calaveras (north)	10.1
Hayward (total length)	14.2
West Napa	16.4

Source: Cornerstone Group 2009 (Appendix GEO)

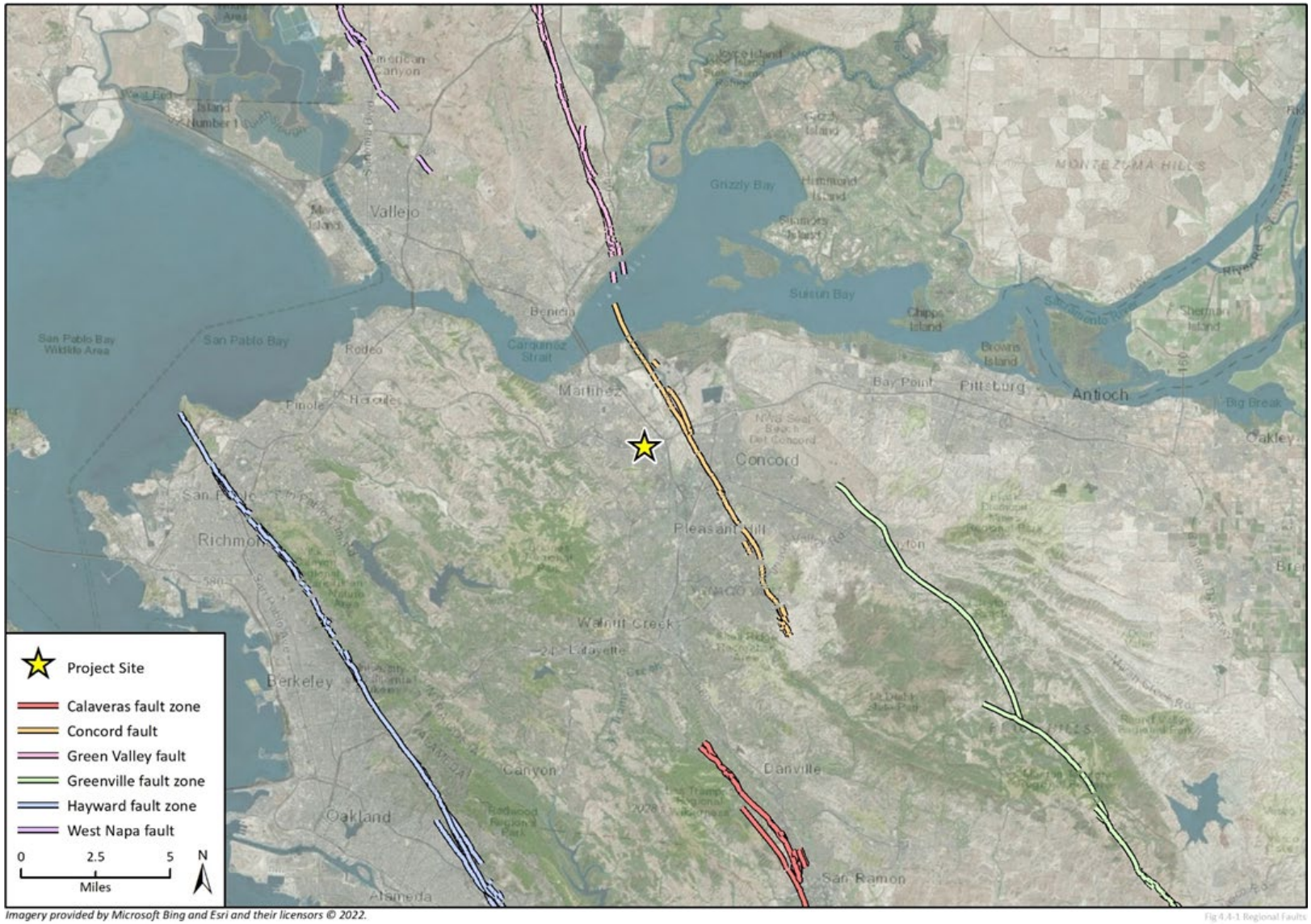
c. Seismic Hazards

Hazards associated with earthquakes include primary hazards, such as surface rupture and ground shaking, and secondary hazards, such as liquefaction and tsunamis. These hazards are described below.

Surface Rupture

Surface rupture represents the breakage of ground along the surface trace of a fault, which is the intersection of the fault surface area that is ruptured in an earthquake. Fault displacement occurs when material on one side of a fault moves relative to the material on the other side of the fault.

Figure 4.4-1 Regional Faults



This can have particularly adverse consequences when buildings are located within the rupture zone. It is not feasible from a structural or economic perspective to design and build structures th can accommodate rapid displacement associated with surface rupture, as surface displacement can range from a few inches to tens of feet during a rupture event. The Hayward and Calaveras faults also show evidence of surface displacement during the past 11,000 years.

Ground Shaking

The major cause of structural damage from earthquakes is ground shaking. The intensity of ground motion expected at a particular site depends upon the magnitude of the earthquake, the distance to the epicenter, and the geology of the area between the epicenter and the site. Greater movement can be expected at sites located on poorly consolidated material, such as alluvium, within close proximity to the causative fault, or in response to a seismic event of great magnitude.

The project site is within a seismically active region and earthquakes have the potential to cause ground shaking of significant magnitude (Appendix GEO). Any slip along all or part of a fault surface releases accumulated energy that radiates in all directions away from the source, in the form of earthquake waves. Associated ground shaking varies in intensity depending on the severity of earthquake activity, proximity to that activity, and local soil and geological conditions. Moderate to severe (design-level) earthquakes can cause strong ground shaking, which is the case for most sites within the Bay Area.

Soil Liquefaction

Liquefaction is a seismic phenomenon in which loose, saturated granular, and silty fine-grained soils lose their structure or strength when subjected to high-intensity ground shaking, transforming them from a solid to a liquefied state. Structures constructed on soils which are prone to liquefaction are subject to damage and possible collapse as a result of settlement and lateral spreading due to liquefaction. Liquefaction occurs when three general conditions exist:

1. Shallow groundwater (within the top 50 feet of the ground surface)
2. Low-density non-plastic soils
3. High-intensity ground motion

The Association of Bay Area Governments mapped the project site as being in an area of very low to low liquefaction potential (Appendix GEO). Cornerstone Earth Group performed a field and laboratory investigation by sampling potentially liquefiable layers above the underlying bedrock formation, performing visual classification on sampled materials, and performing various tests to further classify the soil properties.

The results of the Preliminary Geotechnical Investigation indicate that two of the sand layers on-site may potentially experience liquefaction triggering that could result in soil softening and settlement. Based on Cornerstone Earth Group's preliminary analysis, it is estimated that settlement due to liquefaction beneath Building 5 could be about 1 inch across a horizontal distance of 50 feet. Portions of Building 6 could experience settlement of approximately 0.5 inch or more, depending on extent and thickness of the soil layers.

Contra Costa County is not currently included in the State-designated Liquefaction Hazard Zone mapping performed by the California Geologic Survey. The site could potentially experience

liquefaction triggering that could result in soil softening and post liquefaction total settlement ranging from approximately 0.25 to 1.5 inches (Appendix GEO).

Landslides and Ground Failure

Landslides and slope instability are characterized by the movement of soils and surficial deposits, known as colluvium, and bedrock down steep slopes. This movement results from wet weather, adverse structures, seismic shaking, and/or improper grading and drainage. The project site has numerous mature trees and low bushes that and moderate slope inclinations which make the potential for landslides or ground failure low. However, the sandy topsoil along the top of the site's slopes may be susceptible to shallow sloughing or erosion during periods of heavy rainfall.

d. Paleontological Resources

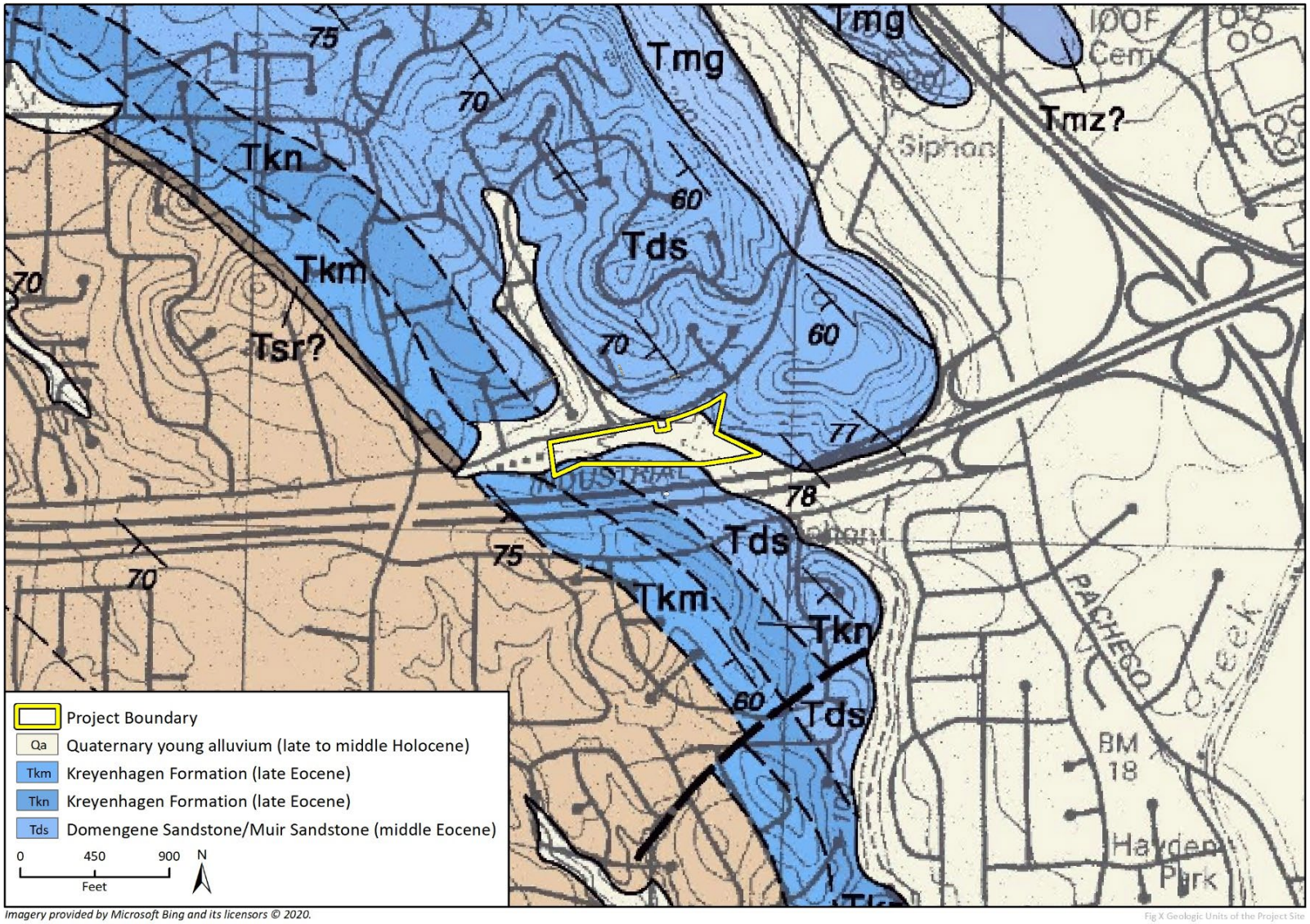
This analysis included review of pertinent geologic maps and geologic literature, and a paleontological locality search to identify any known fossil localities within the project site, or from geologic units mapped in the project site. Fossil collections records from the Paleobiology Database and University of California Museum of Paleontology (UCMP) online database were reviewed to identify known fossil localities in Contra Costa County (Paleobiology 2020, UCMP 2020). Following the geologic map review, literature review, and UCMP database search, a paleontological sensitivity classification level was assigned to each geologic unit mapped within the proposed project site. The assigned paleontological sensitivity followed the Society of Vertebrate Paleontology (SVP) guidelines (SVP 2010). The SVP has developed a system for assessing paleontological sensitivity and describes sedimentary rock units as having high, low, undetermined, or no potential for containing scientifically significant nonrenewable paleontological resources (SVP 2010). This system is based on rock units within which vertebrate or significant invertebrate fossils have been determined by previous studies to be present or likely to be present.

The project site is situated in the Diablo Range of the Coast Ranges, a geomorphic province of California extending approximately 600 miles from the Oregon border south to the Santa Ynez River in Santa Barbara County (California Geological Survey 2002, Norris and Webb 1990). Locally, the project site includes three geologic units mapped at the surface: 1) Quaternary young (late to middle Holocene) alluvium (Qa), 2) late Eocene Kreyenhagen Formation (Tkm, Tkn), and 3) middle Eocene Domengene Sandstone (Tds) (Dibblee and Minch 2005). Geological units are shown in Figure 4.4-2.

Holocene Alluvium

The late to middle Holocene alluvial deposits (Qa) are mapped throughout the northern project site; consisting of unconsolidated gravel, sand, and clay derived from streams, alluvial fan drainage, and floodplains. Late to middle Holocene alluvial deposits are too young (i.e., less than 5,000 years old) to preserve paleontological resources at or near the surface; however, late to middle Holocene deposits may grade downward into more fine-grained deposits of early Holocene to late Pleistocene (Qoa) or Eocene age (Tkm, Tkn, Tds) that could preserve fossil remains at an indeterminate depth. The depths at which these units become old enough to contain fossils is highly variable, but generally does not occur at depths of less than 5 feet. However, most of the project site has been previously disturbed and is immediately underlain by artificial fill to a depth of approximately 10 feet below ground surface (Appendix GEO). Early Holocene to late Pleistocene alluvial sediments

Figure 4.4-2 Geological Units in the Project Vicinity



Imagery provided by Microsoft Bing and its licensors © 2020.
Geologic basemap provided by Dibblee, T.W., and Minch, J.A., 2005.

Fig X Geologic Units of the Project Site

that may occur at depths greater than 10 feet have a well-documented record of abundant and diverse vertebrate fauna throughout California. Localities have produced fossil specimens of mammoth (*Mammuthus columbi*), horse (*Equus*), camel (*Camelops*), and bison (*Bison*), as well as various birds, rodents, and reptiles (Jefferson 1985, 2010, Paleobiology Database 2020, UCMP 2020). Areas mapped as late to middle Holocene alluvial deposits have low-paleontological sensitivity at the surface and high-paleontological sensitivity below 10 feet of depth in the project area.

Artificial fill consists of compacted, disturbed sediments related to prior development and as such has no paleontological sensitivity.

Kreyenhagen Formation

The late Eocene Kreyenhagen Formation (Tkm, Tkn), mapped in the southern and western portions of the project site, consists of marine clastic sedimentary rocks, including a sandstone subunit (Tkm) and an underlying clay shale subunit (Tkn). The sandstone subunit (Tkm), also known as the Markley Sandstone Member, is light gray to tan, bedded, semi-friable, and arkosic in nature. The underlying clay shale subunit (Tkn), also known as the Nortonvile Shale Member, is dark brownish gray, bedded, micaceous, and interbedded with olive brown, fine-grained sandstone and dolomite (Dibblee and Minch 2005). Late Eocene Kreyenhagen Formation (Tkm, Tkn) have yielded several paleontological resources throughout Northern California. A search of the paleontological locality records maintained in online databases (i.e., Paleobiology Database and UCMP) indicates that the late Eocene Kreyenhagen Formation (Tkm, Tkn) has rendered numerous significant fossil specimens of extinct requiem shark (*Carcharhinidae*), ray-finned fish (*Caranx orolomaensis*), beardfish (*Parapolymixia californica*), and other bony fish (*Osteichthyes*) within neighboring counties (Paleobiology Database 2020). Areas mapped as late Eocene Kreyenhagen Formation (Tkm, Tkn) are assigned a high-paleontological sensitivity at depths greater than 10 feet.

Domengene Sandstone

The middle Eocene Domengene Sandstone (Tds), mapped in the southern and eastern portions of the project site, consists of moderately to well lithified, semi-friable, *siliciclastic*, light gray to nearly white marine sedimentary rocks. Locally, this geologic unit is also referred to as Muir Sandstone (Dibblee and Minch 2005). Middle Eocene Domengene Sandstone (Tds) has yielded several paleontological resources throughout Northern California. A search of the paleontological locality records maintained in online databases (i.e., Paleobiology Database and UCMP) indicates that the middle Eocene Domengene (Muir) Sandstone (Tds) has yielded various fossil specimens of bony fish (*Osteichthyes*); as well as marine invertebrates, including bivalve (*Bivalvia*), gastropod (*Gastropoda*), and stony coral (*Flabellum californicum, Trochocyathus stantoni*) in Contra Costa County (Paleobiology Database 2020, UCMP 2020). Areas mapped as middle Eocene Domengene Sandstone (Tds) within the project site are assigned a high-paleontological sensitivity at depths greater than 10 feet.

4.4.2 Regulatory Setting

a. Federal Regulations

Clean Water Act Section 402

Section 402 of the Clean Water Act requires that all construction sites on an acre or greater of land, as well as municipal, industrial and commercial facilities discharging wastewater or stormwater directly from a point source (e.g., pipe, ditch, or channel) into a surface water of the United States must obtain permission under the National Pollutant Discharge Elimination System (NPDES) permit. All NPDES permits are written to ensure that the surface water receiving discharges will achieve specified water quality standards.

According to federal regulations, NPDES permit coverage for stormwater discharges associated with construction activity can be obtained through individual State permits or general permits. Individual permitting involves the submittal of specific data on a single construction project to the appropriate permitting agency that will issue a site-specific NPDES permit to a project. NPDES coverage under a general permit involves the submittal of a Notice of Intent by the regulated construction project that they intend to comply with a general permit to be developed by USEPA or a state with delegated permitting authority.

In California, the NPDES program is administered by the SWRCB through the RWQCBs and requires municipalities to obtain permits that outline programs and activities to control wastewater and stormwater pollution. The Federal Clean Water Act prohibits discharges of stormwater from construction projects unless the discharge is in compliance with an NPDES permit. The SWRCB is the permitting authority in California and adopted an NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) (Order 2009-0009, as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). Containment and spill cleanup are also included in the Storm Water Pollution Prevention Plan (SWPPP). SWPPPs include requirements for chemical storage with secondary containment, on-site cleanup and spill equipment, response procedures for hazardous and non-hazardous spills, and spill training for construction personnel.[2]

The order applies to construction sites that include one or more acre of soil disturbance. Construction activities include clearing, grading, grubbing, excavation, stockpiling, and reconstruction of existing facilities involving removal or replacement. The Construction General Permit requires that the landowner and/or contractor file permit registration documents prior to commencing construction and then pay a fee annually through the duration of construction. These documents include a notice of intent, risk assessment, site map, SWPPP, and signed certification statement. The SWPPP must include measures to ensure that all pollutants and their sources are controlled, non-stormwater discharges are identified and eliminated, controlled, or treated, site best management practices (BMP) are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges, and BMPs installed to reduce or eliminate pollutants after construction are completed and maintained. The Construction General Permit specifies minimum BMP requirements for stormwater control based on the risk level of the site.

[2] See https://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/constpermits/wqo_2009_0009_complete.pdf

b. State Regulations

California Government Code Section 65302(g)(1)

The California Government Code gives requirements on the inclusion of slope instability and seismic hazards in the general plan. General plans must include mapping of known seismic and other geologic hazards, and policies addressing:

- Evacuation routes
- Military installations
- Peak load water supply requirements
- Minimum road widths and clearing around structures for emergency vehicle access

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was signed into law in 1972 (14 C.C.R. Sections 3600 et seq.). The purpose of this Act is to prohibit the location of most structures for human occupancy across the traces of active faults and to thereby mitigate the hazard of fault rupture. Under the Act, the State Geologist is required to delineate "Earthquake Fault Zones" along known active faults in California (14 C.C.R. Section 3601). Towns, cities, and counties affected by the zones must regulate certain development projects within the zones. They must withhold development permits for sites within the zones until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting (14 C.C.R. Section 3603). Currently, the California Geological Survey does not include Martinez on its list of towns or cities affected by Alquist-Priolo Earthquake Fault Zones.

Seismic Hazards Mapping Act

The California Geological Survey, formerly the California Department of Conservation, Division of Mines and Geology (CDMG), provides guidance with regard to seismic hazards. Under CDMG's Seismic Hazards Mapping Act (1990), seismic hazard zones are to be identified and mapped to assist local governments in land use planning (California Public Resources Code Sections 2690 et seq.). The intent of these maps is to protect the public from the effects of strong ground shaking, liquefaction, landslides, ground failure, or other hazards caused by earthquakes. In addition, CDMG's Special Publications 117, "Guidelines for Evaluating and Mitigating Seismic Hazards in California," provides guidance for the evaluation and mitigation of earthquake-related hazards for projects within designated zones of required investigations.

Local building departments must require geologic studies before issuing building permits for all properties located in "zones of required investigation," where seismic induced liquefaction or landslides could occur during a large earthquake. In addition, property sellers must inform potential buyers of all properties within Seismic Hazard Zones.

California Building Code

California law provides a minimum standard for building design through the California Building Code (CBC) (C.C.R. Title 24). Chapter 23 of the CBC contains specific requirements for seismic safety. Chapter 29 regulates excavation, foundations, and retaining walls. Chapter 33 of the CBC contains specific requirements pertaining to site demolition, excavation, and construction to protect people and property from hazards associated with excavation cave-ins and falling debris or construction

materials. Chapter 70 of the CBC regulates grading activities, including drainage and erosion control. Construction activities are subject to occupational safety standards for excavation, shoring, and trenching as specified in California Division of Occupational Safety and Health (Cal/OSHA) regulations (C.C.R. Title 8).

The CBC has been adopted and amended as Chapter 15.04 of the Martinez Municipal Code (MMC), which is the Building Code for Martinez and regulates all building and construction projects within the City. All development in Martinez applying for a permit is subject to the 2019 Building Code, CCR Title 24, Part 2.

c. Local Regulations

City of Martinez Municipal Code

The MMC and Building Code incorporates the CBC, described above. The following MMC regulations provide protection against potential hazards due to soil/geologic conditions and limits the loss of topsoil:

- **15.04.060.b, Section J110 Amended—Erosion Control.** Erosion Control Measures—Required. Erosion control measures are required prior to commencing work under any of the following conditions:
  1. The area of land disturbed exceeds one-half acre;
  2. Natural and finished slopes exceed 10% and area of land disturbed exceeds 3,000 square feet.
  3. Volume of soil stored exceeds 200 cubic yards.

- **22.33.010, Hillside Development Regulations—Purpose.** The hills of Martinez are a highly valued natural feature of the community. The Martinez General Plan recognizes the intrinsic value and sensitive nature of the hills and sets as policies and goals the preservation of the hills from overbuilding and visually intrusive development. It is the intent of this Chapter to implement the aims of the General Plan Land Use Element, Hill Residential Areas and the Environmental Goals and Policies of the Open Space Element, by:
  1. Relating the intensity of development to the limitations imposed by topography, hydrology and geology and avoiding development in areas prone to erosion, flooding and landsliding; and
  2. Ensuring that the level of development is consistent with the level of services which reasonably can be provided in hill areas; and
  3. Preserving the natural features, environmental quality and scenic character of the hills while providing creative, innovative and safe residential development with a variety of housing types.

     The provisions of this Chapter shall apply to any form of residential development including all sites to be developed as a subdivision or as a planned unit development on properties with any areas of 10% and/or above slope as shown on the Slope Analysis or Seismic and Geologic Hazards Maps of the Open Space, Conservation, Seismic Safety, Scenic Roadway Element of the General Plan or as determined by a slope and hazard area map as described in Section 22.33.020.[3]

[3] Pursuant to the California Density Bonus law, the project applicant has requested a waiver of the Hillside Development Regulations as they pertain to density.

- **22.33.040.b, Development Standards.** Areas of slope instability due to slides, drainage or other geologic hazards shall not be developed. Where these conditions cannot be mitigated by locating development away front [*sic;* from] the hazard, they shall be repaired as required for the protection of public safety.

City of Martinez General Plan

The following goals, policies, and programs in the City of Martinez General Plan (1973) are intended to protect soils and address geologic safety concerns in the city. At the time of this document, the City is in the process of updating their General Plan but does not have a projected timeline for adoption.

Policies

OS-22.41 Large scale alteration of the topography to accommodate incompatible development patterns is prohibited to prevent severe erosion and hydrologic hazard.

OS-22.43 Grading alterations should not induce or accelerate natural channel grading, sheet erosion, gullying and other forms of erosion.

OS-22.51 Hill areas greater than 30% slope shall not be developed, except as set forth in A & B below, and except on an existing lot of record where only one single family house is proposed and there is no building site under 30% slope. In such cases, development shall only be allowed if it can be demonstrated that significant alteration of the topography will be minimized and that hazards to public safety will not be incurred. This prohibition will protect public safety and soils, safeguard watershed areas and waterways, and preserve the natural scenic setting of the community as determined by its landforms. This policy shall be applied as part of all specific area plans, area plans, and/or specific plans adopted as part of, or pursuant to, this general plan, and need not be restated or repeated in such plans.

a. Where no alternative exists, roads connecting development area may pass over areas of over 30% slope, subject to approval by the Planning Commission. Grading shall be limited to that necessary for the road or the minimum amount which will create the most natural appearing contours. If such grading creates buildable areas, residential development fronting the road may be permitted subject to approval by the Planning Commission.

b. Small areas of 30% and over slope entirely surrounded by areas under 30% slope may be developed. Small infringements on areas of over 30% slope may be permitted where the existing topography of the majority of the building area and area to be graded are under 30% slope.

OS-24.212 Development shall be precluded along any fault where surface rupture is deemed possible. Faults which are considered to be inactive should be evaluated for special foundation problems prior to the construction of any buildings, utilities, roads, or paving on or across their trace.

OS-24.225 Areas where moderate soil limitations are present must be studied on a site specific basis with respect to technique and density suitability.

4.4.3 Impact Analysis

a. Methodology and Significance Thresholds

This section describes the potential environmental impacts of the proposed project relevant to geology and soils. The impact analysis is based on an assessment of baseline conditions for the proposed project area, including topography, geologic and soil conditions, and seismic hazards, as described above under Section 4.4.1, *Setting*. This analysis identifies potential impacts based on the predicted interaction between the affected environment and construction, operation, and maintenance activities related to the development predicted to occur under the proposed project. This section describes impacts in terms of location, context, duration, and intensity, and recommends mitigation measures, when necessary, to avoid or minimize impacts.

The following thresholds of significance are based on *CEQA Guidelines* Appendix G. For the purposes of this EIR, project implementation may have a significant adverse impact if it would do any of the following:

1. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
    a. 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;
    b. Strong seismic ground shaking;
    c. Seismic-related ground failure, including liquefaction; or
    d. Landslides;
        1. Result in substantial soil erosion or the loss of topsoil;
        2. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
        3. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property;
        4. 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; or
        5. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

b. Project Impacts and Mitigation Measures

Threshold 1a:	Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?
Threshold 1b:	Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

Impact GEO-1 PROJECT CONSTRUCTION AND OPERATION COULD RESULT IN EXPOSURE OF PEOPLE OR STRUCTURES TO A RISK OF LOSS, INJURY, OR DEATH FROM SEISMIC EVENTS. ADHERENCE TO THE REQUIREMENTS OF THE CALIFORNIA BUILDING CODE AND CITY BUILDING CODE WOULD REDUCE THIS IMPACT TO A LESS-THAN-SIGNIFICANT LEVEL.

As noted in Table 4.4-1, there are no active faults that cross the site; therefore, there is no risk of fault rupture hazard at the project site.

The project site is not located within a State-designated Alquist-Priolo Earthquake Zone, but it is in an area with moderate to severe regional seismic activity; it is reasonable to assume the site would be exposed to strong ground shaking during the life of the project. Project construction would be required to comply with the seismic safety requirements in the CBC and the City Building Code including seismic retrofitting and building reinforcement. Compliance with these requirements would reduce seismic ground shaking impacts to the maximum extent feasible with current engineering practices. Furthermore, the project would not increase ground-shaking hazards at adjacent properties. Therefore, impacts related to strong seismic ground shaking would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 1c:	Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?
Threshold 1d:	Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?
Threshold 3:	Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Impact GEO-2 THE PROJECT SITE IS IN AN AREA PRONE TO EARTHQUAKES AND GROUND SHAKING. IMPLEMENTATION OF MITIGATION MEASURE GEO-1, IN ADDITION TO COMPLIANCE WITH GENERAL PLAN POLICIES AND THE CBC, WOULD REDUCE POTENTIAL IMPACTS RELATED TO SEISMIC GROUND SHAKING TO A LESS-THAN-SIGNIFICANT LEVEL. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

The project site may experience moderate to potentially severe ground shaking from earthquakes generated on known faults in the region as show in Figure 4.4-1 above in Section 4.4.1*, Setting*. However, proposed buildings would be constructed to comply with the seismic design criteria of the CBC. The CBC requires various measures of all construction in California to minimize risks associated with seismic shaking. These measures include standards for structural design, necessary tests and inspections, provisions addressing building foundations, and standards for the use of certain materials. With adherence to the requirements of the CBC, as required by the MMC, the project would result in less-than-significant impacts related to seismically-induced ground shaking from nearby faults. The project would be required to comply with the City Seismic Requirements and the latest CBC to ensure that all new and modified buildings would be capable of withstanding anticipated levels of ground shaking.

The results of the Preliminary Geotechnical Investigation indicate that two of the sand layers on-site may potentially experience liquefaction triggering that could result in soil softening and settlement. Based on Cornerstone Earth Group's preliminary analysis, it is estimated that settlement due to liquefaction beneath proposed Building 5 could be about 1 inch across a horizontal distance of 50 feet. Thus, impacts related to seismic-related liquefaction would be potentially significant.

Lateral spreading is horizontal/lateral ground movement of relatively flat-lying soil deposits towards a free face such as an excavation, channel, or open body of water; typically, lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of the exposed slope. A 3- to 6-foot deep drainage channel crosses the eastern half of the site that would be filled during site development. As a result, the potential for lateral spreading to affect the site is low (Appendix GEO).

The site's potential for landslides is low due to the generally favorable bedrock orientation and slope inclinations (Appendix GEO). However, the slope's sandy topsoil may be susceptible to shallow sloughing or erosion during periods of heavy rainfall. Therefore, impacts related to unstable soil would be potentially significant. According to the Preliminary Geotechnical Investigation performed by Cornerstone Earth Group (Appendix GEO), from a geotechnical viewpoint, the proposed project is feasible provided the issues related to unstable soils are addressed by standard engineering measures and the completion of a design-level geotechnical investigation once site development plans are finalized.

Mitigation Measure

GEO-1 Design-Level Geotechnical Investigation

Prior to grading and/or building permit issuance, the applicant must submit to the City a design-level geotechnical investigation which includes additional subsurface exploration, laboratory testing and engineering analysis that further evaluates the potential for post-construction settlement in the vicinity of buildings 4, 5, 6, and the podium garage, shallow slope creep or erosion, and shallow groundwater. This evaluation shall be used to confirm the preliminary recommendations found in the Preliminary Geotechnical Investigation conducted by Cornerstone Earth Group in December 2009 and updated in May 2022 and develop detailed mitigation techniques. The applicant must demonstrate to the City that a qualified geologist oversees earthwork operations to check that the site is properly prepared, and that all grading or fill activity on the site accounts for post-construction settlement and has been performed in accordance with geotechnical recommendations and project specifications. The applicant must submit the geotechnical investigation and construction plans for City review and approval prior to issuing grading and/or building permits, and the applicant must demonstrate to the City that all geotechnical recommendations are implemented during construction.

Significance After Mitigation

Implementation of Mitigation Measure GEO-1 would reduce potential impacts due to unstable soils including lateral spreading, erosion, and seismic-related liquefaction, to less-than-significant levels.

Threshold 2: Would the project result in substantial soil erosion or the loss of topsoil?

Impact GEO-3 THE PROJECT SITE MAY POTENTIALLY EXPERIENCE SHALLOW SOIL CREEP OR EROSION DURING PERIODS OF HEAVY RAINFALL. HOWEVER, POTENTIAL IMPACTS RELATED TO SOIL EROSION OR THE LOSS OF TOPSOIL WOULD BE REDUCED TO LESS THAN SIGNIFICANT WITH COMPLIANCE TO EXISTING REGULATORY REQUIREMENTS, INCLUDING IMPLEMENTATION OF APPLICABLE BMPS RELATED TO WIND AND WATER EROSION CONTROL, AND MITIGATION. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

As outlined above in Section 4.4.1, *Setting*, the project site contains topsoil made up of loose, sandy soils mantling the north-facing slopes. As a result, shallow soil creep or erosion would be expected to occur at the site during periods of heavy rainfall. As discussed in the *Regulatory Setting*, BMPs required under the SWPPP would help reduce soil erosion and topsoil loss, including use of silt fences or straw bales/wattles, use of soil stabilizers, and similar measures. Nevertheless, the potential for soil erosion would be potentially significant and mitigation measures would be required to ensure that erosion is controlled, as discussed in the geotechnical investigation (Appendix GEO).

Mitigation Measure

Mitigation Measure GEO-1 would be required.

Significance After Mitigation

Implementation of Mitigation Measure GEO-1 would reduce potential impacts due to soil erosion or loss of topsoil to less-than-significant levels.

Threshold 4:	Would the project be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Impact GEO-4 THERE IS POTENTIAL FOR EXPANSIVE SOILS TO OCCUR ON THE PROJECT SITE. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

The peer review conducted by Cal Engineering & Geology noted that the Preliminary Geotechnical Investigation produced by Cornerstone Earth Group (Appendix GEO) found clay and silt-containing soils on portions of the project site that were not tested for plasticity. Often clayey and silty soils can have higher expansion potential (Cal Engineering & Geology 2016). Therefore, it was determined that the project site may have expansive soils. This impact would be potentially significant and Mitigation Measure GEO-1 would be required. According to the Preliminary Geotechnical Investigation performed by Cornerstone Earth Group (Appendix GEO), from a geotechnical viewpoint, the proposed project is feasible provided the issues related to expansive soils are addressed by standard engineering measures and the completion of a design-level geotechnical investigation once site development plans are finalized.

Mitigation Measure

Mitigation Measure GEO-1 is required.

Significance After Mitigation

Implementation of Mitigation Measure GEO-1 would be required. The measure includes supervision of earthwork operations to ensure that all grading or fill activity on the site accounts for post-construction settlement and would reduce potential impacts due to expansive soils to less-than-significant levels.

Threshold 5:	Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Impact GEO-5 THE PROJECT WOULD BE SERVED BY THE CITY'S SEWER SYSTEM AND NO ON-SITE SEPTIC OR ALTERNATIVE WASTEWATER SYSTEMS ARE PROPOSED. THERE WOULD BE NO IMPACT.

As discussed above under Section 4.4.1, *Setting*, the project would not have any impacts related to use of septic tanks or alternative wastewater disposal systems because the project would be connected to the city's sewer system for wastewater collection. Therefore, no impacts from septic systems or alternative wastewater disposal systems would occur, and no mitigation measures are required.

Mitigation Measures

No mitigation measures would be required.

Significance After Mitigation

No impact would occur.

Threshold 6:	Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Impact GEO-6 PROJECT CONSTRUCTION COULD RESULT IN IMPACTS TO PALEONTOLOGICAL RESOURCES. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

The potential for significant impacts to paleontological resources was evaluated based on the project's potential to disturb sensitive geologic units during construction.

Project construction would excavate up to 15 to 20 feet below ground surface (Appendix GEO). Given the site's conditions, project construction would require ground disturbance of previously disturbed areas, which would not result in potential impacts to paleontological resources. However, certain proposed construction activities would involve ground disturbance beyond the limits of previously disturbed areas. If native (i.e., previously undisturbed) sediments or geologic units with a high paleontological sensitivity (early Holocene to late Pleistocene alluvium [Qoa], Kreyenhagen Formation [Tkm, Tkn], Domengene Sandstone [Tds]) are disturbed, impacts to paleontological resources could occur. Construction activities may result in the destruction, damage, or loss of undiscovered scientifically important paleontological resources, and would be a significant impact. Therefore, mitigation measures would be required.

Mitigation Measure

GEO-2 Paleontological Resources Monitoring

Prior to grading and/or building permit issuance and/or before the start of construction, the project applicant must provide evidence to the City that it has retained a qualified paleontological monitor (i.e., a paleontologist who meets the SVP [2010] standards as a Paleontological Resource Monitor) to conduct paleontological monitoring during excavation to estimated depths of 10 feet or more below the existing ground surface of intact (i.e., previously undisturbed) Qoa, Tkm, Tkn, and Tds geologic units.

Full-time monitoring shall be conducted for all ground-disturbing activities exceeding 10 feet below ground surface, excluding pile driving and drilling with an auger diameter of less than 3 feet, that impact native previously undisturbed geologic units mapped at the surface as early Holocene to late Pleistocene alluvium [Qoa], Kreyenhagen Formation [Tkm, Tkn], Domengene Sandstone [Tds]), which have a high-paleontological sensitivity. Ground-disturbing activities that impact previously disturbed sediments only do not require paleontological monitoring.

The Qualified Paleontologist shall determine the duration and timing of the monitoring. If the Qualified Paleontologist determines that full-time monitoring is no longer warranted, he or she may recommend reducing monitoring to periodic spot-checking or may recommend that monitoring cease entirely. Monitoring shall be reinstated if any new ground disturbances are required, and the Qualified Paleontologist shall reconsider reduction or suspension at that time.

If a paleontological resource is discovered, the monitor shall have the authority to temporarily divert construction equipment within 50 feet the find, until it is assessed for scientific significance and collected. Once salvaged, significant fossils shall be prepared to a curation-ready condition and curated in a scientific institution with a permanent paleontological collection (such as the UCMP). Curation fees are the responsibility of the project owner.

A final report shall be prepared describing the results of the paleontological monitoring efforts associated with the project. The report shall include a summary of the field and laboratory methods,

an overview of the project geology and paleontology, a list of taxa recovered (if any), an analysis of fossils recovered (if any) and their scientific significance, and recommendations. The report shall be submitted to the City. If the monitoring efforts produced fossils, then a copy of the report shall also be submitted to the designated museum repository.

Significance After Mitigation

Implementation of Mitigation Measure GEO-2 would reduce this impact to a less-than-significant level.

4.4.4 Cumulative Impacts

The planned and pending projects in the project site vicinity are listed in Table 3-1 of Section 3, *Environmental Setting*. Cumulative projects considered in this analysis include 10 projects, including residential, industrial, and commercial uses. The project, in conjunction with other planned and pending projects in the project site vicinity, would cumulatively increase the potential to encounter geologic phenomena (faults, seismic ground shaking, landslides, etc.), similar soil conditions, and paleontological resources.

Each individual project would be required to investigate and address the site specific geologic and soil conditions in conjunction with engineering recommendations incorporated into the final design, consistent with CBC requirements. Similarly, in the event that paleontological resources are discovered, each individual project would be required to comply with the applicable regulatory requirements and mitigate any potential impacts to resources on the individual project site.

Compliance with CEQA requirements, including the implementation of recommendations provided in project-specific resource studies, on all new development, would reduce impacts at a project level, and in-turn avoid significant impacts on a cumulative basis. Potential impacts of the project would be reduced to a less-than-significant level due to implementation of Mitigation Measures GEO-1 and GEO-2. The site-specific soil characteristics of the project site will be considered in the engineering requirements and the final design for each planning area. In the event that paleontological resources are uncovered, each individual project would be required to comply with the applicable regulatory requirements to mitigate potential impacts. Such recommendations may include implementation of a mitigation plan, monitoring, recovery and curation. Therefore, cumulative impacts to geology and soils, including paleontological resources, would be less than significant.

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4.5 Noise

This section evaluates the potential for significant noise impacts resulting from project construction and operation. The analysis in this section is based on a *Noise and Vibration Study* conducted by Rincon in March 2022 (Appendix NOI).

4.5.1 Setting

Overview of Noise and Vibration

Noise

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

Human Perception of Sound

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

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

Sound Propagation and Shielding

Sound changes in both level and frequency spectrum as it travels from the source to the receiver. The most obvious change is the decrease in the noise level as the distance from the source increases. The manner by which noise reduces with distance depends on factors such as the type of sources (e.g., point or line), the path the sound will travel, site conditions, and obstructions.

Sound levels are described as either a "sound power level" or a "sound pressure level," which are two distinct characteristics of sound. Both share the same unit of measurement, the dB. However, sound power (expressed as L_{pw}) is the energy converted into sound by the source. As sound energy travels through the air, it creates a sound wave that exerts pressure on receivers, such as an eardrum or microphone, which is the sound pressure level. Sound measurement instruments only measure sound pressure, and noise level limits are typically expressed as sound pressure levels.

Noise levels from a point source (e.g., construction, industrial machinery, air conditioning units) typically attenuate, or drop off, at a rate of 6 dBA per doubling of distance. Noise from a line source (e.g., roadway, pipeline, railroad) typically attenuates at about 3 dBA per doubling of distance (Caltrans 2013). Noise levels may also be reduced by intervening structures; the amount of attenuation provided by this "shielding" depends on the size of the object and the frequencies of the noise levels. Natural terrain features, such as hills and dense woods, and man-made features, such as buildings and walls, can significantly alter noise levels. Generally, any large structure blocking the line of sight will provide at least a 5-dBA reduction in source noise levels at the receiver (Federal Highway Administration [FHWA] 2011). Structures can substantially reduce exposure to noise as well. The FHWA's guidance indicates that modern building construction generally provides an exterior-to-interior noise level reduction of 10 dBA with open windows and an exterior-to-interior noise level reduction of 20 to 35 dBA with closed windows (FHWA 2011).

Descriptors

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

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

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

Ground-Borne Vibration

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

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

primary concern from vibration is that it can be intrusive and annoying to building occupants at vibration-sensitive land uses and may cause structural damage.

Typically, ground-borne vibration generated by manmade activities attenuates rapidly as distance from the source of the vibration increases. Vibration amplitudes are usually expressed in peak particle velocity (PPV) or root mean squared (RMS) vibration velocity. The PPV and RMS velocity are normally described in inches per second (in/sec). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is often used as it corresponds to the stresses that are experienced by buildings (Caltrans 2020).

High levels of ground-borne vibration may cause damage to nearby building or structures; at lower levels, ground-borne vibration may cause minor cosmetic (i.e., non-structural damage) such as cracks. These vibration levels are nearly exclusively associated with high-impact activities such as blasting, pile-driving, vibratory compaction, demolition, drilling, or excavation. The American Association of State Highway and Transportation Officials (AASHTO) has determined vibration levels with potential to damage nearby buildings and structures; these levels are identified in Table 4.5-1.

Table 4.5-1 AASHTO Maximum Vibration Levels for Preventing Damage

Type of Situation	Limiting Velocity (in/sec)
Historic sites or other critical locations	0.1
Residential buildings, plastered walls	0.2–0.3
Residential buildings in good repair with gypsum board walls	0.4–0.5
Engineered structures, without plaster	1.0–1.5

Source: Caltrans 2020

Numerous studies have been conducted to characterize the human response to vibration. The vibration annoyance potential criteria recommended for use by Caltrans, which are based on the general human response to different levels of ground-borne vibration velocity levels, are described in Table 4.5-2.

Table 4.5-2 Vibration Annoyance Potential Criteria

	Vibration Level (in/sec PPV)	
Human Response	Transient Sources	Continuous/Frequent Intermittent Sources[1]
Severe	2.0	0.4
Strongly perceptible	0.9	0.10
Distinctly perceptible	0.25	0.04
Barely perceptible	0.04	0.01

[1] Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

in/sec = inches per second; PPV = peak particle velocity

Source: Caltrans 2020

Project Noise Setting

Sensitive Receivers

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. The City of Martinez General Plan Noise Element identifies noise-sensitive land uses as hospitals, schools, churches, senior care uses and similar facilities (City of Martinez 2016).

Vibration-sensitive receivers, which are similar to noise-sensitive receivers, include residences and institutional uses, such as schools, churches, and hospitals. Vibration-sensitive receivers also include buildings where vibrations may interfere with vibration-sensitive equipment that is affected by vibration levels that may be well below those associated with human annoyance (e.g., recording studies or medical facilities with sensitive equipment).

As shown in Figure 2-2, the nearest sensitive receivers to the site boundaries are single-family residences adjacent to the project site to the west and across Arnold Drive 90 feet to the north, and single-family residences 450 feet to the south across SR 4.

Noise Measurements

The most prevalent source of noise in the project site vicinity is vehicular traffic on SR 4 to the south and Arnold Drive to the north. To characterize ambient sound levels at and near the project site, two 15-minute sound level measurements and one 24-hour measurement and were conducted on Tuesday, January 25, 2022 at 10:41 a.m., 11:02 a.m., and 11:31 a.m. An Extech Model 407780A, ANSI Type 2 integrating sound level meter was used to conduct the measurements. Noise Measurement (NM) 1 was conducted to measure noise from SR 4 to the project site; NM-2 was conducted to measure noise from Arnold Drive to the project site; and Long Term (LT) 1 was conducted to analyze ambient noise levels in the western portion of the project site. These noise levels are also representative of ambient noise levels at the nearest sensitive receivers to the project site (residences adjacent to the west). Table 4.5-3 and Table 4.5-4 summarize the results of the noise measurements. Detailed sound level measurement data are included in Appendix NOI.

Table 4.5-3 Project Site Vicinity Sound Level Monitoring Results- Short-Term

Measurement Location		Sample Times	Approximate Distance to Primary Noise Source	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)
NM-1	Southern Boundary of Project Site	10:29 – 10:44 a.m.	85 feet to Centerline of State Route 4	58	56	63
NM-2	Northern Boundary of Project Site	10:53 – 11:08 a.m.	30 feet to Centerline of Arnold Drive	63	49	79[1]

[1]An airplane was observed overhead during NM-2 that resulted in the L_{max} value.

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

Detailed sound level measurement data are included in Appendix NOI.

Table 4.5-4 Project Site Vicinity Noise Monitoring Results – Long Term

Sample Time	dBA L_{eq}	Sample Time	dBA L_{eq}
24-hour Measurement – West Side of Project Site – January 25-26, 2022			
11:30 a.m.	57.1	11:30 p.m.	55.8
12:30 p.m.	55.2	12:30 a.m.	51.4
1:30 p.m.	55.1	1:30 a.m.	51.7
2:30 p.m.	55.5	2:30 a.m.	51.4
3:30 p.m.	57.2	3:30 a.m.	56.8
4:30 p.m.	59.3	4:30 a.m.	58.3
5:30 p.m.	58.5	5:30 a.m.	62.4
6:30 p.m.	59.5	6:30 a.m.	62.3
7:30 p.m.	59.0	7:30 a.m.	62.6
8:30 p.m.	60.7	8:30 a.m.	59.3
9:30 p.m.	58.8	9:30 a.m.	57.8
10:30 p.m.	57.4	10:30 a.m.	57.4
24-hour Noise Level (CNEL)			**64.8**

L_{eq} = average noise level equivalent; dBA = A-weighted decibel; CNEL = Community Noise Equivalent Level

Detailed sound level measurement data are included in Appendix NOI.

4.5.2 Regulatory Setting

City of Martinez 1985 Noise Element of the General Plan

The City of Martinez Noise Element was adopted by the City through Resolution No, 194-85 on November 20, 1985, and utilizes the recommended State of California Office of Planning and Research (OPR) Noise Element Guidelines for community noise exposure. For low density residential land uses, these guidelines stipulate an ambient noise environment of up to 60 dBA L_{dn} is acceptable, up to dBA 70 L_{dn} is conditionally acceptable, and above 70 L_{dn} is normally unacceptable (City of Martinez 1985). These guidelines are consistent with the OPR's most recent general plan guidelines (OPR 2017).

City of Martinez Municipal Code

MMC Section 8.34 (Noise Control) prescribes standards prohibiting detrimental levels of noise to implement the goals of the Noise Element of the General Plan. The following standards would be applicable to the proposed project:

8.34.020 Noise Standards

A. Acceptable standards for noise levels shall be as follows:
   1. A L_{dn} of 45 dBA is the standard for interior noise levels. An L_{dn} of 45 dBA is achieved by an allowable interior noise level of 35 dBA between 10:00 p.m. - 7:00 a.m. and 45 dBA between 7:00 a.m. - 10:00 p.m.
   2. A L_{dn} of 60 dBA is the standard for exterior noise. An L_{dn} of 60 dBA is a maximum noise level of 50 dBA between 10:00 p.m. - 7:00 a.m. and 60 dBA between 7:00 a.m. - 10:00 p.m.

8.34.030 Noise Regulations

The following specific acts are declared to be public nuisances and are prohibited, subject to the exemptions set forth herein.

A. No person shall cause or allow to cause, any source of sound at any location within the City or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which when measured within public or private indoor or outdoor space on the property where the noise disturbance is being experienced, causes the noise level to exceed the standards set forth in Section 8.34.020.

B. The operation or use of any of the following before 7:00 a.m., or after 7:00 p.m. daily (except Saturday, Sunday, and State, federal or local holidays, when the prohibited time shall be before 9:00 a.m. and after 5:00 p.m.).

1. A hammer or any other device or implement used to repeatedly pound or strike an object.
2. An impact wrench, or other tool or equipment powered by compressed air.
3. Any tool or piece of equipment powered by an internal-combustion engine such as, but not limited to, chain saw, backpack leaf blower, and lawn mower. Except as specifically included in this Chapter, motor vehicles, powered by an internal combustion engine and subject to the State of California Vehicle Code, are excluded from this prohibition.
4. Any electrically or battery powered tool or piece of equipment used for cutting drilling, or shaping wood, plastic, metal or other materials or objects, such as but not limited to a saw, drill, lathe, or router.
5. Any of the following: the operation and/or loading or unloading of heavy equipment (such as but not limited to bulldozer, road grader, back hoe), ground drilling and boring equipment, hydraulic crane and boom equipment, portable power generator or pump, pavement equipment (such as but not limited to pneumatic hammer, pavement breaker, tamper, compacting equipment), pile-driving equipment, vibrating roller, sand blaster, gunite machine, trencher, concrete truck, and hot kettle pump and the like.
6. Construction, demolition, excavation, erection, alteration, or repair activity.

D. Loading, unloading, opening, closing or other handling of boxes, crates, containers, building materials, garbage cans or similar objects between the hours of 10:00 p.m. and 7:00 a.m. daily in such a manner so as to create a noise disturbance.

8.34.060 Noise Standards for New Construction

A. All residential development, including hotels and motels, subject to California Building Code, Title 24, Part 2, Section 1207, which are to proposed be located in zones exceeding 60 dB CNEL, or residential developments which are proposed to be located within 500 feet of any major arterial, highway, railroad or mass transit line shall submit, to the Community Development Department, as part of a development application, on-site noise measurements to determine existing and future noise levels, and shall include noise attenuation provisions in the design of those developments if they are found to exceed the adopted standards set forth herein.

Methodology

Construction Noise

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

Variation in power imposes additional complexity in characterizing the noise source level from construction equipment. Power variation is accounted for by describing the noise at a reference distance from the equipment operating at full power and adjusting it based on the duty cycle of the activity to determine the L_{eq} of the operation (FTA 2018). Each phase of construction has a specific equipment mix, depending on the work to be accomplished during that phase. Each phase also has its own noise characteristics; some will have higher continuous noise levels than others, and some have high-impact noise levels.

Construction activity would result in temporary noise in the project site vicinity, exposing surrounding nearby receivers to increased noise levels. Construction noise would typically be higher during the heavier periods of initial construction (i.e., site preparation and grading) and would be lower during the later construction phases (i.e., building construction and paving). Typical heavy construction equipment during project grading could include dozers, loaders, graders, and dump trucks. It is assumed that diesel engines would power all construction equipment. Construction equipment would not all operate at the same time or location. In addition, construction equipment would not be in constant use during the 8-hour operating day.

Project construction would occur nearest to the single-family residences north of the project site. Over the course of a typical construction day, construction equipment would be located as close as 15 feet to the properties but would typically be located at an average distance farther away due to the nature of construction and the lot size of the project. For example, during a typical construction day, the equipment may operate approximately 100 to 300 feet from a nearby sensitive receiver. Therefore, it is assumed that over the course of a typical construction day the construction equipment would operate at an average distance of 200 feet from the single-family residences to the north.

Construction noise is typically loudest during activities that involve excavation and that move soil, such as site preparation and grading. A potential construction scenario includes a dozer and a front-end loader working during grading to excavate and move soil. At a distance of 200 feet, a dozer and a front-end loader would generate a noise level of 67.6 dBA L_{eq} (RCNM calculations are included in Appendix NOI).

Ground-Borne Vibration

The project does not include any substantial vibration sources associated with operation. Thus, construction activities have the greatest potential to generate ground-borne vibration affecting nearby receivers, especially during grading and excavation of the project site. Table 4.5-5 shows vibration levels of anticipated grading and excavation equipment used during construction. The greatest vibratory source during construction in the project vicinity would be a large bulldozer. Neither blasting nor pile driving would be required for construction of the project.

Table 4.5-5 Vibration Levels Measured during Construction Activities

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

Source: FTA 2018

Although ground-borne vibration is sometimes noticeable in outdoor environments, it is almost never annoying to people who are outdoors; therefore, the vibration level threshold is assessed at occupied structures (FTA 2018). Therefore, all vibration impacts are assessed at the structure of an affected property.

Based on AASHTO recommendations, limiting vibration levels to below 0.2 in/sec PPV at residential structures would prevent structural damage regardless of building construction type. These limits are applicable regardless of the frequency of the source. However, as described in Section 4.5.1, *Setting*, potential human annoyance associated with vibration is usually different if it is generated by a steady state or a transient vibration source.

As shown in Table 4.5-2, the vibration level threshold at which transient vibration sources (such as construction equipment) are considered to be distinctly perceptible is 0.25 in/sec PPV. This analysis uses the distinctly perceptible threshold for purposes of assessing vibration impacts.

Operational Noise

ON-SITE NOISE SOURCES

Noise sources associated with operation of the proposed project would consist of landscaping maintenance, general conversations, and mechanical equipment (e.g., heating, ventilation, and air conditioning [HVAC] units). Due to the distances and low noise levels associated with general site activities and landscape maintenance, these sources are not considered substantial and are not analyzed further.

The primary on-site operational noise source from the project would be HVAC units. Specific planning data for the future HVAC systems are not available at this stage of project design; however, this analysis assumes the use of a typical HVAC system for commercial or multi-family residential sites, which has a sound power level of 85 dBA. The unit used in this analysis is a 16.7-ton Carrier 38AUD25 split system condenser (see Appendix NOI for manufacturer's specifications). The project assumptions are based upon one ton of HVAC per 600 sf of building space, as shown in Table 4.5-6. Based on the size of the project, it is assumed that 19 rooftop-mounted HVAC units distributed across the project site would be needed, producing a combined noise level at off-site receivers that is equivalent to all units being located at the center of the project site, which is measured at approximately 200 feet from the nearest off-site sensitive receivers north of the project boundary.

Table 4.5-6 Modeled HVAC

Use/Description	Building Square Footage	Model	Estimated HVAC Tons	Estimated HVAC Units	Sound Power Level per Unit
Multi-Family Housing/Hotel Use	188,897	38AUD25	315	19	85

See Appendix NOI for sample HVAC specification sheets.

TRAFFIC NOISE

Noise levels affecting the project site and existing receivers would be primarily influenced by traffic noise from SR 4 and Arnold Drive. Future noise levels affecting the compatibility of the project site were estimated using the FHWA's Traffic Noise Model (TNM) traffic noise-reference levels and SoundPLAN. Traffic noise-model inputs to SoundPLAN include the three-dimensional coordinates of the roadways, noise receivers, and topographic features or planned barriers that would affect noise propagation, vehicle volumes and speeds, type of vehicle, and absorption factors. The project's increase in traffic noise levels to off-site receivers was calculated using the relative increase in traffic levels from project traffic compared to existing levels, assuming a 3 dBA increase for a doubling of traffic.

Peak hour traffic volumes used for the noise analysis are shown in Table 4.5-7. Existing roadway volumes for SR 4 were taken from the Caltrans Traffic Census Program (Caltrans 2022); the observed traffic volume on Arnold Drive during the site measurements was used for that roadway. The posted speed limit is 65 miles per hour on SR 4 and 35 miles per hour on Arnold Drive. To determine the vehicle classification mix for modeling, the Caltrans vehicle classification mix from SR 4 was used, which observed 95 percent automobiles, 3 percent medium trucks, and 2 percent heavy trucks (Caltrans 2022). The observed traffic mix on Arnold Drive during the site measurements was used of 96 percent automobiles and 4 percent medium trucks. Peak hour traffic was assumed to be approximately 10 percent of the roadway's total average daily traffic in the model as 10 percent peak hour traffic noise level is considered approximately equivalent to CNEL.

Table 4.5-7 Peak Hour Trip Volumes

Roadway	Modeled Peak Hour Traffic Volumes
State Route 4 between Route 80 and Pacheco Boulevard	6,200
Arnold Drive	216

Source: Caltrans 2020 and 2022

Exterior traffic noise levels at the residential building façades were calculated with receivers placed on the ground floor 5 feet above ground level and residential receivers placed on the second, third, and fourth floor approximately 20, 30, 40 feet above ground level, respectively.

Significance Thresholds

To determine whether a project would have a significant noise impact, Appendix G of the *CEQA Guidelines* requires consideration of whether a project would result in:

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;
2. Generation of excessive groundborne vibration or groundborne noise levels; or
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 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

Construction Noise

Per MMC Section 8.34.030, noise generated by construction activities is not prohibited by MMC Section 8.34.020 if it occurs between the hours of 7:00 a.m. to 7:00 p.m., Monday through Friday and 9:00 a.m. to 5:00 p.m. on Saturday, Sunday, and Holidays. However, for purposes of analyzing impacts from this project, the FTA *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018) criteria were used. The FTA provides reasonable criteria for assessing construction noise impacts based on the potential for adverse community reaction. For residential uses, the daytime noise threshold is 80 dBA L_{eq} for an 8-hour period (FTA 2018).

On-Site Operational Noise

The City has adopted noise standards in the MMC that regulate operational noise sources in the City. The proposed project would involve a multi-family residential building. The proposed project would result in a significant impact if it generates noise from on-site sources in excess of MMC standards included in Section 8.34.030 which regulate noise from operations that are typically associated with residential uses (e.g., sound-amplifying devices, lawn maintenance equipment, hand tools, wheeled equipment), or if it generates noise exceeding levels established by MMC Section 8.34.020.

Off-Site Traffic Noise

Off-site project noise (i.e., roadway noise) would result in a significant impact if the project would cause the ambient noise level measured at the property line of affected uses to increase by 3 dBA, which would be a perceptible increase in traffic noise.

Construction Vibration

The City has not adopted a significance threshold to assess vibration impacts during construction and operation. Therefore, the Caltrans *Transportation and Construction Vibration Guidance Manual* (2020) is used to evaluate potential construction vibration impacts related to both potential building damage and human annoyance. Based on the Caltrans criteria described above, construction vibration impacts would be significant if vibration levels exceed 0.5 in/sec PPV for residential structures and 2.0 in/sec PPV for commercial structures, which are the limits where minor cosmetic (i.e., non-structural) damage may occur to these buildings. In addition, construction vibration impacts would cause human annoyance at nearby receivers if vibration levels exceed 0.25 in/sec PPV, which is the limit where vibration becomes distinctly perceptible from barely perceptible.

Land Use Compatibility

The City has adopted noise guidelines that provide the normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable noise levels for different land uses. The proposed project would include multi-family residences. For multi-family residential uses, these guidelines stipulate an ambient noise environment of up to 60 dBA L_{dn} is acceptable, up to 70 dBA L_{dn} is conditionally acceptable, and above 70 dBA L_{dn} is normally unacceptable. However, analysis of impacts of the environment on a project is not required for CEQA compliance (*Ballona Wetlands Land Trust et al. v. City of Los Angeles*). Therefore, noise exposure to new noise-sensitive land uses has been analyzed for informational purposes only.

4.5.3 Impact Analysis

Threshold 1:	Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

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. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction

The nearest noise-sensitive receivers affected by project construction are the single-family residences north of the project site. Over the course of a typical construction day, construction equipment would be located at an average of 200 feet to the nearest sensitive receivers.

At a distance of 200 feet, a dozer and a backhoe are estimated at a noise level of 67.6 dBA L_{eq} (RCNM calculations are included in Appendix NOI). Therefore, construction noise would not exceed the threshold of 80 dBA L_{eq} for an 8-hour period. The approximate 80 dBA L_{eq} (8 hour) noise contour for project construction is estimated at 64 feet (i.e., if construction takes place at an average of 64 feet or less from a sensitive receiver throughout an 8-hour construction day, it would exceed the threshold). Therefore, if construction occurs within 64 feet of sensitive receivers, noise levels from construction may exceed the FTA construction noise threshold for residential uses. Construction would not occur within 64 feet of a sensitive receptor for an 8-hour period. Therefore, impacts from construction would be less than significant.

Operation

HVAC Units

New buildings on the project site would have rooftop-mounted HVAC equipment that generates noise. As shown in Table 4.5-6, it is assumed that the project would require 19 HVAC units. The combined operation of 19 HVAC units would generate an estimated noise level of 53.7 dBA L_{eq} at the nearest off-site sensitive receivers north of the project site boundary.

The project would include parapet walls surrounding HVAC equipment on the building rooftops, which would contribute at least a 5 dBA decrease in noise levels. Therefore, estimated noise levels at the nearest offsite sensitive receivers would be 48.7 dBA L_{eq}. This would not exceed the City's maximum noise level limit of 50 dBA between 10:00 p.m. - 7:00 a.m.

Additional on-site noise sources such as landscape maintenance, low-speed traffic on internal roadways, conversations, open space activities, and trash hauling also would be typical of noise generated by neighboring land uses and would not substantially contribute to overall ambient noise levels. Therefore, on-site operations would have a less-than-significant impact on noise-sensitive receivers.

Off-Site Traffic Noise

According to the project's air quality analysis (Appendix AQ), the project would result in approximately 1,332 average daily trips (ADT), which would equate to a peak hour trip volume of 133. This additional traffic would increase noise levels on Arnold Drive by approximately 2 dBA. These increases would not exceed the 3 dBA criterion for off-site traffic noise impacts. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 2:	Would the project result in generation of excessive ground-borne vibration or ground-borne noise levels?

Impact NOI-2 THE PROJECT WOULD NOT RESULT IN GENERATION OF EXCESSIVE GROUND-BORNE VIBRATION OR GROUND-BORNE NOISE LEVELS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction activities known to generate excessive ground-borne vibration, such as pile driving, would not be conducted by the project. The greatest anticipated source of vibration during general project construction activities would be from a dozer, which may be used within 15 feet of the nearest off-site sensitive receivers to the to the west. A dozer would create approximately 0.089 in/sec PPV. at a distance of 25 feet (Caltrans 2013). This would equal a vibration level of approximately than 0.16 in/sec PPV. at a distance of 15 feet.[2] This would be lower than what is considered a distinctly perceptible impact for humans of 0.25 in/sec PPV. and the structural damage impact to residential structures of 0.5 in/sec PPV. Therefore, although a dozer may be perceptible to nearby human receptors, temporary impacts associated with the dozer (and other potential equipment) would be less than significant.

Operation of the project would not include any substantial vibration sources. Therefore, operational vibration impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

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

Threshold 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 2 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?

Impact NOI-3 THE PROJECT WOULD NOT EXPOSE PEOPLE RESIDING OR WORKING IN THE PROJECT AREA TO EXCESSIVE NOISE LEVELS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

The airport nearest to the project site, the Buchanan Field Airport, is located approximately 1 mile to the east. The project would not be located within the noise contours of the airport (County of Contra Costa 2000). Therefore, no substantial noise exposure from airport noise would occur to construction workers, users, or employees of the project, and no impacts would occur.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 4:	Would the project be subjected to noise levels in excess of the City's land use compatibility guidelines for noise?

Impact NOI-4 NOISE LEVELS AT THE RESIDENTIAL BUILDING FAÇADES ON THE SOUTHERNMOST BUILDING THAT FACE SR 4 MAY CONFLICT WITH THE CITY'S INTERIOR NOISE STANDARD BECAUSE THEY ARE ESTIMATED TO BE HIGHER THAN THE 45 DBA LDN THRESHOLD. OTHER BUILDING FAÇADES OF THE PROJECT WOULD NOT EXCEED NOISE STANDARDS. IMPLEMENTATION OF RECOMMENDATION NOI-1, DOCUMENTATION OF EXTERIOR-TO-INTERIOR NOISE REDUCTION, WOULD ACHIEVE COMPLIANCE WITH THE INTERIOR NOISE STANDARD.

Noise levels at the project's proposed future residential façades were measured following the methodology and reference noise levels discussed in Section 4.5.2, *Regulatory Setting*. As shown in Table 4.5-8, R1 through R36 capture noise at the residential façades around the project site, and R37 through R38 capture proposed common area and children's play area noise levels. These receivers, as well as the contours from off-site traffic, are shown on Figure 4.5-1.

Standard construction techniques for wood-frame construction buildings required under the California Building Code typically achieve a minimum 25-dBA reduction from exterior sources at interior locations when the windows are in a closed position. Therefore, if building façade noise levels exceeded 70 dBA L_{dn} for the residences, interior noise levels for the project would potentially exceed the City's interior noise standard of 45 dBA L_{dn}. As shown in Table 4.5-8, noise levels at the residential building façades on the southernmost building that face SR 4 may conflict with the City's interior noise standard because they are estimated to be higher than the 45 dBA L_{dn} threshold. Other building façades of the project would not exceed noise standards. Implementation of Recommendation NOI-1, documentation of exterior-to-interior noise reduction, would achieve compliance with the interior noise standard.

Figure 4.5-1 On-site Receivers and Traffic Noise Contours

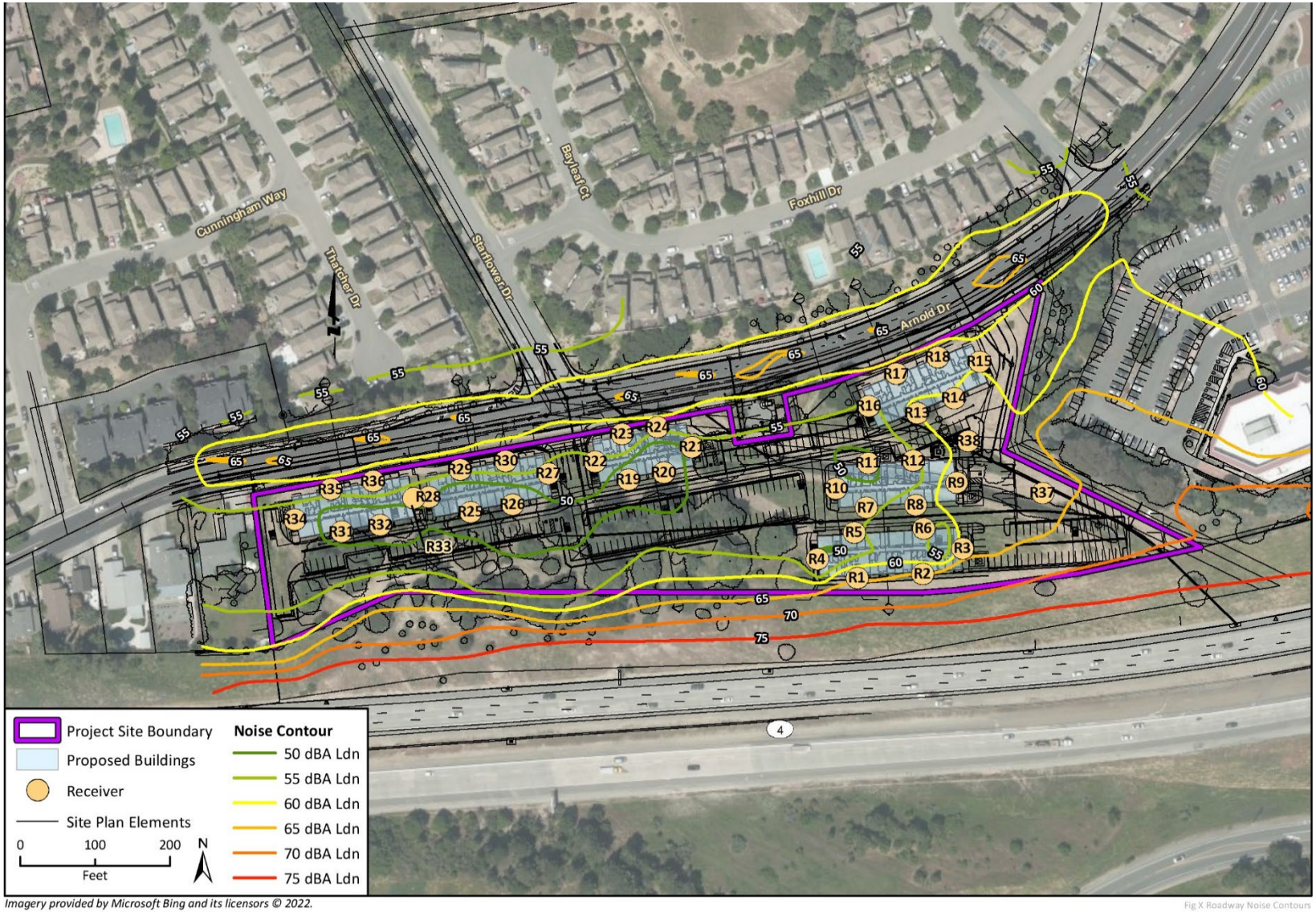

Table 4.5-8 Traffic Noise Levels

Receiver	Description	Noise Level (dBA L_{dn})				Potentially Exceed Exterior Threshold?	Potentially Exceed Interior Threshold?
		Ground Level/ 1st Floor	2nd Floor	3rd Floor	4th Floor		
R1	Residential Building façade	50	55	61	65	N/A	No
R2	Residential Building façade	66	72	75	75	N/A	**Yes**
R3	Residential Building façade	65	70	74	72	N/A	**Yes**
R4	Residential Building façade	65	70	71	71	N/A	**Yes**
R5	Residential Building façade	54	58	60	59	N/A	No
R6	Residential Building façade	58	63	63	64	N/A	No
R7	Residential Building façade	53	58	59	58	N/A	No
R8	Residential Building façade	58	63	64	64	N/A	No
R9	Residential Building façade	50	52	53	55	N/A	No
R10	Residential Building façade	61	66	68	69	N/A	No
R11	Residential Building façade	48	54	55	56	N/A	No
R12	Residential Building façade	54	59	61	62	N/A	No
R13	Residential Building façade	60	64	65	N/A	N/A	No
R14	Residential Building façade	62	65	67	N/A	N/A	No
R15	Residential Building façade	59	62	64	N/A	N/A	No
R16	Residential Building façade	54	56	57	N/A	N/A	No
R17	Residential Building façade	59	59	59	N/A	N/A	No
R18	Residential Building façade	59	59	59	N/A	N/A	No
R19	Residential Building façade	47	51	54	57	N/A	No
R20	Residential Building façade	49	52	55	57	N/A	No
R21	Residential Building façade	54	56	57	58	N/A	No
R22	Residential Building façade	53	53	53	54	N/A	No
R23	Residential Building façade	59	59	59	59	N/A	No
R24	Residential Building façade	59	59	59	59	N/A	No
R25	Residential Building façade	46	49	54	N/A	N/A	No

Receiver	Description	Noise Level (dBA L_{dn})				Potentially Exceed Exterior Threshold?	Potentially Exceed Interior Threshold?
		Ground Level/ 1st Floor	2nd Floor	3rd Floor	4th Floor		
R26	Residential Building façade	47	50	54	N/A	N/A	No
R27	Residential Building façade	53	54	56	N/A	N/A	No
R28	Residential Building façade	52	53	53	N/A	N/A	No
R29	Residential Building façade	58	58	58	N/A	N/A	No
R30	Residential Building façade	58	58	58	N/A	N/A	No
R31	Residential Building façade	48	53	56	N/A	N/A	No
R32	Residential Building façade	48	50	56	N/A	N/A	No
R33	Residential Building façade	52	53	53	N/A	N/A	No
R34	Residential Building façade	53	55	56	N/A	N/A	No
R35	Residential Building façade	59	59	58	N/A	N/A	No
R36	Residential Building façade	59	59	58	N/A	N/A	No
R37	Children's Play Area	64	N/A	N/A	N/A	No	No
R38	Common Area	63	N/A	N/A	N/A	No	No

See Figure 4.5-1 for receiver locations. Bold numbers represent receivers that may exceed thresholds.

As shown in Table 4.5-8, estimated exterior noise levels from traffic at the children's play area and common area would be 64 and 63 dBA L_{dn}, respectively. Therefore, noise levels at exterior areas of project residences would not exceed the City's 70 CNEL conditionally acceptable exterior noise standard, and exterior noise levels at the project would not conflict with the City General Plan.

Land Use Compatibility Recommendations

NOI-1 Documentation of Exterior-to-Interior Noise Level Reduction

For Building 6, which would contain residential units where exterior noise levels would exceed 70 dBA L_{dn}, the applicant shall submit construction plans that demonstrate interior noise levels shall comply with the 45 dBA L_{dn} interior noise level standard. The units that are located on the southernmost project that face SR 4 may be exposed to noise levels exceeding 70 dBA L_{dn}. Compliance with the 45 dBA L_{dn} interior noise level standard must be demonstrated through exterior-to-interior noise analysis and incorporation of noise attenuation features once specific building plan information is available. The information in the analysis must include wall heights and lengths, room volumes, window, and door tables typical for a building plan, as well as information on any other openings in the building shell. With this specific building plan information, the analysis must provide documented evidence from a noise specialist that demonstrates interior noise levels at the planned on-site buildings and architectural materials or techniques that must be included to achieve reduced noise levels to the applicable limit.

Possible noise reduction techniques may include, but are not limited to:

- Windows and sliding glass doors would be mounted in low air infiltration rate frames (0.5 cubic feet per minute or less, per ANSI specifications).
- Exterior doors would have a solid core with perimeter weather-stripping and threshold seals with a Sound Transmission Class (STC) rating of at least 31, with the potential for STC rating of 36 or higher if necessary.
- Exterior walls would include minimum of 5/8-inch of stucco or brick veneer over a minimum 1/2-inch plywood or OSB shear panel, R11 insulation and interior 5/8-inch gypsum board.
- Walls would have a STC rating of at least 46.
- Dual-paned windows would be installed with a STC rating of at least 31, with the potential for STC rating of 36 or higher if necessary.
- If exterior sliding glass doors are included, high-performance glazing would be installed with a minimum STC rating of 36.
- Air conditioning or mechanical ventilation systems would be installed to allow windows and doors to remain closed for extended intervals of time so that acceptable interior noise levels can be maintained. The mechanical ventilation system would meet the criteria of the International Building Code (Chapter 12, Section 1203.3 of the 2001 California Building Code).

The City shall review and approve the applicant's proposed noise reduction techniques prior to issuing building permits.

Noise Standard Consistency After Implementation of Measures

Interior noise levels at the project residences would be compatible with the City interior noise standard of 45 dBA L_{dn} with implementation of Recommendation NOI-1.

4.5.4 Cumulative Impacts

As discussed in Section 3, *Environmental Setting*, the cumulative impacts analysis is based on currently planned and pending projects in the City of Martinez and surrounding areas. The closest cumulative project is the Sunrise Self-Storage Project located on Sunrise Drive between Pacheco Boulevard and Arnold Drive. The Sunrise Self-Storage Project is located approximately 0.5-mile northeast of the proposed project site. The next closest cumulative project to the project sites is the Traditions at the Meadows Project, which is located is approximately 1 mile to the southwest of the proposed project. Entitlement is pending for the Sunrise Self-Storage project, and construction is underway on the Traditions at the Meadows Project.

Construction noise and vibration are localized and rapidly attenuate within an urban environment. Although some cumulative projects in the surrounding area may be under construction at the same time as the proposed project, these projects are not located in close enough proximity to the project site such that noise and vibration from construction activities would impact the same sensitive receivers and structures due to existing intervening structures that would block the line of sight, distance attenuation, and sensitivity to noise for the affected land use. Therefore, no cumulative construction noise and vibration impacts would occur.

Some cumulative projects in the surrounding area would include similar operational noise sources as the proposed project (e.g., HVAC operation). Similar to construction noise and vibration, operational noise and vibration from these sources is localized and rapidly attenuates within an urbanized setting due to the effects of intervening structures and topography that block the line of sight and other noise sources closer to receivers that obscure project-related noise. The proposed HVAC units would not exceed 50 dBA L_{eq} and there are no other large HVAC systems in the project's vicinity to cause a cumulative increase. Project-generated traffic would generate an increase of up to approximately 2 dBA at adjacent roadways; however, this increase is not considered cumulatively substantial. Given the distance of the cumulative projects from the project site, these projects are not located in close enough proximity to the project site such that operational noise and vibration would impact the same sensitive receivers. Therefore, there would be no cumulatively considerable noise impacts related to operational noise and vibration associated with the proposed project.

4.6 Transportation

This section analyzes the proposed project's impacts to the local transportation and circulation system as well as impacts related to the change in vehicle miles traveled (VMT) that would result from project implementation.

4.6.1 Setting

The project is within the City of Martinez, which encompasses 13.6 square miles. The city is served by a circulation system that facilitates multimodal travel including walking, bicycling, public transportation, and motor vehicles, and includes a network of freeways, highways, local streets, and bicycle facilities. The project site is also served by freeways and roadways that are outside the City's boundaries.

a. Existing Street Network

Interstate 680 (I-680) is a generally north-south, three- to four-lane freeway. I-680 passes through several inland cities to the east of the San Francisco Bay, beginning in San Jose and ending in Benicia, just north of the City of Martinez. I-680 is approximately 0.3 mile east of the project site.

State Route 4 (SR 4) is a generally east-west, two- to three-lane freeway that begins along the San Pablo Bay in the Greater San Francisco Bay Area and terminates at its intersection with SR 89 near the California-Nevada border. SR 4 is approximately 120 feet south of the project site and has an interchange with I-680 approximately 0.4 mile east of the project site.

Arnold Drive is a one- to two-lane roadway that runs parallel to SR 4 on its northern side. Arnold Drive borders several residential areas to the north and connects with several commercial areas on its eastern end. Arnold Drive is adjacent to the project site to the north and would provide access to the site.

Pacheco Boulevard is a one- to two-lane roadway that generally travels along the City of Martinez's eastern and northern boundaries. Pacheco Boulevard connects several residential and commercial areas and terminates in northern Martinez. Pacheco Boulevard is approximately 900 feet east of the project site and intersects Arnold Drive approximately 1,000 feet northeast of the project site.

Muir Road is a one-lane roadway that runs parallel to SR 4 on its southern side. Muir Road connects to Pacheco Boulevard via an underpass under SR 4, and serves as a primary connector between Pacheco Boulevard, SR 4, and I-680. Muir Road is approximately 0.3 mile south of the project site on the opposite side of SR 4.

Starflower Drive is a residential roadway that begins and ends along Arnold Drive and loops through several residential streets. The northeastern end of the project site is near the northern intersection of Starflower Drive and Arnold Drive.

Transit Facilities

Amtrak

Amtrak is a passenger railroad service that provides inter-city rail service throughout California and the contiguous United States. The Amtrak station in the City of Martinez is located at 601 Marina Vista Avenue. The Martinez station is served by the California Zephyr, which runs between the San

Francisco Bay Area and Chicago, the Coast Starlight, which runs between Los Angeles and Seattle, and the Capitol Corridor, which runs between San Jose and the greater Sacramento area (Amtrak 2021).

Bay Area Rapid Transit (BART)

BART is a rapid transit rail service that operates 50 stations throughout the greater San Francisco Bay Area. Martinez is served by the North Concord/Martinez Station located at 3700 Port Chicago Highway in the neighboring city of Concord. This station is served by the Antioch-SFO + Millbrae line, which begins at the San Francisco International Airport (SFO) and terminates in Antioch. Trains depart the North Concord/Martinez Station approximately every 10 to 30 minutes on weekdays and approximately every 30 minutes on weekends (BART 2022).

County Connection

County Connection provides fixed-route and paratransit bus service throughout the communities of Concord, Pleasant Hill, Martinez, Walnut Creek, Clayton, Lafayette, Orinda, Moraga, Danville, San Ramon, as well as unincorporated communities in Central Contra Costa County. County Connection operates a fleet of 121 fully accessible transit buses and 63 paratransit vehicles. Service is provided from approximately 6 AM to 9 PM on weekdays, and from approximately 9 AM to 7 PM on weekends. County Connection routes 18 and 316 stop at the intersection of Glacier Drive and Arnold Drive, approximately 0.2 miles west of the project site (County Connection 2022).

Tri Delta Transit

Tri Delta Transit is a bus service that provides service to the cities of Antioch, Pittsburg, Brentwood, Oakley, Bay Point, Concord, and Martinez in eastern Contra Costa County. The City of Martinez is served by the 200 Martinez/Pittsburg line, which has stops in downtown Martinez, by the Contra Costa Regional Medical Center in northern Martinez, in commercial and residential areas along SR 4, and at the intersection of Starflower Drive and Arnold Drive approximately 0.2 mile east of the project site. Eastbound and westbound buses serve the Starflower Drive and Arnold Drive stop approximately every 30 to 60 minutes (Tri Delta Transit 2022).

Bicycle Facilities

The City of Martinez General Plan Transportation Element identifies that bike lanes currently exist on the following roadways (City of Martinez 1992):

- Alhambra Avenue, south of K Street and continuing on Pleasant Hill Road
- Center Avenue, between Muir Road and Hidden Lakes Drive
- Morello Avenue, between SR 4 and Paso Nogal
- Arnold Drive, east of Howe Road to Pacheco Boulevard
- Muir Road, from Kaiser Permanente (200 Muir Road) to Pacheco Boulevard
- Glacier Drive, from Contra Costa County offices (255 Glacier Drive) to Muir Road
- Chilpancingo Parkway, west of Morello Avenue to the Contra Costa Canal Trail

In 2018, the Contra Costa Transit Authority (CCTA) adopted the Countywide Bicycle and Pedestrian Plan, a document that assesses current bike facilities in the county and plans for a low-stress (referring to the level of stress the cyclist will experience while riding), connected system of bike facilities in the county. This plan identifies that low-stress bike facilities currently exist along the

Contra Costa Canal Trail, which is adjacent to but not currently accessible from the project site to the north and east (CCTA 2018).

Pedestrian Facilities

The CCTA Countywide Bicycle and Pedestrian Plan also identifies existing pedestrian facilities and pedestrian priority areas where such facilities should be improved. Sidewalks exist all throughout the downtown area of Martinez and most residential areas. Near the project site, a sidewalk is located on the north side of Arnold Drive. However, the Countywide Bicycle and Pedestrian Plan identifies pedestrian priority areas within 0.25 mile of public schools in the City of Martinez, as some neighborhoods surrounding schools do not have complete sidewalks or marked pedestrian crossings (CCTA 2018).

4.6.2 Regulatory Setting

a. Federal Regulations

The US Department of Transportation (USDOT) provides a number of grant programs, primarily for the construction and upgrading of major highways and transit facilities. Many of these grants are administered by the State and regional governments. Use of federal grant funding also invokes the National Environmental Protection Act (NEPA) in some cases. The Federal Highway Administration (FHWA) sets design standards (such as interchange spacing) for interstate highways, such as I-680. The Federal Railroad Administration within the USDOT establishes safety rules regarding the operation of railroads (e.g., maximum train speeds, maximum allowed highway crossing blockage time).

b. State Regulations

California Environmental Quality Act

CEQA generally requires State and local government agencies to inform decision-makers and the public about the potential environmental impacts of proposed projects and to reduce those environmental impacts to the extent feasible. *CEQA Guidelines* Section 15064.3 describes specific considerations for determining a project's transportation impacts. Generally, VMT is the most appropriate measure of transportation impacts. For the purposes of this section, "vehicle miles traveled" refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations include the project's potential impacts to transit and non-motorized travel, vehicular emergency access to the project site, and traffic hazards. The criteria used to analyze transportation impacts are listed in Section 4.6.3, *Impact Analysis*.

California Senate Bill 743

Senate Bill 743 (SB 743) was signed into law on September 27, 2013, and directed the Governor's Office of Planning and Research (OPR) to develop revisions to the *CEQA Guidelines* to establish new criteria for determining the significance of transportation impacts. SB 743 was enacted, in part, as further implementation of California's Climate Action Plan to meet California Global Warming Solutions Act (Assembly Bill [AB] 32) greenhouse gas emission reduction targets. SB 743 seeks to reduce criteria air pollutants and greenhouse gas emissions in the transportation sector by reducing VMT. SB 743 changed the approach to transportation impact analysis by establishing measures such as VMT, VMT per capita, or automobile trip generation rates as the primary measures of

transportation impacts and eliminates the traditionally used measures of auto delay and congestion, such as Level of Service (LOS), and other measures of traffic congestion as a basis for determining significant impacts.

In December 2018, OPR adopted its changes to the *CEQA Guidelines* (14 California Code of Regulations [CCR] Section 15000 et seq.) in response to SB 743. Section 15064.3 of the *CEQA Guidelines* contains the operative language for implementing the goals of SB 743 when determining the significance of a project's transportation impacts. There are four key aspects of *CEQA Guidelines* Section 15064.3 that apply in the case of the proposed project:

1. "[A] project's effect on automobile delay shall not constitute a significant environmental impact" (Section 15064.3[a]).
2. For a land use project like the proposed project, "Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant 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" (Section 15064.3[b][1]).
3. "A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure" (Section 15064.3[b][(4]).
4. The terms and conditions of Section 15064.3 apply prospectively and a lead agency "may elect to be governed by the provisions of [15064.3] immediately. Beginning on July 1, 2020, the provisions of [15064.3] shall apply statewide" (Section 15064.3[c]).

To implement SB 743, the *CEQA Guidelines* have been updated to change the criteria for determining what constitutes a significant traffic-related environmental impact to rely upon quantification of VMT instead of LOS. As of July 1, 2020, the VMT-based approach in Section 15064.3 of the *CEQA Guidelines* applies statewide for the purpose of assessing traffic-related impacts under CEQA. Section 15064.3(b)(1) of the *CEQA Guidelines* states that land use "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." According to the Technical Advisory on Evaluating Transportation Impacts, published by OPR in December 2018, a 15 percent reduction in VMT per capita from existing development is "generally achievable" and supportive of State goals to reduce greenhouse gas emissions (OPR 2018).

California Assembly Bill 32, Senate Bill 32, and Senate Bill 375

The "California Global Warming Solutions Act of 2006" (AB 32) outlines California's major legislative initiative for reducing GHG emissions. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020, a reduction of approximately 15 percent below emissions expected under a "business as usual" scenario. On September 8, 2016, the governor signed Senate Bill 32 (SB 32) into law, extending the California Global Warming Solutions Act of 2006 by requiring the State to further reduce GHG emissions to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged).

The Sustainable Communities and Climate Protection Act of 2008 (SB 375), signed in August 2008, enhances the state's ability to reach AB 32 goals by directing the California Air Resources Board (CARB) to develop regional GHG emission reduction targets to be achieved from passenger vehicles by 2020 and 2035. SB 375 aligns regional transportation planning efforts, regional GHG reduction targets, and affordable housing allocations. Metropolitan Planning Organizations (MPOs) are required to adopt a

Sustainable Communities Strategy (SCS), which allocates land uses in the MPO's Regional Transportation Plan (RTP). Qualified projects consistent with an approved SCS or Alternative Planning Strategy (categorized as "transit priority projects") can receive incentives to streamline CEQA processing.

On March 22, 2018, CARB adopted updated regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. ABAG was assigned a 19 percent reduction in per capita GHG emissions from passenger vehicles by 2035. SB 375 also provides the option for the coordinated development of subregional plans by the subregional councils of governments and the county transportation commissions to meet SB 375 requirements. On October 21, 2021, ABAG formally adopted the RTP/SCS titled Plan Bay Area 2050, which meets the requirements of SB 375.

c. Local Regulations

City of Martinez General Plan Transportation Element

Adopted in 1992, the City of Martinez General Plan Transportation Element contains goals and policies for the circulatory network in Martinez, including roadways, parking, bicycles, alternative commutes, and pedestrian travel. Because it was drafted prior to SB 743, the Transportation Element uses level of service as a measure of transportation impacts rather than VMT. However, several of the Transportation Element's policies are still applicable and are listed below.

Policy I.A Comply with Contra Costa Transportation Authority guidelines for transportation planning and growth management.

Policy II.B Discourage parking intrusion in residential neighborhoods.

Policy III.B Require all new development outside of the downtown area to provide all parking off-street.

Goal V Encourage commute alternatives.

Policy V.C Support intermodal transportation facilities.

Goal VI Encourage pedestrian travel.

Contra Costa Transportation Authority

The Contra Costa Transportation Authority (CCTA) is the primary transportation planning agency in Contra Costa County and serves as the county's designated Congestion Management Agency. CCTA assigns funds to transportation projects in upcoming planning periods and works cooperatively with the California Department of Transportation (Caltrans) by managing phases of State highway system projects. CCTA adopted the Countywide Transportation Plan in 2017, which contains goals and policies that address the general planning direction for transportation system projects in Contra Costa County. The Countywide Transportation Plan forms a basis for the Regional Transportation Plan/Sustainable Communities Strategy adopted by the Association of Bay Area Governments and Metropolitan Transportation Commission.

Plan Bay Area 2050

The Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) are jointly responsible for long range planning in the San Francisco Bay Area, which includes Contra Costa County and eight other counties. ABAG and MTC developed the Regional

Transportation Plan/Sustainable Communities Strategy (RTP/SCS), a long-range regional transportation plan, required by state and federal law. The RTP/SCS, titled Plan Bay Area 2050, focuses on the sectors of housing, economic growth, transportation, and the environment and contains goals and policies regarding a compatible, regional transportation and transit system.

4.6.3 Impact Analysis

The analysis in this section is in part based on a VMT analysis prepared by Abrams Associates Traffic Engineering, Inc. (Appendix TRA). Consistent with Appendix G of the *CEQA Guidelines,* the project would result in a significant impact related to transportation and circulation if it would:

1. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities;
2. Conflict or be inconsistent with *CEQA Guidelines* section 15064.3, subdivision (b);
3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment); or
4. Result in inadequate emergency access.

d. Threshold of Significance

Pursuant to SB 743, Section 15064.3 of the *CEQA Guidelines* and guidance from OPR, this analysis uses the metric of VMT to determine the project's traffic-related impact. The City of Martinez has not adopted any CEQA thresholds related to VMT. Therefore, impacts related to VMT are analyzed in the context of the current VMT per capita in Contra Costa County. On June 6, 2020, Contra Costa County released the Contra Costa County Transportation Analysis Guidelines (Guidelines, CCTA 2020). The Guidelines establish a uniform approach and methodology to evaluate transportation projects in the County. The Guidelines allow for the use of the CCTA Travel Demand Model. This model calculates VMT based on the number of vehicles multiplied by the typical distance traveled by each vehicle, originating from or driving to a certain area. The model uses average daily VMT per capita as a metric of analysis. The model also incorporates land use types, density, and location, as well as existing and planned future supporting transportation systems, by dividing the county's area into transportation analysis zones (TAZ).

Pursuant to OPR's Technical Advisory on Evaluating Transportation Impacts, the project would have a significant impact if VMT attributable to the project exceeds a level of 15 percent below the existing VMT per County resident. In Contra Costa County, the existing daily VMT per capita in the TAZ where the project would be located is 16.5 miles. Therefore, a significant impact would occur if the project were to generate an average daily VMT exceeding 14.7 miles per capita, which is 15 percent below the existing Contra Costa County metric.

Project Impacts and Mitigation

Threshold 1: Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Impact TRA-1 THE PROPOSED PROJECT WOULD NOT CONFLICT WITH APPLICABLE POLICIES ADDRESSING TRANSIT, ROADWAY, BICYCLE, AND PEDESTRIAN FACILITIES. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

The proposed project would be consistent with the City of Martinez General Plan Transportation Element, the CCTA Countywide Transportation Plan, and Plan Bay Area 2050. Applicable policies from these planning documents and project consistency with these policies are shown in Table 4.6-1.

Table 4.6-1 Project Consistency with Transportation Plans

Planning Document Policy	Project Consistency
City of Martinez Transportation Element	
Policy I.A. Comply with Contra Costa Transportation Authority guidelines for transportation planning and growth management.	**Consistent.** The transportation analysis conducted for this project utilized the CCTA Transportation Analysis Guidelines and the CCTA Travel Demand Model to estimate transportation impacts that could occur as a result of the project (see threshold 2).
Policy II.B. Discourage parking intrusion in residential neighborhoods.	**Consistent.** The project would provide 275 parking spaces for residents of the proposed apartment structures, which exceeds the 223 parking spaces required by State density bonus law. The proposed parking spaces would provide adequate parking for residents, which would minimize parking intrusion in the nearby residential neighborhoods.
Policy III.B. Require all new development outside of the downtown area to provide all parking off-street.	**Consistent.** The project would provide 275 off-street parking spaces for residents of the proposed apartment structures, which exceeds the 223 parking spaces required by State density bonus law.
Goal V. Encourage commute alternatives.	**Consistent.** The project would be served by bus route 200 operated by Tri Delta Transit, which stops at the intersection of Starflower Drive and Arnold Drive approximately 0.2 mile east of the project site. Route 200 also stops at the Martinez Amtrak station and the North Concord/Martinez BART Station, which would connect future residents of the project to regional transit options for commutes. The project would also be served by County Connection route 18 and 316, which stop at the Pleasant Hill BART and Martinez Amtrak station.
Policy V.C. Support intermodal transportation facilities.	**Consistent.** The project would be served by bus route 200 operated by Tri Delta Transit, which stops at the intersection of Starflower Drive and Arnold Drive approximately 0.2 mile east of the project site. Route 200 also stops at the Martinez Amtrak station and the North Concord/Martinez BART Station, which would connect future residents to several intermodal transit options. The project would also be served by County Connection route 18 and 316, which stop at the Pleasant Hill BART and Martinez Amtrak station.
Goal VI. Encourage pedestrian travel.	**Consistent.** The project is approximately 1 mile east of a commercial area with several restaurants, a grocery store, and a department store. The project is also approximately 0.4 mile southwest of an access point to the Contra Costa Canal Trail, a 13.6-mile walking and cycling trail that extends from the southern boundary of the City Martinez, travels through the City of Pleasant Hill, and terminates in the City of Concord.

Planning Document Policy	Project Consistency
Contra Costa Countywide Transportation Plan	
Policy 3.4. Walkways and trails. Support transit-oriented and pedestrian friendly developments, and invest in trails, walkways, and pedestrian-oriented improvements.	**Consistent.** The project is approximately 1 mile east of a commercial area with several restaurants, a grocery store, and a department store. The project is also approximately 0.4 mile southwest of an access point to the Contra Costa Canal Trail, a 13.6-mile walking and cycling trail that extends from the southern boundary of the City Martinez, travels through the City of Pleasant Hill, and terminates in the City of Concord.
Policy 3.5. Alternate modes. Promote the formation of more carpools and vanpools, and greater use of transit, bicycling, and walking.	**Consistent** The project would be served by bus route 200 operated by Tri Delta Transit, which stops at the intersection of Starflower Drive and Arnold Drive approximately 0.2 mile east of the project site. Route 200 also stops at the Martinez Amtrak station and the North Concord/Martinez BART Station, which would connect future residents of the project to regional transit options. The project would also be served by Connection routes 18 and 316, which stop at the Pleasant Hill BART and Martinez Amtrak station. The project would incorporate transportation demand management strategies, as detailed under Threshold 2. The project site is approximately 0.4 mile southwest of an access point to the Contra Costa Canal Trail, a 13.6-mile walking and cycling trail that extends from the southern boundary of the City Martinez, travels through the City of Pleasant Hill, and terminates in the City of Concord. The project would include the construction of a sidewalk on the southern side of Arnold Drive to improve pedestrian access to the project site.
Policy 3.9. Pricing programs. Support congestion pricing and parking pricing programs, transportation demand management programs and other innovative strategies that reduce greenhouse gas emissions.	**Consistent.** The project would implement a transportation demand program, which could involve several strategies to reduce project-related VMT and associated greenhouse gas emissions. Possible strategies are discussed under Threshold 2.
Plan Bay Area 2050	
Strategy EN.9. Expand transportation demand management initiatives. Expand investments in programs like vanpools, bikeshare, carshare, and parking fees to discourage solo driving.	**Consistent.** The project would implement a transportation demand program, which could involve car sharing, ride sharing, bike sharing, and other strategies to reduce solo driving. Possible strategies are discussed under Threshold 2.

Sources: City of Martinez 1992; CCTA 2017; ABAG 2021

As shown above, the proposed project would be generally consistent with applicable programs and plans addressing the circulation system in the City of Martinez and in Contra Costa County. Impacts would be less than significant.

Threshold 2: Would the project conflict or be inconsistent with *CEQA Guidelines* Section 15064.3, subdivision (b)?

Impact TRA-2 THE PROJECT WOULD GENERATE AN ESTIMATED AVERAGE DAILY VMT PER CAPITA OF 16.5, WHICH EXCEEDS THE VMT THRESHOLD FOR THE TRAFFIC ANALYSIS ZONE IN WHICH THE PROJECT WOULD BE LOCATED. TRANSPORTATION DEMAND MANAGEMENT STRATEGIES WOULD BE IMPLEMENTED AS MITIGATION BUT ARE UNLIKELY TO REDUCE PROJECT IMPACTS TO VMT TO LESS-THAN-SIGNIFICANT LEVELS. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

As described under *Regulatory Setting*, *CEQA Guidelines* Section 15064.3 identifies VMT as the most appropriate criteria to evaluate a project's transportation impacts. While the City of Martinez has

not adopted any CEQA thresholds related to VMT, CCTA established VMT as the methodology for evaluating transportation impacts in June 2020. As described under *Threshold of Significance,* the project would have to produce less than an average daily VMT of 14.7 per capita in order to have less-than-significant impacts.

The proposed apartment building would be expected to have similar VMT as other residential developments in the TAZ in which it is located. Therefore, it is assumed that the VMT per capita estimated by the CCTA Travel Demand Model for the project site's TAZ would represent the approximate VMT per capita that would occur as a result of the project. The project site is located in TAZ 20037, which has an average daily VMT per capita of 16.5. As shown in Table 4.6-2, the project would generate an estimated average daily VMT of 16.5 per capita, which exceeds the threshold of an average daily VMT of 14.7 per capita (Appendix TRA).

Table 4.6-2 Estimated Project VMT Impacts

Scenario	Project TAZ Average VMT per Capita	VMT Impact Threshold	Impact?
Near-Term Conditions	16.5	14.7	Yes

Source: Appendix TRA

The VMT generated as a result of the project could be reduced with the implementation of a travel demand management (TDM) program, which would be subject to City approval. The TDM program would need to achieve an 11 percent reduction to the average VMT per capita for the project's VMT impacts to be less than significant. For projects located in suburban settings such as the proposed project, studies indicate that the maximum VMT reduction than can be expected from a TDM program is approximately 10 percent. Furthermore, this reduction could be difficult to achieve for the project due to its distance from walkable services and limited available transit services (Appendix TRA). Although a TDM program is unlikely to mitigate the project's impacts to less than significant, the implementation of feasible mitigation measures is required.

Mitigation Measure

Mitigation Measure TRA-1: TDM Program

Prior to issuance of a building permit, the applicant shall submit a TDM program for the project for City review and approval. Strategies that could be incorporated into a TDM program could include, but are not limited to:

- Incorporating electric vehicle facilities
- Providing bicycle parking facilities
- Providing car sharing, bike sharing, and ride sharing programs
- Shifting single occupancy vehicle trips to carpooling or vanpooling
- Providing incentives or subsidies that increase the use of modes other than single-occupancy vehicles
- Implementing a commute trip reduction program

Significance After Mitigation

The TDM program is unlikely to fully mitigate the project's impacts to VMT due to the project site's suburban setting, distance from walkable services, and lack of readily available transit. The greatest

reduction likely to be achieved in suburban settings is 10 percent, which would not achieve the 11 percent reduction needed to reduce impacts to a less-than-significant level. Therefore, impacts would remain significant and unavoidable.

Threshold 3:	Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?

Impact TRA-3 THE PROJECT WOULD INVOLVE THE CONSTRUCTION OF TWO DRIVEWAYS ON ARNOLD DRIVE THAT WOULD NOT SUBSTANTIALLY INCREASE HAZARDS DUE TO DESIGN FEATURES OR INCOMPATIBLE USES FOR VEHICLES. IMPLEMENTATION OF MITIGATION MEASURES WOULD ENSURE THAT PEDESTRIAN CROSSINGS ON ARNOLD DRIVE WOULD NOT SUBSTANTIALLY INCREASE HAZARDS DUE TO DANGEROUS INTERSECTIONS. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

The project would involve the construction of two driveways on Arnold Drive that would provide access to the proposed apartment buildings and surface parking. One driveway would be directly across from Starflower Drive and would have three lanes: one lane providing ingress, one left-turn lane providing egress to Arnold Drive, and one right-turn lane providing egress to Arnold Drive. The second driveway would be located in the northeastern corner of the project site and would have one ingress lane and one egress lane. Neither proposed driveway would create a sharp curve or a dangerous intersection, and the driveways would not substantially increase hazards. It is anticipated that the project would primarily serve passenger vehicles and would intermittently serve moving trucks, delivery vehicles, and solid waste trucks. The surface parking lot and driveways are designed to be compatible with the typical turn patterns of these vehicles.

The project would likely result in pedestrians crossing Arnold Drive at its intersection with Starflower Drive, as future residents may walk between the proposed apartments and the existing neighborhoods to the north of the project site or bus stops on the north side of Arnold Drive. While pedestrian crossings may be minimal, any number of pedestrians crossing Arnold Drive could be hazardous as there is currently no marked crosswalk, there are no traffic controls adjacent to the site, and speeding has been observed to occur in the area (Appendix TRA). Unprotected pedestrian crossings could substantially increase hazards and result in a potentially significant impact. Mitigation is required to reduce the impact to a less-than-significant level.

Mitigation Measure

Mitigation Measure TRA-2 Pedestrian Safety

In order to ensure safe pedestrian crossings at the project site, the applicant shall work with the City of Martinez to provide on-street parking along the south side of Arnold Drive along the project boundary in a manner that would not obstruct views of pedestrians and would not introduce any hazards for bicyclists. Final plans for on-street parking shall be approved by the City prior to the issuance of an occupancy permit. The presence of on-street parking can help reduce motorist speeds, which would enhance pedestrian safety. The applicant shall work with the City and pay a fair-share fee, as determine by the City, to implement on-street parking and other potential measures to improve safety for pedestrian crossings. Such measures could include but are not limited to the following:

- Improved street lighting at the intersection of Starflower Drive and Arnold Drive. The risk of pedestrian injuries and fatalities increases at night or under low-light conditions, and adding additional lighting would reduce this risk.
- Construction of a median to provide pedestrian refuge. Providing a median between opposing lanes of traffic would allow pedestrians to cross Arnold Drive one direction of traffic at a time, which would reduce the complexity of the crossing.
- Striping of a marked crosswalk across Arnold Drive at Starflower Drive and installation of rectangular rapid flashing beacons. Although flashing beacons are typically used at intersections with a significant number of pedestrian crossings, the installation of flashing beacons across Arnold Drive would draw attention to the marked crosswalk and encourage motorists to yield to pedestrians in the crosswalk. Use of flashing beacons would be subject to applicable regulations in the California Manual of Uniform Traffic Control Devices.
- Striping of a marked crosswalk across Arnold Drive at Starflower Drive and installation of a pedestrian hybrid beacon. A pedestrian hybrid beacon is a type of hybrid traffic signal that is used to warn and stop traffic at an unsignalized intersection to assist pedestrians in crossing the street. A hybrid beacon would draw attention to the marked crosswalk and encourage motorists to yield to pedestrians in the crosswalk. Use of a hybrid beacon would be subject to applicable regulations in the California Manual of Uniform Traffic Control Devices.
- Installation of radar speed signs. The presence of a radar speed sign that displays the speeds of vehicle approaching Starflower Drive would encourage motorists to slow down near the marked crosswalk.
- Installation of all-way stop sign at Arnold Drive and Starflower Drive. Stop sign would be subject to a traffic engineer's findings subject to applicable regulations in the California Manual of Uniform Traffic Control Devices.

Significance After Mitigation

Implementation of the above mitigation measure or equivalent pedestrian safety measures would ensure that the project would not result in a hazard to pedestrians due to dangerous intersections. Impacts would be less than significant with mitigation incorporated.

Threshold 4: Would the project result in inadequate emergency access?

Impact TRA-4 THE PROJECT WOULD INVOLVE THE CONSTRUCTION OF TWO DRIVEWAYS AND A SURFACE PARKING LOT THAT WOULD PROVIDE ADEQUATE EMERGENCY ACCESS TO THE PROJECT SITE. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

The project would not require lane or road closures during construction. In addition, the Contra Costa County Fire Protection District would review and approve the project to ensure that emergency access meets district standards. The Contra Costa County Fire Protection District's review would confirm that the project would not interfere with evacuation routes or impede evacuation plans. Furthermore, the project would be required to provide adequate emergency access pursuant to the 2019 California Building Code. The Contra Costa County Fire Protection District's review would ensure that the project would comply with City and County standards and requirements for emergency access. During operation, emergency access to the project site would be available via two proposed driveways. One driveway would be directly across from Starflower Drive, and another driveway would be located in the northeastern corner of the project site. Both driveways would provide access to the surface parking lot, which would provide direct access to

each apartment building. There would be multiple ways to circulate through the parking lot, which would provide adequate space for emergency vehicles to turn around and move through the project site.

4.6.4 Cumulative Impacts

The planned and pending projects in the project site vicinity are listed in Table 3-1 of Section 3, *Environmental Setting*. Cumulative projects considered in this analysis include 10 projects, including residential, industrial, and commercial uses.

The proposed project would not conflict with any programs or polices. All other planned and pending projects in Martinez will be assessed under CEQA for consistency with existing plans and programs. Because the project would result in an impact to VMT in the City of Martinez, it is required to determine if the countywide VMT would increase or decrease as a result of the proposed project, relative to the VMT that would be generated by full buildout of the Contra Costa County General Plan by 2040. A "future baseline" average daily VMT per capita was estimated by inputting the project site's zoning and General Plan designations into the CCTA Travel Demand Model. The project would have a cumulative impact if the estimated average daily VMT per capita for the TAZ increases compared to the future baseline. The project would result in a slight decrease in the total number of residents forecasted for the project's TAZ compared to what could otherwise be developed under the project site's existing zoning and General Plan designations. As shown in Table 4.6-3, the proposed project is estimated to generate fewer VMT compared to cumulative buildout conditions, and cumulative impacts would be less than significant.

Table 4.6-3 Estimated Cumulative Project VMT Impacts

Scenario	Cumulative 2040 Countywide VMT	Cumulative plus Project Countywide VMT	Change in Countywide VMT	Impact?
Cumulative (2040) Conditions	55,100,259	55,095,006	-5,253	No

Source: Appendix TRA

4.7 Tribal Cultural Resources

This section analyzes potential impacts related to tribal cultural resources from project implementation. The analysis in this section has been prepared in accordance with *CEQA Guidelines* Section 15064.5 and considers potential impacts to Tribal Cultural Resources (TCR). This section includes a summary of TCR background information and a summary of consultation conducted by the City with Native American groups as part of the Assembly Bill (AB) 52 tribal consultation process. Potential impacts to archaeological and historical resources are addressed in Section 4.3, *Cultural Resources* and potential impacts to paleontological resources are addressed in Section 4.4, *Geology and Soils*.

4.7.1 Setting

a. Ethnographic Context

The project lies within an area traditionally occupied by the Ohlone (or Costanoan) people. Ohlone territory extends along the California coast from the point where the San Joaquin and Sacramento Rivers merge into the San Francisco Bay to Point Sur. Their inland boundary was limited to the interior Coast Ranges (Kroeber 1925: 462). The Ohlone language belongs to the Penutian family, with several distinct dialects throughout the region (Kroeber 1925: 462). It is divided into eight regional dialects: Karkin, Chochenyo, Ramaytush, Awaswas, Taymen, Mutsun, Rumsen, and Chalon (Jones 2015)

The pre-contact Ohlone were semi-sedentary, with a settlement system characterized by base camps and seasonal reserve camps composed of tule reed houses with thatched roofs made of matted grass (Schick 1994, Skowronek 1998). Just outside base camps, large sweat houses were built into the ground near stream banks used for spiritual ceremonies and possibly hygiene (Schick 1994, Jones 2015). Villages were divided into small polities, each of which was governed by a chief responsible for settling disputes, acting as a war leader during times of conflict, and supervising economic and ceremonial activities (Skowronek 1998, Kroeber 1925: 468). Social organization appeared flexible to ethnographers and any sort of social hierarchy was not apparent to mission priests (Skowronek 1998).

Previous archaeological investigations by Leventhal and DiGiuseppe (2009) discuss Ohlone mortuary rituals, identifying that cemeteries were set away from villages and visited during the annual Mourning Anniversary. Ceremonial human grave offerings might include *Olivella* beads, as well as tools like drills, mortars, pestles, hammerstones, bone awls, and utilized flakes (Leventhal and DiGiuseppe 2009). Ohlone mythology included animal characterization and animism, which was the basis for several creation narratives. Ritually burying of animals, such as a wolf, squirrel, deer, mountain lion, gray fox, elk, badger, grizzly bear, blue goose, and bat ray, was commonly practiced. Similar to human burials, ceremonial offerings were added to ritual animal graves like shell beads, ornaments, and exotic goods (Kroeber 1925, Field and Leventhal 2003, Jones 2010).

Ohlone subsistence strategies were based on hunting, gathering, and fishing (Kroeber 1925: 467, Skowronek 1998). Larger animals, like bears, might be avoided, but smaller game was hunted and snared on a regular basis (Schick 1944: 17). Like the rest of California, the acorn was an important staple and was prepared by leaching acorn meal in openwork baskets and in holes dug into the sand (Kroeber 1925: 467). The Ohlone also practiced controlled burning to facilitate plant growth (Kroeber 1925: 467, Skowronek 1998). During specific seasons or in times of drought, the reserve

camps would be utilized for gathering seasonal food and accessing food storage (Schick 1994). Fishing would be done with nets and gorge hooks out of tule reed canoes (Schick 1994: 16-17). Mussels were a particularly important food resource. Sea mammals such as sea lions and seals were hunted, and beached whales were exploited (Kroeber 1925: 467).

Seven Franciscan missions were built within Ohlone territory in the late 1700s, and the members of the Ohlone group were eventually brought into the mission system (Kroeber 1925: 462, Skowronek 1998). After the establishment of the missions, Ohlone population dwindled from roughly 10,000 people in 1770 to 1,300 by 1814 (Skowronek 1998). In 1973, the population of people with Ohlone descent was estimated at fewer than 300. The descendants of the Ohlone united in 1971 and have since arranged political and cultural organizations to revitalize aspects of their culture (Skowronek 1998).

4.7.2 Regulatory Setting

This regulatory framework section identifies the federal, State, and local laws, statutes, guidelines, and regulations that govern the identification and treatment of Tribal cultural resources as well as the analysis of potential impacts to TCR. The lead agency must consider the provisions and requirements of this regulatory framework when rendering decisions on projects that have the potential to affect TCR.

a. State Regulations

Assembly Bill 52

As of July 1, 2015, California Assembly Bill (AB) 52 was enacted and expands CEQA by defining a new resource category: TCR. AB 52 establishes that "a project with an effect that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment" (PRC Section 21084.2). It further states that the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a TCR, when feasible (PRC Section 21084.3).

PRC Section 21074(a)(1)(A) and (B) defines TCRs as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and requires that they meet either of the following criteria:

1) Listed or eligible for listing in the CRHR, or in a local register of historical resources, as defined in PRC Section 5020.1(k).
2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section5024.1. In applying these criteria, the lead agency shall consider the significance of the resource to a California Native American Tribe.

AB 52 also establishes a formal consultation process for California Tribes regarding TCRs. The consultation process must be completed before a CEQA document can be certified. Under AB 52, lead agencies are required to "begin consultation with a California Native American Tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." Native American Tribes that have requested notice of projects proposed in the jurisdiction of the lead agency are to be included in the process.

In compliance with AB 52, the City sent a project notification letter to the Ione Band of Miwok Indians, the only group who had requested notification from the City of Martinez, on April 11, 2016. The Ione Band of Miwok Indians did not respond to the request for consultation. Additionally, a search of the Sacred Lands File conducted by the Native American Heritage Commission for the project did not identify sacred lands in the project area.

Codes Governing Human Remains

The disposition of human remains is governed by Health and Safety Code Section 7050.5 and PRC Sections 5097.94 and 5097.98 and falls within the jurisdiction of the NAHC. If human remains are discovered, the County Coroner must be notified within 48 hours and there should be no further disturbance to the site where the remains were found. If the remains are determined by the coroner to be Native American, the Coroner is responsible for contacting the NAHC within 24 hours. The NAHC, pursuant to PRC Section 5097.98, will immediately notify those persons it believes to be most likely descended from the deceased Native Americans so they can inspect the burial site and make recommendations for treatment of the remains and associated grave goods, as further discussed in Section 4.3 *Cultural Resources*.

b. Local Regulations

City of Martinez General Plan

The City of Martinez General Plan, which was adopted in 2016, identifies goals, policies, and implementation measures regarding cultural resources and TCRs throughout the City (City of Martinez 2016). As presented in the Historic, Cultural & Art Element the policies regarding TCRs are included here:

Goal

HCA-G-1 Foster protection, preservation, and rehabilitation on of Martinez's historic and cultural heritage.

Policies

HCA-P-1.1 Promote community and visitor appreciation for the history of Martinez.

HCA-P-1.2 Strengthen and enhance the historic, natural, and cultural character of Martinez while promoting long-term sustainable economic development.

HCA-P-1.4 Recognize the importance of protecting significant archaeological resources by identifying, when possible, archaeological resources and potential impacts on such resources.

HCA-P-1.5 Avoid damaging effects to any tribal cultural resource when feasible.

HCA-P-1.6 Treat any Native American and human remains with culturally dignity when discovered during development or otherwise.

HCA-P-1.10 Comply with State and federal laws to preserve and protect archaeological resources by complying with assessment and recovery of the resources.

4.7.3 Impact Analysis

Threshold 1:	Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC Section 21074 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k)?
Threshold 2:	Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC Section 21074 that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1?

Impact TCR-1 THE PROJECT SITE DOES NOT CONTAIN KNOWN TCRS. NONETHELESS, PROJECT GROUND-DISTURBING ACTIVITIES HAVE THE POTENTIAL TO IMPACT UNRECORDED TCRS. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION.

The City's AB 52 consultation period closed on May 11, 2016, and no responses were received from Tribes. Furthermore, the site was previously disturbed for agricultural activities and SR 4 construction, resulting in approximately 2 to 10 feet of fill across the site (Appendix GEO). Although NWIC indicates that cultural resources of Native American origin may exist at the project site (see Section 4.3 *Cultural Resources*), the project site has historic agricultural use, as well as the construction of SR 4 which resulted in topographical changes (Environmental Resources Group, Inc. 2015; Appendix ESA). Although the project site has been historically disturbed, because the project involves ground disturbance, there is the possibility of encountering undisturbed subsurface TCR during project construction. Therefore, the project could result in potentially significant impacts to TCRs, and mitigation Measure TCR-1 would be required.

Mitigation Measure

TCR-1 Unanticipated Discovery of Tribal Cultural Resources

If cultural resources of Native American origin are identified during project construction, earth-disturbing work within 50 feet of the vicinity of the find must be temporarily suspended or redirected until an archaeologist has evaluated the nature and significance of the find and an appropriate Native American representative, based on the nature of the find, is consulted. If the City determines that the resource is a tribal cultural resource and thus significant under CEQA, a mitigation plan shall be prepared and implemented in accordance with State guidelines and in consultation with Native American groups. The plan would include avoidance of the resource or, if avoidance of the resource is infeasible, the plan would outline the appropriate treatment of the resource in coordination with the archeologist and the appropriate Native American tribal representative. At minimum, the treatment plan may include, but would not be limited to, steps to protect the cultural character and integrity of the resource, steps to protect traditional use of the resource, or excavation and reburial of the resource in a location not subject to further disturbance. The plan must be reviewed and approved by the City prior to implementation.

Significance After Mitigation

Implementation of Mitigation Measure TCR-1 would reduce potential impacts to unanticipated TCRs to less than significant.

4.7.4 Cumulative Impacts

The planned and pending projects in the project site vicinity are listed in Table 3-1 of Section 3, *Environmental Setting*. Cumulative projects considered in this analysis include 10 projects, including residential, industrial, and commercial uses.

The proposed project, in conjunction with other development in the City and surrounding areas, would cumulatively increase the potential to encounter sensitive tribal cultural resources. However, as discussed above, potential impacts to TCR are site-specific and impacts would be reduced due to implementation of mitigation measures that would protect TCR. In the event that tribal cultural resources are discovered, Mitigation Measure TCR-1 would be implemented and reduce impacts to less-than-significant levels as work would be temporarily suspended within 50 feet of the find and the resources would be evaluated prior to ground disturbing activities continuing in the vicinity. Therefore, cumulative impacts to TCR would be less than significant and the project's contribution would not be cumulatively considerable.

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5 Other CEQA Required Discussions

This section discusses growth-inducing impacts and irreversible environmental impacts that would be caused by the proposed project.

5.1 Growth Inducement

Section 15126(d) of the *CEQA Guidelines* requires a discussion of a proposed project's potential to foster economic or population growth, including ways in which a project could remove an obstacle to growth. Growth does not necessarily create significant physical changes to the environment. However, depending upon the type, magnitude, and location of growth, it can result in significant adverse environmental effects. The proposed project's growth inducing potential is therefore considered significant if project-induced growth could result in significant physical effects in one or more environmental issue areas.

5.1.1 Population Growth

As discussed in Section 14, *Population and Housing*, of the Initial Study (Appendix IS), the proposed project would directly induce population growth in the area through the proposed construction of 183 dwelling units. According to the Bay Area Census, the average household size in Martinez is 2.4 people per household (U.S. Census 2010). With 183 units, the proposed project would result in approximately 439 new residents. As determined by the California Department of Finance and Plan Bay Area, the current population of Martinez is 38,402 and the population growth forecast is 40,035 by 2040 (DOF 2020, Association of Bay Area Governments 2020). Adding the project's 439 residents to the current population of 38,402 would result in 38,841 residents, which is within the growth forecast of 40,035 residents by 2040. Therefore, the project's new residents would be within those forecasted by regional growth projections.

Moreover, as discussed in Section 3, *Air Quality*, and Section 8, *Greenhouse Gas Emissions*, of the Initial Study, development and operation of the project would not generate air quality or GHG emissions that would result in a significant impact.

5.1.2 Economic Growth

The proposed project would generate temporary employment opportunities during construction. Because construction workers would be expected to mostly be drawn from the existing regional work force, construction of the project would not be growth-inducing from a temporary employment standpoint.

The proposed project would not directly add long-term employment opportunities. However, residents would contribute incrementally to economic growth through patronage of area businesses and services. The proposed project would not be expected to induce substantial economic expansion to the extent that direct physical environmental effects would result. Moreover, the environmental effects associated with future development in or around Martinez would be addressed as part of the CEQA environmental review for such development projects.

5.1.3 Removal of Obstacles to Growth

The proposed project is located in an urbanized area that is served by existing infrastructure. As discussed in Section 19, *Utilities and Service Systems*, of the Initial Study (Appendix IS) and Section 4.6, *Transportation* of this EIR, existing infrastructure in the City would be adequate to serve the project. Minor improvements to water, sewer, and drainage infrastructure to connect the project to existing utilities would be needed but would be sized to specifically serve the proposed project. No new roads would be required. Because the project constitutes infill development within an urbanized area and would not require the extension of new infrastructure through or to serve other undeveloped areas, project implementation would not remove an obstacle to growth.

5.2 Irreversible Environmental Effects

The *CEQA Guidelines* require that EIRs contain a discussion of significant irreversible environmental changes. This section addresses non-renewable resources, the commitment of future generations to the proposed uses, and irreversible impacts associated with the proposed project.

The proposed project involves infill development on a vacant lot in the City of Martinez. Construction and operation of the project would involve an irreversible commitment of construction materials and non-renewable energy resources. The project would involve the use of building materials and energy, some of which are non-renewable resources, to construct a total of 183 residential units on a total of 6.06 acres. Consumption of these resources would occur with any development in the region and is not unique to the proposed project.

Additional vehicle trips associated with the proposed project would incrementally increase vehicle miles travelled in the region. As discussed in Section 4.6 of this EIR, *Transportation*, impacts related to vehicle miles travelled would be significant and unavoidable. Traffic related air pollutant and GHG emissions would also increase. However, as discussed in Section 3, *Air Quality*, and Section 8, *Greenhouse Gas Emissions*, of the Initial Study (Appendix IS), development and operation of the project would not generate air quality, or GHG emissions, that would result in a significant impact.

The project would also require a commitment of law enforcement, fire protection, water supply, wastewater treatment, and solid waste disposal services. However, as discussed in Section 15, *Public Services*, and Section 19, *Utilities and Service Systems*, of the Initial Study, impacts to these service systems would not be significant.

CEQA requires decision makers to balance the benefits of a proposed project against its unavoidable environmental risks in determining whether to approve a project. The analysis contained in this EIR concludes that the proposed project would result in a significant and unavoidable long-term impact to transportation related to vehicle miles travelled.

6 Alternatives

As required by *CEQA Guidelines* Section 15126.6, this EIR examines a range of reasonable alternatives to the proposed project that would attain most of the basic project objectives (stated in Section 2 of this EIR) but would avoid or substantially reduce the significant adverse impacts.

As discussed in Section 2, *Project Description*, the project objectives are as follows:

- **Housing**: Provide multi-family housing on an identified Housing Opportunity Site in the City's 2015-2023 Housing Element and assist the City in meeting its housing obligations by providing a 183 rental unit project
- **Implementation of City Plans**: Provide housing on an identified Housing Opportunity Site from the City's 2015-2023 Housing Element
- **Mobility**: Efficiently connect the proposed project uses to freeway access and proximate retail uses while providing safe spaces for pedestrians, cyclists, transit, and motor vehicles along Arnold Drive

In this analysis are four alternatives, including the CEQA-required "no project" alternative, that involve changes to the project that may reduce the project-related significant environmental impacts as identified in this EIR. The alternatives provide a reasonable range of options to help decision-makers and the public understand the environmental implications of revising or eliminating certain components of the proposed project.

The following alternatives are evaluated in this EIR:

- Alternative 1: No Project Alternative
- Alternative 2: Mixed Use Alternative
- Alternative 3: Reduced Density Alternative
- Alternative 4: Alternative Site

The potential environmental impacts of each alternative are analyzed in Sections 6.1 through 6.4 below, beginning with a description of the alternative.

6.1 Alternative 1: No Project

6.1.1 Description

The No Project Alternative assumes that the six proposed apartment buildings, 275 parking spaces, and other components of the proposed project are not constructed. The project site would continue to consist of undeveloped land under this alternative. The No Project Alternative would not fulfill any of the project objectives.

6.1.2 Impact Analysis

The No Project Alternative would involve no changes to the physical environment. As such, this alternative would have reduced impacts with respect to aesthetics, biological resources, cultural resources, geology and soils, noise, transportation, tribal cultural resources, and all other resource areas. Project construction impacts would be avoided because no development would occur on the

project site. No mitigation measures would be required for the No Project Alternative. Overall impacts would be lower than those of the project since no change to environmental conditions would occur.

The No Project Alternative would not meet any of the project objectives. This alternative would not involve any development on the site, nor would it preclude future development of the site.

6.2 Alternative 2: Mixed Use Alternative

6.2.1 Description

Similar to the proposed project, this alternative would involve the construction of six apartment buildings on the project site. Three of the buildings, Buildings 1, 2, and 4, would be three stories and up to 35 feet, 2 inches above adjacent grade. The other three buildings, Buildings 3, 5, and 6, would be four stories and up to 44 feet, 2 inches above adjacent grade. Under Alternative 2, however, the ground floor of Building 3 would have a commercial day care use. The proposed residential units in Building 3 would be smaller in size to accommodate the same number of units as the proposed project. The other five buildings would be the same as the proposed project.

Alternative 2 would meet the project objectives by providing additional multifamily housing units on an identified Housing Opportunity Site from the City's 2015-2023 Housing Element and integrating a commercial day care use that would support the mobility of the project area by reducing vehicle trips.

6.2.2 Impact Analysis

a. Aesthetics

Under Alternative 2, aesthetics impacts would be similar in nature to the proposed project, as Alternative 2 would have the same building envelope. Similar to impacts of the proposed project, described in Section 4.1, *Aesthetics*, impacts to scenic vistas, scenic resources and light or glare would be less than significant. Like the proposed project, Alternative 2 would be subject to design review, which would help ensure that the project design is consistent with City design guidelines for the John Muir Parkway Specific Area Plan Area. Therefore, similar to the proposed project, aesthetics impacts of Alternative 2 would be less than significant.

b. Biological Resources

Alternative 2 would involve the same development footprint as the proposed project, and thus have the same impacts to biological resources. Similar to the impacts of the proposed project as described in Section 4.2, *Biological Resources,* impacts related to wildlife movement and local policies or ordinances protecting biological resources would be less than significant, since Alternative 2 would be subject to the City's ordinances and requirements protecting biological resources. Furthermore, impacts to special-status species and their habitat, sensitive natural communities, and jurisdictional state or federally protected wetlands under Alternative 2 would be potentially significant, as it occurs on the same project site as the proposed project. Under Alternative 2, Mitigation Measures BIO-1a through BIO-3b would be required to reduce impacts to special-status species, riparian habitat, and jurisdictional state or federally protected wetlands due to ground disturbing activities on the project site. Therefore, similar to the proposed project, impacts to biological resources would be less than significant with mitigation.

c. Cultural Resource

Alternative 2 would involve the same development footprint as the proposed project, and thus would have the same impacts to cultural resources. As described in Section 4.3, *Cultural Resources,* the project site does not contain known archaeological resources. Nonetheless, similar to the proposed project, ground-disturbing activities have the potential to impact unrecorded archaeological resources under Alternative 2, and Mitigation Measure CR-1 would be required. Similar to the proposed project, impacts related to archeological resources would be less than significant with mitigation incorporated.

d. Geology and Soils

Impacts related to Geology and Soils under Alternative 2 would be similar to those of the proposed project, as Alternative 2 would involve the same development footprint. As described in Section 4.4, *Geology and Soils*, the project site may experience moderate to potentially severe ground shaking from earthquakes generated on known faults in the region but is otherwise not within an area susceptible to lateral spreading, fault rupture, or landslide. While the site is susceptible to liquefaction, development in the City of Martinez is required to adhere to the CBC. The impact to people, buildings, or structures on the project site from strong seismic ground shaking would be reduced by the required conformance with applicable building codes, and accepted engineering practices, and Mitigation Measure GEO-1. Ground-disturbing activities during project construction may impact previously unknown paleontological resources that may be present below the project site surface, and mitigation to address potential paleontological discoveries would be required. Impacts would be less than significant with implementation of mitigation.

Alternative 2 would require implementation of Mitigation Measures GEO-1 and GEO-2 to reduce impacts to paleontological resources and impacts due to unstable soils including lateral spreading, erosion, and seismic-related liquefaction to a less-than-significant level. Impacts related to geology and soils would be the same as those under the proposed project.

e. Noise

Under Alternative 2, impacts would be similar in nature to those of the proposed project. Similar to the impacts of the proposed project as described in Section 4.5, *Noise*, Alternative 2 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, as the noise generated by the daycare use would not be likely to exceed applicable standards. Furthermore, Alternative 2 would not result in generation of excessive ground-borne vibration or ground-borne noise levels and would not expose people residing or working in the project area to excessive noise levels. Because Alternative 2 would be located at the same site as the proposed project, noise levels at the residential building façades on the southernmost building that face SR 4 may conflict with the City's interior noise standard because they are estimated to be higher than the 45 dBA Ldn threshold. Other building façades of the project would not exceed noise standards. Implementation of Recommendation NOI-1, an exterior-to-interior noise analysis, would achieve compliance with the interior noise standard.

Therefore, impacts related to noise from Alternative 2 would be less than significant, similar to the proposed project.

f. Transportation

Alternative 2 would generate fewer vehicle trips and reduced VMT compared to the proposed project since there would be a day care use available to project residents onsite. It is assumed that some customers would come from the project site and immediate neighborhood and would therefore incrementally reduce overall trip lengths to day care facilities that are farther away. Similar to the impacts of the proposed project described in Section 4.6, *Transportation*, impacts from Alternative 2 related to conflicting with a program, plan, ordinance or policy addressing the circulation system and inadequate emergency access would be less than significant. Furthermore, impacts of Alternative 2 related to hazards due to a geometric design feature would be the same as those under the proposed project, with Mitigation Measure TRA-2 incorporated to reduce potential pedestrian safety issues. Alternative 2 would slightly reduce impacts to VMT; however, due to the modest reduction, impacts from Alternative 2 would remain significant and unavoidable, based on factors including the site's distance from services and high-quality transit, similar to the proposed project. Implementation of Mitigation Measure TRA-1 would reduce but would not eliminate this significant impact. Overall, transportation impacts under Alternative 2 would be similar to but slightly reduced compared to those of the proposed project.

g. Tribal Cultural Resources

Alternative 2 would involve the same development footprint as the proposed project, and thus have the same impacts related to tribal cultural resources as the proposed project. As described in Section 4.7, *Tribal Cultural Resources*, the project site does not contain known tribal cultural resources. Nonetheless, project ground-disturbing activities have the potential to impact unrecorded tribal cultural resources under Alternative 2. Similar to the proposed project, implementation of Mitigation Measure TCR-1 would reduce impacts to unanticipated tribal cultural resources to a less-than-significant level.

h. Other Resources

Impacts related to construction activities and operation would be similar to the proposed project since Alternative 2 would involve the same development footprint as the proposed project. Similar to the impacts of the proposed project, impacts of Alternative 2 relating to agriculture and forestry resources, air quality, energy, greenhouse gas emissions, hazards and hazardous materials, hydrology, land use and planning, mineral resources, population and housing, public services, recreation, utilities, and wildfire would be less than significant or would result in no impact.

6.3 Alternative 3: Reduced Density Alternative

6.3.1 Description

This alternative would involve the construction of six three-story apartment buildings on the project site. The three buildings would accommodate a total of 153 total residential units, 30 fewer residential units than included in the proposed project.

Alternative 3 would not fulfill the project objectives compared to the proposed project by developing fewer residential units and would not help the City in meeting its state-mandated housing obligations. Alternative 3 may also not be feasible as the reduction in units may be inconsistent with the applicant's rights under the state density bonus law.

6.3.2 Impact Analysis

a. Aesthetics

Under Alternative 3, impacts would be similar but reduced compared to those of the proposed project. Similar to impacts of the proposed project described in Section 4.1, *Aesthetics*, impacts of Alternative 3 to scenic vistas, scenic resources, and light or glare would be less than significant. As with the proposed project, Alternative 3 would be subject to design review, which would help ensure that the project design is consistent with City design guidelines for the John Muir Parkway Specific Area Plan Area. Due to the reduced height of Alternative 3 compared to the proposed project, the buildings' height would not conflict with applicable regulations governing scenic quality. However, aesthetic impacts would be less than significant, similar to the proposed project.

b. Biological Resources

Alternative 3 would involve the same development footprint as the proposed project and thus have the same impacts to biological resources. Similar to the impacts of the proposed project described in Section 4.2, *Biological Resources,* impacts related to wildlife movement and local policies or ordinances protecting biological resources, such as trees would be less than significant under Alternative 3, since the project would be subject to the City's ordinances and requirements protecting biological resources. Furthermore, due to the identical development footprint, impacts of Alternative 3 to special-status species and their habitat, sensitive natural communities, and jurisdictional state or federally protected wetlands would be less than significant with mitigation incorporated under Alternative 3.

Similar to the proposed project, under Alternative 3, Mitigation Measures BIO-1a through BIO-3b would be required to reduce impacts to special-status species, riparian habitat, and jurisdictional state or federally protected wetlands due to ground disturbing activities. Therefore, impacts to biological resources would be less than significant with mitigation, the same as under the proposed project.

c. Cultural Resource

Alternative 3 would involve the same development footprint as the proposed project, and thus have the same impacts to cultural resources. As with the proposed project, Alternative 3 would involve construction activities and excavation of soil at the project site. Similar to the impacts of the proposed project described in Section 4.3, *Cultural Resources*, impacts related to historical resources and the disturbance of human remains would be less than significant under Alternative 3. While the project site does not contain known archaeological resources, project ground-disturbing activities have the potential to impact unrecorded archaeological resources. Therefore, Mitigation Measure CR-1 would be required to reduce potential impacts due to the unanticipated discovery of archaeological resources under Alternative 3 to a less-than-significant level. Impacts to cultural resources under Alternative 3 would be the same as those under the proposed project.

d. Geology and Soils

Alternative 3 would involve the same development footprint as the proposed project. As described in Section 4.4, *Geology and Soils*, the project site may experience moderate to potentially severe ground shaking from earthquakes generated on known faults in the region but is otherwise not within an area susceptible to lateral spreading, fault rupture, or landslide. While the site is

susceptible to liquefaction, development in the City of Martinez is required to adhere to the CBC. The impact to people, buildings, or structures on the project site from strong seismic ground shaking would be reduced by the required conformance with applicable building codes, and accepted engineering practices, and Mitigation Measure GEO-1. Ground-disturbing activities during project construction may impact previously unknown paleontological resources that may be present below the project site surface, and mitigation to address potential paleontological discoveries would be required. Impacts would be less than significant with implementation of mitigation.

Similar to the proposed project, implementation of Mitigation Measures GEO-1 and GEO-2 under Alternative 3 would reduce impacts to paleontological resources and impacts due to unstable soils including lateral spreading, erosion, and seismic-related liquefaction to a less-than-significant level.

e. Noise

Alternative 3 would involve the same development footprint as the proposed project but would have a reduced construction duration because of the fewer total number of units and reduced building heights. As described in Section 4.5, *Noise*, 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. Furthermore, the project would not result in generation of excessive ground-borne vibration or ground-borne noise levels and would not expose people residing or working in the project area to excessive noise levels. These impacts would be reduced under Alternative 3 due to the shorter construction period.

Similar to the impacts of the proposed project, noise levels at the residential building façades on the southernmost building that face SR 4 may conflict with the City's interior noise standard because they are estimated to be higher than the 45 dBA Ldn threshold. Other building façades of Alternative 3 would not exceed noise standards. Implementation of Recommendation NOI-1, an exterior-to-interior noise analysis, would achieve compliance with the interior noise standard for Alternative 3. On site operational noise under Alternative 3 would be similar in nature to the proposed project, but would generate incrementally less noise due to the reduced amount of residents. While the project would involve a slight decrease in overall trips generated by the residents, the reduction would not substantially reduce traffic noise associated with project.

Overall, noise impacts under Alternative 3 would be slightly reduced compared to those of the proposed project due to the shorter construction period.

f. Transportation

Alternative 3 would reduce the number of units, and therefore the number of residents compared to the proposed project but would not change the VMT per capita. Construction trips under this alternative would be comparable to the proposed project. Similar to the impacts of the proposed project described in Section 4.6, *Transportation*, impacts related to conflicting with a program, plan, ordinance or policy addressing the circulation system and inadequate emergency access would be less than significant under Alternative 3. Alternative 3 would result in the same impacts relating to potential safety concerns due to pedestrian crossings at the Arthur Drive and Starflower Drive intersection. However, Mitigation TRA-2 would reduce this impact to a less-than-significant level. As the VMT per capita would not be changed under this alternative, impacts would be significant and unavoidable, despite the incorporation of Mitigation TRA-1. Overall construction trips would be similar to the proposed project; however, the construction duration would be reduced due to the

reduced number of residential units. Transportation impacts under Alternative 3 would be significant and unavoidable, similar to the impacts of the proposed project.

g. Tribal Cultural Resources

Alternative 3 would involve the same development footprint as the proposed project and thus have the same impacts related to tribal cultural resources. As described in Section 4.7, *Tribal Cultural Resources*, the project site does not contain known tribal cultural resources. Nonetheless, similar to the proposed project, ground-disturbing activities under Alternative 3 have the potential to impact unrecorded tribal cultural resources. As Alternative 3 would still require construction activity on the project site, there would be a potentially significant impact associated with the potential to encounter tribal cultural resources.

Similar to the proposed project, implementation of Mitigation Measure TCR-1 would be required to reduce impacts to less-than-significant levels. Impacts to tribal cultural resources would be less than significant with mitigation, similar to the proposed project.

h. Other Resources

Impacts related to construction activities and operation would be slightly reduced compared to the proposed project since the number of units would be reduced, along with the construction duration. As with the proposed project, impacts to agriculture and forestry resources, air quality, energy, greenhouse gas emissions, hazards and hazardous materials, hydrology, land use and planning, mineral resources, population and housing, public services, recreation, utilities, and wildfire would be less than significant or would result in no impact.

6.4 Alternative 4: Alternative Site

6.4.1 Description

This alternative would involve the construction of six apartment buildings with 183 units on an alternative site south of the Martinez Amtrak Station near the intersection of Foster Street and Berrellesa Street on APN 372-400-006 as shown in Figure 6-1. The alternative site is a 6.1-acre lot within the City of Martinez Downtown Specific Plan area and is designated as Downtown Shoreline. The applicant does not own or control this site. This alternative is analyzed as a project alternative for CEQA purposes but may not be feasible because the applicant's ability to purchase the property cannot be assured.

Similar to the proposed project, three of the buildings, Buildings 1, 2, and 4, would be three stories and up to 35 feet, 2 inches above adjacent grade. Buildings 3, 5, and 6, would be four stories and up to 44 feet, 2 inches above adjacent grade.

Alternative 4 would fulfill the project objective to provide housing on an identified Housing Opportunity Site from the City's 2015-2023 Housing Element. It would also fulfill the project objective of mobility connections to a greater extent than the proposed project, as the alternative site is within walking distance of a range of services and the Amtrak station and has access to more robust bicycle and pedestrian facilities than the proposed project site.

Figure 6-1 Alternative Site Location

6.4.2 Impact Analysis

a. Aesthetics

Under Alternative 4, the project would be similar in nature to the proposed project since the height of the buildings would remain the same, but the visual context differs due to the alternative site location. There are some glimpses of the Carquinez Strait looking north through the alternative site from short stretches of Foster Street and Carquinez Scenic Dive. In addition, the project may block parts of the hillside looking south through the site from a short stretch of Embarcadero Street. Therefore, impacts related to scenic vistas under Alternative 4 may be slightly greater than those under the proposed project. The visual quality of the alternative site is generally low, and therefore impacts related to changes to the site's visual quality would be reduced compared to the proposed project. Similar to the proposed project, light and glare impacts would be less than significant. The proposed project would be subject to a design review that would help ensure that the project design is consistent with City design guidelines. The Downtown Shoreline zoning allows heights of up to 40 feet, compared to Alternative 4's height of 44 feet 2 inches. Therefore, the buildings' massing and height would not conflict with applicable regulations governing scenic quality resulting in a less than significant impact. The height of Alternative 4 would, similar to the proposed project, would not exceed the height allowed by the project's underlying zoning. Overall, impacts would be similar to those of the proposed project.

b. Biological Resources

Under Alternative 4, construction would occur over a similar length of time, and construction activities would occur on a similarly sized site area. As described in Section 4.2, *Biological Resources,* impacts related to wildlife movement and local policies or ordinances protecting biological resources such as trees would be less than significant, since the project would be subject to the City's ordinances and requirements protecting biological resources. Furthermore, impacts to special-status species and their habitat, sensitive natural communities, and jurisdictional state or federally protected wetlands would be less than significant due to a lack of wetland habitat on-site (USFWS 2022).

Under Alternative 4, Mitigation Measures BIO-1b would be required to reduce impacts to nesting birds that may roost in trees on-site. However, due to the lack of wetlands and drainages on this site, impacts to biological resources would be reduced compared to those of the proposed project.

c. Cultural Resource

Alternative 4 would involve the same development footprint as the proposed project but on an alternative site.

Similar to the impacts of the proposed project, described in Section 4.3, *Cultural Resources*, Alternative 4 would involve construction activities and excavation of soil, although this construction would occur at the alternative project site. Due to the proximity to the Carquinez Strait and likelihood that less imported fill is present, this site could be more sensitive for archaeological resources than the proposed project site. Mitigation Measure CR-1, and potentially additional mitigation if warranted based on further research, would be required to reduce potential impacts to the unanticipated discovery of archaeological resources during such activities. In addition, the existing buildings on the project site would need to be evaluated to determine if they are of historic importance. Impacts related to archeological resources would likely be less than significant with

mitigation incorporated, and impacts to historic resources could be greater than for the proposed project, but this would need to be determined through further cultural resources investigations. Overall, impacts to cultural resources would likely be greater than for the proposed project.

d. Geology and Soils

Alternative 4 would involve construction of a similar development as the proposed project but on a different project site. As described in Section 4.4, *Geology and Soils*, the City may experience moderate to potentially severe ground shaking from earthquakes generated on known faults in the region. Like the proposed project site, the alternative site is not within an area susceptible to lateral spreading, fault rupture, or landslide (DOC 2018). However, the site could potentially experience liquefaction. Development in the City of Martinez is required to adhere to the CBC, and therefore the impact to people, buildings, or structures on the project site from strong seismic ground shaking would be reduced by the required conformance with applicable building codes, accepted engineering practices, and a site-specific geotechnical study. Ground-disturbing activities during project construction may impact previously unknown paleontological resources that may be present below the project site surface, and Mitigation Measure GEO-2 to address potential paleontological discoveries would be required. Impacts would be less than significant with implementation of mitigation.

Similar to the proposed project, implementation of site-specific geotechnical measures would reduce impacts to paleontological resources and unstable soils to a less-than-significant level.

e. Noise

Construction activity would be similar to the proposed project but occurring on a different project site. Similar to the impacts of the proposed project as described in Section 4.5, *Noise*, Alternative 4 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. Furthermore, the project would not result in generation of excessive ground-borne vibration or ground-borne noise levels and would not expose people residing or working in the project area to excessive noise levels. Noise levels at the residential building façades facing the train tracks north of the Alternative 4 site may conflict with the City's interior noise standard. Implementation of Recommendation NOI-1, a site-specific exterior-to-interior noise analysis, would achieve compliance with the interior noise standard.

Alternative 4 would cause fewer noise impacts due to the greater ambient noise from the adjacent train tracks and fewer sensitive receivers located nearby. Therefore, operation and construction-related noise impacts would be less than significant and reduced compared to the proposed project.

f. Transportation

Alternative 4 would generate fewer vehicle trips since the alternative site is located closer to Downtown Martinez and the Amtrak station. Similar to the proposed project's impacts described in Section 4.6, *Transportation*, Alternative 4 would have less-than-significant impacts related to conflicting with a program, plan, ordinance or policy addressing the circulation system and inadequate emergency access would be less than significant, as plans would be reviewed by emergency service providers. Furthermore, impacts related to hazards due to a geometric design feature would be less than significant, as the site-specific issues regarding pedestrian crossings at the intersection of Arnold Drive and Starflower Drive would not occur at the alternative site. Alternative 4 would reduce impacts to VMT and potentially avoid significant impacts of the

proposed project related to VMT, through a substantial reduction in miles traveled due to a location closer to services and the walkable downtown area and in proximity to the Amtrak station, which provides regional public transit. Impacts under Alternative 4 would be reduced, compared to the proposed project.

g. Tribal and Cultural Resources

Alternative 4 would involve the same development footprint as the proposed project but would be located on an alternative site. Similar to the impacts of the proposed project in Section 4.7, *Tribal Cultural Resources*, project ground-disturbing activities have the potential to impact unrecorded tribal cultural resources. As Alternative 4 would require construction activity on the alternative site, and there would be a potentially significant impact associated with the potential to encounter tribal cultural resources.

Due to the proximity to the Carquinez Strait, this site is more likely to have archaeological resources and could be more sensitive for tribal cultural resources than the proposed project site. Mitigation Measure TCR-1 would be required to reduce impacts to less than significant. Impacts to tribal and cultural resources may be greater than those of the proposed project, but this would be confirmed through further study and Native American consultation.

h. Other Resources

Impacts to agriculture and forestry resources, air quality, energy, greenhouse gas emissions, hydrology, land use and planning, mineral resources, population and housing, public services, recreation, utilities, and wildfire would be less than significant or would result in no impact. Impacts related to hazards and hazardous materials would likely be greater than those of the proposed project because the alternative site has been in industrial use and is listed on state hazardous materials databases.

6.5 Environmentally Superior Alternative

CEQA requires that an EIR identify the Environmentally Superior Alternative and discuss the facts that support that selection, as well as whether it would accomplish the project objectives or be infeasible (Public Resources Section 21081.5; *CEQA Guidelines* Sections 15091, 15126.6).

Table 6-1 indicates whether each alternative's environmental impact is greater than, less than or similar to that of the proposed project for each of the environmental topics studied.

Based on the alternatives analyses, Alternative 1, the No Project Alternative, would be the environmentally superior alternative, as it would result in fewer impacts compared to the proposed project and would reduce the significant and unavoidable impact associated with the project's VMT. However, Alternative 1 would not meet any of the project objectives, nor would it help the City meet its state-mandated housing obligations under the 2015-2023 Housing Element.

If the No Project Alternative is the Environmentally Superior Alternative, CEQA requires that an Environmentally Superior Build Alternative be identified. Based on this consideration, Alternative 2 would be environmentally superior regarding transportation, but would still result in a significant and unavoidable VMT impact. Alternative 3 would be environmentally superior regarding noise and would reduce this impact to a less-than-significant level while not resulting in any greater impacts.

Alternative 4 would be environmentally superior for biological resources, noise, and transportation but would result in greater environmental impacts regarding hazards and hazardous materials, due to the site's listing on state hazardous materials databases, and greater sensitivity for cultural and tribal cultural resources, due to its proximity to Carquinez Strait. As Alternative 4 would result in greater impacts in one area and Alternative 3 would not result in any greater environmental impacts than the proposed project, Alternative 3 would be the Environmentally Superior Alternative. However, Alternative 3 would not meet the purpose and need to the same extent as the proposed project because it may be infeasible as the applicant does not own or control that alternate site.

Table 6-1 Impact Comparison of Alternatives

Issue	Proposed Project Impact Classification	Alternative 1: No Project	Alternative 2: Mixed Use Alternative	Alternative 3: Reduced Density Alternative	Alternative 4: Alternative Site
Aesthetics	Less than Significant	+	=	+	=
Biological Resources	Less than Significant with Mitigation Incorporated	+	=	=	+
Cultural Resources	Less than Significant with Mitigation Incorporated	+	=	=	-
Geology and Soils	Less than Significant with Mitigation Incorporated	+	=	=	=
Noise	Less than Significant with Mitigation Incorporated	+	=	+	+
Transportation and Traffic	Significant and Unavoidable	+	+	=	+
Tribal and Cultural Resources	Less than Significant with Mitigation Incorporated	+	=	=	-
Other Resources	Less than Significant or No Impact	+	=	=	-

+ Superior to the proposed project (reduced level of impact)
- Inferior to the proposed project (increased level of impact)
= Similar level of impact to the proposed project

7 References

7.1 Bibliography

Aesthetics

Caltrans 2019. List of eligible and officially designated State Scenic Highways. https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways (accessed March 2022).

Martinez, City of. General Plan https://www.cityofmartinez.org/home/showpublisheddocument/2091/637816481071000000.

_____. 2018. City of Martinez Zoning Map. http://maps.digitalmapcentral.com/production/vecommunityview/cities/Martinez/index.aspx. (accessed March 2022).

Meyers Nave. 2021. Guide to the California Density Bonus Law, by Jon Goetz and Tom Sakai. Available at https://www.meyersnave.com/wp-content/uploads/California-Density-Bonus-Law_2021.pdf. Revised January 2021.

Traverso Tree Service. 2022. Updated Arborist Report for Amáre Apartments, Arnold Drive & Highway 4, Martinez. January 31.

Biological Resources

California Department of Fish and Wildlife (CDFW). 2019a. Natural Diversity Database. August 2019. Special Animals List. Periodic publication. 67 pp.

_____. 2019b Natural Communities List Arranged Alphabetically by Life Form (PDF). Available from https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities#sensitive%20natural%20communities. (Accessed May 2020).

_____. 2019c. Biogeographic Information and Observation System (BIOS). http://bios.dfg.ca.gov. (Accessed February 2020).

_____. 2020a. California Natural Diversity Database, Rarefind 5. https://wildlife.ca.gov/data/cnddb/maps-and-data (Accessed February 2020).

_____. 2020b. Natural Diversity Database. January 2020. Special Vascular Plants, Bryophytes, and Lichens List. Quarterly publication. 140 pp.

California Native Plant Society. 2020. Inventory of Rare and Endangered Plants. V8-02. http://www.rareplants.cnps.org/. (Accessed February 2020).

Holland, Robert F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. California Department of Fish and Wildlife, Nongame Heritage Program. 156 pgs.

Jennings, M.J., D. Faber-Langendoen, O.L., Loucks, R.K. Peet. 2009. Standards for associations and alliances of the U.S. National Vegetation Classification. Ecological Monographs 79(2): 173–199.

Martinez, City of. 2013. City of Martinez General Plan. Available at https://www.cityofmartinez.org/home/showpublisheddocument/2091/637816481071000000.

Martinez, City of. 2020. Municipal Code. Available at https://library.municode.com/ca/martinez/codes/code_of_ordinances.

Martinez, City of. 2018. Zoning Map. Available at https://www.cityofmartinez.org/civicax/filebank/blobdload.aspx?BlobID=17160. February 17.

Patterson, Charles A. 2016a. Biotic Survey Report for Vacant Parcel on Arnold Drive, Martinez, Contra Costa County. January 11.

_____. 2016b. Request of a "JD" for a vacant lot (approximately 5 acres) on Arnold Drive, Martinez, Contra Costa County. March 31.

Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society, Sacramento, CA.

Traverso Tree Service. 2022. Updated Arborist Report for Amáre Apartments, Arnold Drive & Highway 4, Martinez. January 31.

U.S. Army Corps of Engineers (USACE). 2017. Preliminary Jurisdictional Determination, Arnold Drive at Starflower Drive. File No. 2016-00144S. February 6.

U.S. Department of Agriculture (USDA), Natural Resources Conservation Service. 2019. Web Soil Survey. Soil Survey Area: Contra Costa County, California. Soil Survey Data: Version 8. Available at: http://websoilsurvey.nrcs.usda.gov/app/. (Accessed February 2020).

U.S. Fish and Wildlife Service (USFWS). 2020a. National Wetlands Inventory (NWI) Wetlands mapper. Available at: https://www.fws.gov/wetlands/data/mapper.html (Accessed February 2020).

_____. 2020b. Information for Planning and Consultation (IPaC). Available at: https://ecos.fws.gov/ipac/. (Accessed February 2020).

_____. 2020c. Critical Habitat Portal. Available at: http://criticalhabitat.fws.gov. (Accessed February 2020).

Cultural Resources

Bay Area Census. 2010. City of Martinez, Contra Costa County Census 2010. Electronic document at: http://www.bayareacensus.ca.gov/cities/Martinez.htm. (accessed January 2022).

Bean, Walton. 1968. California: An Interpretive History. McGraw-Hill Book Company, New York.

Byrd, Brian, Adrian Whitaker, Patricia Mikkelsen, Jeffrey Rosenthal, Todd Jaffke, Philip Kaijankoski, Jack Meyer, Randall Milliken, and Eric Wohlgemuth. 2017. San Francisco Bay-Delta Regional Context and Research Design for Native American Archaeological Resources, Caltrans District 4. Report on file with the California Department of Transportation (Caltrans).

D'Oro, Stella. 2009. *Native California Prehistory and Climate in the San Francisco Bay Area*. Master's Thesis, Department of Anthropology, San Jose State University, San Jose, California.

Dumke, Glenn S. 1994. The Boom of the 1880s in Southern California. Southern California Quarterly 76(1):99-114.

Engelhardt, Zephyrin. 1927a. San Fernando Rey, the Mission of the Valley. Franciscan Herald Press, Chicago.

_____. 1927b. San Gabriel Mission and the Beginning of Los Angeles. Mission San Gabriel, San Gabriel, California.

Gifford, Edward W. 1916. Composition of California Shellmounds. *American Archaeology and Ethnology* 12(1):1-29.

Guinn, James M. 1977. Gold! Gold! Gold! from San Francisquito! in Los Angeles Biography of a City. John Caughey and LaRee Caughey, eds. Pp. 107-108. Berkeley, California: University of California, Berkeley Press.

Hylkema, Mark G. 2002. Tidal Marsh, Oak Woodlands, and Cultural Florescence in the Southern San Francisco Bay Region. In *Catalysts to Complexity: Late Holocene Societies of the California Coast*, edited by Jon M. Erlandson and Terry L. Jones, pp.233–262. Perspectives in California Archaeology, Vol. 6. Cotsen Institute of Archaeology, University of California, Los Angeles.

Lentz, Kari. 2012. Flaked and Groundstone Technology at CA-ALA-554: Mortar Bowls and Stockton Points. *SCA Proceedings* 26:192-211.

Lightfoot, Kent G., and Edward M. Luby. 2002. Late Holocene in the San Francisco Bay Area: Temporal Trends in the Use and Abandonment of Shell Mounds in the East Bay. In *Catalysts to Complexity: Late Holocene Societies of the California Coast*, edited by Jon M. Erlandson and Terry L. Jones, pp.263-281. Perspectives in California Archaeology, Vol. 6. Cotsen Institute of Archaeology, University of California, Los Angeles.

Luby, Edward M. and Mark F. Gruber. 1999. The Dead Must be Fed: Symbolic Meanings of the Shellmounds of the San Francisco Bay Area. *Cambridge Archaeological Journal* 9(1):95-105.

Martinez, City of. 2016 Historic, Cultural and Arts Element of the City of Martinez General Plan, adopted in 2016. Electronic document at: https://www.cityofmartinez.org/civicax/filebank/blobdload.aspx?t=71268.7&BlobID=28216. (accessed January 2022).

Martinez Historical Society. n.d. Historic of Martinez. Electronic document at: https://martinezhistory.org/history-of-martinez/. (accessed January 2022).

McCawley, William. 1996. The First Angelinos: The Gabrielino Indians of Los Angeles. Banning, California: Malki Museum, Press.

Milliken, R. T., R.T. Fitzgerald, M. G. Hylkema, R. Groza, T. Origer, D. G. Bieling, A. Leventhal, R. S. Wiberg, A. Gottsfield, D. Gillette, V. Bellifemine, E. Strother, R. Cartier, and D. A. Fredrickson. 2007. Punctuated Cultural Change in the San Francisco Bay Area. *In California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 99-124. AltaMira Press, Lanham, Maryland.

Moratto, Michael J. 1984. *California Archaeology*. Academic Press, New York.

Ragir, Sonia. 1972. *The Early Horizon in Central California Prehistory*. Contributions of the University of California Archaeological Research Facility, No. 15. Berkeley.

Reséndez, Andrés. 2016. The Other Slavery: The Uncovered Story of Indian Enslavement in America. Houghton Mifflin Harcourt, Boston, New York.

Rolle, Andrew. 2003. California: A History. Revised and expanded sixth edition. Harlan Davidson, Inc., Wheeling, Illinois.

Shumway, Burgess McK. 2007. California Ranchos: Patented Private Land Grants Listed by County. Michael Burgess and Mary Wickizer Burgess, eds. Rockville, Maryland: Borgo Publishing Press.

Simons, Dwight and Tim Carpenter. 2009. Fish Remains from CA-MRN-44/H, Angel Island, Marin County, California. *Proceedings of the Society for California Archaeology* 21:69-81.

Van Der Porten, Peter, Katherine Dixon, and Alex DeGeorgey. 2014. Seriation of Clam Shell Disk Beads in Central California. *SCA Proceedings* 28:267-281.

Vellanoweth, Rene L., Amira F. Ainis, Jon M. Erlandson, and Lisa D. Thomas-Barnett. 2014. An Olivella Grooved Rectangle Bead Cluster from San Nicolas Island, California. *Journal of California and Great Basin Anthropology* , 2014, Vol. 34, No. 2 (2014), pp. 229-246. Electronic document available at http://www.jstor.com/stable/45154987. (accessed September 2021).

Workman, Boyle. 1935. The City that Grew. Los Angeles, California: The Southland Publishing Company.

Geology and Soils

California Geological Survey. 2002. California Geomorphic Provinces, Note 36.

Cornerstone Earth Group. Preliminary Geotechnical Investigation Hill Valley Oaks Apartments. Revised December 11, 2009

Dibblee, T.W., and Minch, J.A., 2005, Geologic map of the Walnut Creek quadrangle, Contra Costa County, California: Dibblee Geological Foundation, Dibblee Foundation Map DF-149, scale 1:24,000.

Paleobiology Database. 2020. Online fossil locality database. Available online: https://www.paleobiodb.org/#/.

University of California Museum of Paleontology (UCMP). 2020. UCMP online database specimen search portal, http://ucmpdb.berkeley.edu/.

Society of Vertebrate Paleontology (SVP). 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee.

Norris, R.M., and R.W. Webb. 1990. Geology of California. John Wiley and Sons, Inc. New York.

Jefferson, G.T. 1985. Review of the Late Pleistocene avifauna from Lake Manix, central Mojave Desert, California. Contributions in Science, Natural History Museum of Los Angeles County, 362, p. 1-13.

_____. 2010. A catalogue of late Quaternary vertebrates from California. Natural History Museum of Los Angeles County Technical Report 7, p. 5-172.

Noise

California Department of Transportation (Caltrans). 2013. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. (CT-HWANP-RT-13-069.25.2) September. Available at: http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf

_____. 2020. *Highway Design Manual.* Available at: https://dot.ca.gov/-/media/dot-media/programs/design/documents/hdm-complete-12312020a11y.pdf

_____. 2020. *Transportation and Construction Vibration Guidance Manual*. Available at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf

_____. 2022. *2020 Traffic Volumes*. Available at: https://dot.ca.gov/programs/traffic-operations/census.

California Office of Planning and Research (OPR). 2017. State of California General Plan Guidelines.

Contra Costa, County of. 2000. Contra Costa County Airport Land Use Compatibility Plan. https://www.contracosta.ca.gov/DocumentCenter/View/856/Buchanan-Field-Airport-Policies?bidId=

Federal Highway Administration (FHWA). 2006*. FHWA Highway Construction Noise Handbook*. (FHWAHEP-06-015; DOT-VNTSC-FHWA-06-02). Available at: http://www.fhwa.dot.gov/environment/construction_noise/handbook. Accessed November 2018.

_____. 2011. Highway Traffic Noise: Analysis and Abatement Guidance (FHWA-HEP-10-025). https://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/analysis_and_abatement_guidance/revguidance.pdf

Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment*. November. Available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf

Martinez, City of. 1985. General Plan Noise Element. Adopted November 20, 1985.

_____. 2016. General Plan Noise and Air Element Update. https://www.cityofmartinez.org/civicax/filebank/blobdload.aspx?t=70552.98&BlobID=28235

Rincon Consultants, Inc. 2022. Amare Apartment Homes Project Initial Study. January.

Transportation

Amtrak. 2021. California Train Routes. https://www.amtrak.com/california-train-routes (accessed January 2022).

Association of Bay Area Governments (ABAG). 2021. Plan Bay Area 2050. October 21, 2021. https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf

Bay Area Rapid Transit (BART). 2022. North Concord/Martinez Station. https://www.bart.gov/stations/ncon (accessed January 2022).

Contra Costa Transit Authority. 2017. Countywide Comprehensive Transportation Plan, Volume I. September 20, 2017. https://ccta.net/wp-content/uploads/2021/07/2017-CTP-Vol-1.2017.10.05.pdf (accessed January 2022).

_____. 2018. Countywide Bicycle and Pedestrian Plan. https://ccta.net/projects/countywide-bicycle-and-pedestrian-plan/ (accessed January 2022).

_____. 2020. Contra Costa County Transportation Analysis Guidelines. June 6, 2020. https://www.contracosta.ca.gov/DocumentCenter/View/70739/FINAL-CCC-Transportation-Analysis-Guidelines-v3-5-10-21?bidId= (accessed January 2022).

Governor's Office of Planning and Research (OPR). 2018. Technical Advisory on Evaluating Transportation Impacts. December 2018. https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf (accessed January 2022).

Martinez, City of. 1992. General Plan Transportation Element. https://www.cityofmartinez.org/civicax/filebank/blobdload.aspx?BlobID=20113 (accessed January 2022).

Tri Delta Transit. 2022. Routes and Stops System Map. http://rta.trideltatransit.com/rtt/public/transit.aspx (accessed January 2022).

Tribal Cultural Resources

Field, Les W. and Alan Leventhal. 2003. "What Must It Have Been Like!": Critical Considerations of Precontact Ohlone Cosmology as Interpreted through Central California Ethnohistory. *Wicazo SA Review* 18(2):95-126.

Jones, Barbara L. 2010. Mythic Implications of Faunal Assemblages from Three Ohlone Sites. Master's Thesis, Department of Anthropology, San Francisco State University, San Francisco, California.

Jones, Doug. 2015. Ritual and Religion in the Ohlone Cultural Area of Central California. Master's Thesis, Department of Anthropology, San Jose State University, San Jose, California.

Kroeber, Alfred J. 1925. Handbook of the Indians of California. Bureau of American Ethnology, Bulletin 78. Originally published 1925, Smithsonian Printing Office, Washington, D.C. Unabridged reprint 1976, Dover Publications, Inc. New York.

Leventhal, Alan and Diane DiGiuseppe. 2009. Analysis of the Stone, Bone and Shell Artifacts from CA-SCL-869. In *Final Report on the Burial and Archaeological Data Recovery Program Conducted on a Portion of a Middle Period Ohlone Indian Cemetery, Katwáš Ketneyma Waréeptak (The Four Matriarchs Site) CA-SCL-869, Located at 5912 Cahalan Avenue, Fire Station # 12 San Jose, Santa Clara County, California*. Ohlone Families Consulting Services. Submitted to City of San Jose Department of Public Works.

Levy, Richard. 1978. Costanoan. In; *Handbook of North American Indians,* Vol. 8, California*,* edited by R. F. Heizer, pp 485-495. Smithsonian Institution, Washington, D.C.

Schick, Grant W. 1994. The Ohlone and the Oak Woodlands: Cultural adaptation in the Santa Clara Valley, Research Manuscript No. 4. Santa Clara University. Santa Clara, California.

Skowronek, Russell K. 1998. Sifting the Evidence: Perceptions of Life at the Ohlone (Costanoan) Missions of Alta California. *Ethnohistory* 45:675-708.

Other CEQA

Association of Bay Area Governments. 2020. Projections 2040. Download Data. Projections 2040 by Jurisdiction (Curated). http://projections.planbayarea.org/ (accessed February 2020).

California Air Pollution Control Officers Association. 2017. CalEEMod User's Guide version 2016.3.2. November 2017.

CARB. 2018. EMFAC2017 (v1.0.2) Emissions Inventory. Contra Costa County, 2024, EMFAC2011 Categories.

United States Census. 2010. Table DP-1, American Community Survey 2006-2010.

United States Energy Information Administration. 2018a. Table CE2.5 Annual household side fuel consumption in the West—totals and averages, 2015. Washington, DC. May 2018. https://www.eia.gov/consumption/residential/data/2015/c&e/pdf/ce2.5.pdf (accessed December 2019).

_____. 2018b. Table HC10.5 Total square footage of West homes, 2015. Revised May 2018. https://www.eia.gov/consumption/residential/data/2015/hc/php/hc10.5.php (accessed December 2019).

Alternatives

California Department of Conservation. 2018. DOC Maps: Geologic Hazards. https://maps.conservation.ca.gov/geologichazards/ (accessed March 2022).

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