2 EXECUTIVE SUMMARY

2.1 INTRODUCTION

The Executive Summary chapter of the EIR provides an overview of the proposed project and summarizes the conclusions of the environmental analysis provided in Chapters 4.1 through 4.12. The chapter also reviews the alternatives to the proposed project that are described in the Alternatives Analysis chapter and identifies the Environmentally Superior Alternative. Table 2-3, found at the end of this chapter, provides a summary of the environmental effects of the proposed project, as identified in each technical chapter of the EIR. Table 2-3 also contains the potential environmental impacts associated with the proposed project, the significance of the impacts, the proposed mitigation measures for the impacts, and the significance of the impacts after implementation of the mitigation measures.

2.2 SUMMARY DESCRIPTION OF THE PROPOSED PROJECT

The proposed project site is located in the southeastern portion of the City of Antioch in eastern Contra Costa County, California. Specifically, the project site is situated within the Sand Creek Focus Area of the General Plan, which contains lands designated by the Antioch General Plan for open space, residential, commercial, and mixed-use development. The project site consists of 551.5 acres of primarily undeveloped land, designated Golf Course Community/Senior Housing/Open Space, Hillside and Estate Residential, and Public/Quasi Public in the City of Antioch General Plan and zoned Study Area (S).

Currently, the project site has a cattle-grazing operation, a single-family residence, and various barns and outbuildings located on the eastern portion of the site. Historical uses of the site include grazing and limited natural gas exploration. Sand Creek, a tributary of Marsh Creek, flows west to east through the proposed project site. The topography of the site is varied, ranging from relatively level areas in the eastern and central portions of the site, gently-sloping hills immediately north and south of Sand Creek, and moderate to steep slopes in the western portion of the site. A large stockpile of soil and large boulders is situated on the northern portion of the proposed project site, near the terminus of Dallas Ranch Road. The stockpiles are likely the result of construction activities associated with Dallas Ranch Road and the existing single-family residential subdivision located to the north of the site.

Surrounding land uses include a single-family, medium density residential subdivision to the north, undeveloped land to the south (planned for future residential), Deer Valley Road and Kaiser Permanente Antioch Medical Center to the east, and Empire Mine Road and undeveloped land (planned for future residential) to the west.

For the purposes of this EIR, the proposed project includes two scenarios: a Multi-Generational Plan and a Traditional Plan. The Multi-Generational Plan (1,307 units) would include a wide

range of housing, including active adult housing, while the Traditional Plan (1,137 units) would include only all-ages housing, and would not include active adult housing. The project applicant is requesting approval of both scenarios to allow flexibility based upon market conditions. The two proposed scenarios would provide a mix of different single-family residential neighborhood types organized into two distinct development areas to the north and south of the Sand Creek corridor. In addition, various public facilities and amenities, circulation and access improvements, and infrastructure improvements to serve the proposed planned community would be included. Development standards for each of the proposed land uses would be included as part of the proposed project as well. Proposed land uses, densities, and lot sizes of both development scenarios are shown in Table 2-1 and Table 2-2.

Buildout of the project would occur over the course of a number of years, as dictated by the economy and demand for new housing in the project area. The project would be constructed in three phases, with the infrastructure and amenities corresponding to new unit demands. The project site would be built out starting from east to west and from north to south. Phasing would be similar for both proposed development scenarios. A finalized phasing plan would be submitted to the City by the project applicant concurrent with the first tentative map application.

The project applicant is seeking discretionary approval of the following entitlements from the City of Antioch:

- *General Plan Text and Map Amendments.* The project would require the approval of General Plan text and map amendments to the Land Use Element to change the land use designations of the site from Golf Course Community/Senior Housing/Open Space, Hillside and Estate Residential, and Public/Quasi Public to Low Density Residential, Medium Low Density Residential, Mixed Use, Public/Quasi Public, and Open Space. The Multi-Generational Plan would designate a portion of the site as Senior Housing. The Circulation Element of the General Plan would be amended to reflect the proposed alignment of Sand Creek Road.
- *Rezoning.* The project would require a rezone from the current zoning, Study Area (S), to Planned Development (PD). The PD would include special development standards for the project.
- *Design Guidelines.* The design guidelines would supplement the proposed development standards.
- *Resource Management Plan.* Pursuant to section 4.4.6.7(t) of the City of Antioch General Plan, the applicant will prepare a Resource Management Plan for City approval.
- *Development Agreement.* The Development Agreement would assure the City that the proposed project would proceed to its completion in compliance with the plans submitted by the applicant, and assure the applicant of vested rights to develop the project.

The proposed project would require the following additional City of Antioch entitlements prior to development in the future:

- Large Lot Tentative Subdivision Map(s);
- Small Lot Tentative Subdivision Map(s);

- Design Review; and
- Conditional Use Permit(s).

Table 2-1 Multi-Generational Plan Land Use					
Land Use		**Acreage**	**Net Density (du/ac)**	**Average Lot Size (sf)**	**Target Number of Units**
Low Density (LD)	LD-1	35	3.4	10,000	120
	LD-2	18	3.6	7,000	65
	LD-3	104	3.9	7,000	410
Active Adult (AA)		93	5.4	5,000	500
Medium Density (MD)		38	5.6	4,500	212
TOTAL RESIDENTIAL		**288**	**4.5**		**1,307**
Village Center (VC)		5			
Public Use (PQ)	Fire Station (PQ-F)	2			
	Staging Area (PQ-S)	1.5			
Parks (P)		22			
Landscape (L)		2.5			
Open Space (OS)		194.5			
Major Roadways		36			
GRAND TOTAL		**551.5**			

Table 2-2 Traditional Plan Land Use					
Land Use		**Acreage**	**Net Density (du/ac)**	**Average Lot Size (sf)**	**Target Number of Units**
Low Density (LD)	LD-1	45	3.4	10,000	155
	LD-2	100	3.6	7,000	360
	LD-3	104	3.9	7,000	410
Medium Density (MD)		38	5.6	4,500	212
TOTAL RESIDENTIAL		**287**	**4.0**		**1,137**
Village Center (VC)		5			
Public Use (PQ)	Fire Station (PQ-F)	2			
	Staging Area (PQ-S)	1.5			
Parks (P)		17.5			
Landscape (L)		3			
Open Space (OS)		199.5			
Major Roadways		36			
GRAND TOTAL		**551.5**			

2.3 MITIGATION MONITORING AND REPORTING PROGRAM

Section 15097 of the California Environmental Quality Act (CEQA) requires all State and local agencies to establish monitoring or reporting programs for projects approved by a public agency whenever approval involves the adoption of environmental findings related to environmental

impact reports (see Guidelines Section 15091 for Findings). In order to ensure that the mitigation measures and project revisions identified in the EIR are implemented, the public agency shall adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects. A public agency may delegate reporting or monitoring responsibilities to another public agency or to a private entity which accepts the delegation; however, until mitigation measures have been completed the lead agency remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with the program.

Consistent with CEQA Section 15097, implementation of the proposed project would require adoption of a Mitigation Monitoring and Reporting Program (MMRP) by the City of Antioch. The MMRP specifies the methods for monitoring mitigation measures required to eliminate or reduce the project's significant effects on the environment.

2.4 ENVIRONMENTAL IMPACTS AND REQUIRED MITIGATION MEASURES

Under the California Environmental Quality Act (CEQA), a significant effect on the environment is defined as a substantial, or potentially substantial, adverse change in any of the existing physical conditions within the area affected by the project, including land, air, water, mineral, flora, fauna, ambient noise, and objects of historic or aesthetic significance. Mitigation measures must be implemented as part of the proposed project to reduce potential adverse impacts to a less-than-significant level. Such mitigation measures are noted in this EIR and are found in the following chapters of this EIR: Aesthetics; Air Quality and Greenhouse Gas (GHG) Emissions; Biological Resources; Cultural Resources; Geology, Soils, and Mineral Resources; Hazards and Hazardous Materials; Hydrology and Water Quality; Noise; and Transportation and Circulation. The mitigation measures presented in the EIR will form the basis of the Mitigation Monitoring and Reporting Program. Any impact that remains significant after implementation of mitigation measures is considered a significant and unavoidable impact.

A summary of the identified impacts in the technical sections of the EIR is presented in Table 2-3. In Table 2-3, the proposed project impacts are identified for each technical chapter (Chapter 4.1 through 4.12) of the EIR. In addition, Table 2-3 includes the level of significance of each impact, any mitigation measures required for each impact, and the resulting level of significance after implementation of mitigation measures for each impact.

2.5 SUMMARY OF PROJECT ALTERNATIVES

The following section presents a summary of the evaluation of the alternatives considered for the proposed project, which include the:

- No Project (No Build) Alternative;
- No Project (Existing General Plan) Alternative;
- Reduced Footprint Alternative; and
- Reduced Intensity/Senior Housing Alternative.

No Project (No Build) Alternative

CEQA requires the evaluation of the comparative impacts of the "No Project Alternative" (CEQA Guidelines Section 15126.6(e)). The No Project Alternative may be defined either as the "no action taken on the proposed project" or a "no build" on the project site. The No Project (No Build) Alternative is defined as the continuation of the existing conditions of the project site, which is 551.5 acres of primarily undeveloped land. Currently, the project site has a cattle-grazing operation, a single-family residence, and various barns and outbuildings located on the eastern portion of the site. The No Project (No Build) Alternative would not meet any of the project objectives. Because development of the site would not occur, land disturbance and any associated physical environmental impacts would not occur as a result of the No Project (No Build) Alternative. The Alternatives Analysis chapter of the EIR identified that the No Project (No Build) Alternative could result in greater impacts than the proposed project related to Land Use and Planning/Population and Housing. However, impacts would not occur under the No Project (No Build) Alternative in all other resource areas.

No Project (Existing General Plan) Alternative

In addition to the No Project (No Build) Alternative described above, the City has decided to evaluate a No Project (Existing General Plan) Alternative as well. Per the City of Antioch General Plan, the proposed project site is designated Golf Course Community/Senior Housing/Open Space, Hillside and Estate Residential, and Public/Quasi Public. The City currently assumes that the golf course would occupy approximately 212 acres on the project site, but the location of the golf course, whether on hillsides, flat areas, etc., is speculative. The same acreage as the proposed project for Public/Quasi Public uses of 3.5 acres is assumed for the No Project (Existing General Plan) Alternative. In addition, the same acreage of 36 acres for major roadways is assumed for the No Project (Existing General Plan) Alternative. A total of approximately 1,020 dwelling units is assumed for the No Project (Existing General Plan) Alternative, which would include senior housing opportunities.

The No Project (Existing General Plan) Alternative would be capable of achieving the majority of the proposed project's objectives. The No Project (Existing General Plan) Alternative would result in fewer impacts than the proposed project in eight resource areas (Aesthetics, Air Quality and GHG Emissions, Geology, Soils, and Mineral Resources, Hazards and Hazardous Materials, Land Use and Planning/Population and Housing, Noise, Public Services, Recreation, and Utilities, and Transportation and Circulation), and similar impacts in four resource areas (Agricultural Resources, Biological Resources, Cultural Resources, and Hydrology and Water Quality). The No Project (Existing General Plan) Alternative would not result in greater impacts than the proposed project in any resource area. It should be noted that the significant and unavoidable impacts identified for the proposed project would remain with implementation of the No Project (Existing General Plan) Alternative.

Reduced Footprint Alternative

The Reduced Footprint Alternative would involve buildout similar to that of the proposed project, with the exception of the overall substantially reduced development footprint. The

Reduced Footprint Alternative would still involve a mix of densities similar to the development scenarios of the proposed project; however, the Reduced Footprint Alternative would not include development within the southern portion of the site, south of Sand Creek Road, where moderate to steep slopes are present. All portions of the site south of Sand Creek, a tributary of Marsh Creek, would be preserved in perpetuity through a conservation easement, or other similar legal mechanism, as open space under the Reduced Footprint Alternative. Accordingly, the Reduced Footprint Alternative would not include the bridges over Sand Creek that are anticipated as part of the proposed project. An amendment to the Circulation Element of the General Plan would be required for the Alternative, similar to the proposed project.

The Reduced Footprint Alternative would involve a total of 1,300 single-family, detached and attached, dwelling units, which could include senior housing opportunities. The units would be composed of 82 acres (820 units) of Medium Density (10 dwelling units per acre) and 80 acres (480 units) of Medium Low Density (six dwelling units per acre) residential units. Accordingly, the Reduced Footprint Alternative would require a General Plan Amendment to the Land Use Map and text modifications to the Sand Creek Focus Area of the General Plan to create a Medium Low Density and a Medium Density designation in the Sand Creek Focus Area that is consistent with the General Plan designations.

The Reduced Footprint Alternative would continue Dallas Ranch Road as Sand Creek Road through Deer Valley Road, with ultimate buildout of two lanes each way, along with a landscaped median. A trail system along the northern side of Sand Creek would be included in the Reduced Footprint Alternative, which would provide interconnectivity through neighborhoods.

The Reduced Footprint Alternative would still be capable of achieving many of the proposed project's objectives. The Reduced Footprint Alternative would result in fewer impacts than the proposed project in five resource areas (Aesthetics, Biological Resources, Cultural Resources, Geology, Soils, and Mineral Resources, and Hydrology and Water Quality), and similar impacts in four resource areas (Agricultural Resources, Hazards and Hazardous Materials, Land Use and Planning/Population and Housing, and Public Services, Recreation, and Utilities). However, the Reduced Footprint Alternative would result in greater impacts than the proposed project in three resource areas (Air Quality and GHG Emissions, Noise, and Transportation and Circulation). All of the significant and unavoidable impacts identified for the proposed project would still occur with implementation of the Reduced Footprint Alternative.

Reduced Intensity/Senior Housing Alternative

The Reduced Intensity/Senior Housing Alternative would involve buildout similar to that of the proposed project, with the exception of the residential units. Rather than the mix of densities proposed for both of the development scenarios of the proposed project, the Reduced Intensity/Senior Housing Alternative would be built out with only age-restricted senior housing at the maximum allowable density envisioned for the Sand Creek Focus Area. The Reduced Intensity/Senior Housing Alternative would not include development within the southwestern portion of the site, south of Street C, where moderate to steep slopes are present. That area would be preserved as open space under the Reduced Intensity/Senior Housing Alternative.

Accordingly, the Reduced Intensity/Senior Housing Alternative would involve a total of 968 age-restricted, single-family, detached dwelling units. Although the Reduced Intensity/Senior Housing Alternative would be developed in accordance with maximum densities envisioned for the Sand Creek Focus Area, the Reduced Intensity/Senior Housing Alternative would not include the golf course use anticipated for the Sand Creek Focus Area.

The Reduced Intensity/Senior Housing Alternative would still be capable of achieving the majority of the proposed project's objectives. The Reduced Intensity/Senior Housing Alternative would result in fewer impacts than the proposed project in 11 resource areas (Aesthetics, Air Quality and GHG Emissions, Biological Resources, Cultural Resources, Geology, Soils, and Mineral Resources, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning/Population and Housing, Noise, Public Services, Recreation, and Utilities, and Transportation and Circulation), and similar impacts in one resource areas (Agricultural Resources). Two of the significant and unavoidable impacts identified for the proposed project related to air quality and GHG emissions would be reduced to less-than-significant levels with implementation of the Reduced Intensity/Senior Housing Alternative. The Reduced Intensity/Senior Housing Alternative would not result in greater impacts than the proposed project in any resource area.

Environmentally Superior Alternative

An EIR is required to identify the environmentally superior alternative from among the range of reasonable alternatives that are evaluated. Section 15126(e)(2) of the CEQA Guidelines requires that an environmentally superior alternative be designated and states, "If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." Generally, the environmentally superior alternative is the one that would result in the fewest environmental impacts as a result of project implementation.

As presented in the Alternatives Analysis chapter of the EIR, all of the significant impacts identified for the proposed project would not occur or would be fewer under the No Project (No Build) Alternative. In addition, the No Project (Existing General Plan) Alternative would reduce a number of significant impacts identified for the proposed project, and would reduce a significant and unavoidable impact identified for the proposed project related to noise. However, given that a "no project" alternative shall not be selected as the environmentally superior alternative, neither the No Project (No Build) Alternative nor the No Project (Existing General Plan) Alternative may be chosen as the environmentally superior alternative.

The Reduced Intensity/Senior Housing Alternative would reduce the most impacts in comparison to the proposed project. In addition, the Reduced Intensity/Senior Housing Alternative would reduce two of the significant and unavoidable impacts identified for the proposed project to less-than-significant levels, both related to air quality and GHG emissions. Because a "no project" alternative shall not be selected as the environmentally superior alternative, and because Reduced Intensity/Senior Housing Alternative would result in the fewest impacts in the most resource areas than the proposed project in comparison to all other development alternatives, the

Reduced Intensity/Senior Housing Alternative would be considered the Environmentally Superior Alternative.

TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.1 Aesthetics			
4.1-1 Substantial adverse effect on a scenic vista.	LS	*None required.*	N/A
4.1-2 Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway.	NI	*None required.*	N/A
4.1-3 Substantially degrade the existing visual character or quality of the project site and/or the site's surroundings.	S	*None feasible.*	SU
4.1-4 Creation of new sources of substantial light or glare that would adversely affect day or nighttime views in the area.	S	*Multi-Generational and Traditional Plans* *4.1-4 Prior to approval of Improvement Plans that include street lights, the City of Antioch's Engineering Division shall review and approve the lighting specifications to ensure that street lighting fixtures comply with the Zoning Code's requirements for minimum and maximum ground-level illumination. In addition, prior to approval of building permits for new structures that include exterior lighting, the City of Antioch's Planning Division shall review and approve the exterior lighting specifications to ensure exterior lighting is of a low*	LS

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		profile and intensity.	
4.1-5 Long-term changes in visual character of the region associated with cumulative development of the proposed project in combination with future buildout in the City of Antioch.	S	*None feasible.*	SU
4.1 Agricultural Resources			
4.2-1 Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance ("Farmland"), or involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.	LS	*None required.*	N/A
4.2-2 Conflict with existing agricultural zoning or a Williamson Act contract, or conflict with existing forest land or timberland zoning, or	NI	*None required.*	N/A

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
	result in the loss of forest land or conversion of forest land to non-forest use.			
4.2-3	**Cumulative changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.**	LS	*None required.*	N/A
	4.3 Air Quality and Greenhouse Gas Emissions			
4.3-1	**Generation of short-term construction-related criteria air pollutant emissions.**	LS	*None required.*	N/A
4.3-2	**Generation of long-term operational criteria air pollutant emissions and a conflict with or obstruction of implementation of regional air quality plans.**	S	*Multi-Generational Plan and Traditional Plan* *4.3-2 In order to reduce criteria air pollutant emissions from the proposed project, all future Improvement Plans for the proposed project, including plans for either residential or commercial developments within the project site, shall show the following features:* • *Build out of the project site shall include the provision of bus stops per consultation with*	SU

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		Tri Delta Transit; • *All indoor faucets installed within the project site shall include low flow fixtures, per the CalGreen Tier 1 Standards; and* • *All outdoor landscaping shall include water conserving measures, per the CalGreen Tier 1 Standards, as such standards relate to water use reductions in landscaping.* *In addition, Improvement Plans for the proposed project shall identify all feasible mitigation measures developed in coordination with the BAAQMD and the City to reduce significant impacts to the extent feasible. Mitigation Measures may include, but would not be limited to, BAAQMD's recommended mitigation measures such as the following:* • *Use zero-VOC paints, finishes, and adhesives only;* • *Orient buildings to maximize passive solar heating;* • *Improve bike and pedestrian network (complete sidewalks, connection to adjacent*	

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		areas, connection to bike network, etc.); • *Implement bicycle and pedestrian facilities such as bike lanes, routes, and paths, bike parking, sidewalks, and benches;* • *Promote ridesharing, transit, bicycling, and walking for work trips;* • *Extend transit service into project site;* • *Participate in bike sharing programs;* • *Implement programs that offer residents free or discounted transit passes to encourage transit use;* • *Subsidize residential transit passes;* • *Promote use of public electric vehicle charging infrastructure;* • *Provide charging stations and preferential parking spots for electric vehicles;* • *Provide traffic calming features;* • *Minimize use of cul-de-sacs and incomplete roadway segments;* • *Install energy star appliances;* • *Install solar water heating;* • *Provide community composting facilities or curb-side food waste services;*	

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		• *Use water efficient landscapes and native/drought-tolerant vegetation; and* • *Provide electrical outlets outside of homes to allow for use of electrically powered landscaping equipment.* *If off-site mitigation measures are proposed, the applicant must be able to show that the emission reductions from identified projects are real, permanent through the duration of the project, enforceable, and are equal to the pollutant type and amount of the project impact being offset. BAAQMD recommends that off-site mitigation projects occur within the nine-county Bay Area in order to reduce localized impacts and capture potential co-benefits. If BAAQMD has established an off-site mitigation program at the time a development application is submitted, as an off-site mitigation measure, the applicant may choose to enter into an agreement with BAAQMD and pay into the established off-site mitigation program fund, where BAAQMD would commit to reducing the type and amount of emissions identified in the agreement.*	

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.3-3 Exposure of sensitive receptors or the general public to substantial levels of pollutant concentrations.	LS	*None required.*	N/A
4.3-4 Creation of objectionable odors affecting a substantial number of people.	LS	*None required.*	N/A
4.3-5 Generation of a cumulatively considerable contribution to criteria air pollutant emissions.	S	*Multi-Generational Plan and Traditional Plan* *4.3-5 Implement Mitigation Measure 4.3-2.*	SU
4.3-6 Generation of a cumulatively considerable contribution to GHG emissions.	S	*Multi-Generational Plan and Traditional Plan* *4.3-6 In addition to the mitigation measures discussed in Mitigation Measure 4.3-2, the proposed project shall be required to implement further measures to reduce GHG emissions to the maximum extent feasible. Such further measures may include, but are not limited to, the following:* • *Use cool roof materials;* • *Plant shade trees;* • *Install smart meters and programmable thermostats;* • *Install charging stations and preferential*	SU

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		parking spots for electric vehicles; • *Install energy star appliances;* • *Install solar water heating;* • *Exceed minimum CALGreen standards (e.g., adopt Tier 1 or Tier 2 voluntary measures); and/or* • *Pre-wire homes for photovoltaic systems.* *It should be noted that many of the mitigation measures indicated in Mitigation Measure 4.3-2 would act to reduce GHG emissions as well as emissions related to criteria pollutants.*	
4.4 Biological Resources			
4.4-1 Have a substantial adverse effect, either directly or through habitat modifications, on special-status plant species.	S	*Multi-Generational Plan and Traditional Plan* *4.4-1(a) Prior to approval of grading permits for each phase, a qualified biologist shall conduct protocol-level floristic surveys for Carquinez goldenbush (Isocoma arguta) within the appropriate bloom period for the project site. If Carquinez goldenbush is found during the surveys within the project site, a qualified biologist shall establish avoidance zones around the plant species. The avoidance zones around the plant populations shall clearly demarcate areas for avoidance. If the plant*	LS

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		populations cannot be avoided, the applicant shall hire a qualified biologist to prepare a seed collection and replanting plan in coordination with the City of Antioch to reduce impacts to the identified special-status plant populations, subject to review and approval by the City of Antioch Planning Division. All survey results shall be submitted to the City of Antioch Planning Division prior to approval of grading permits.	
		4.4-1(b) *Prior to the initiation of any construction activities for each phase, a qualified biologist shall establish avoidance zones around the special-status plant species identified within the project site (shining navarretia, crownscale, and San Joaquin spearscale). The avoidance zones around the plant populations shall clearly demarcate areas for avoidance. If the plant populations cannot be avoided, the applicant shall hire a qualified biologist to prepare a seed collection and replanting plan in coordination with the City of Antioch to reduce impacts to the identified special-status plant populations, subject to review and approval by the City of Antioch Planning Division.*	
		4.4-1(c) *Prior to approval of grading permits for each phase, a qualified biologist shall conduct focused special-status plant surveys for the off-site improvement areas.*	

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		Focused surveys shall be performed according to CNPS protocols. Surveys shall be timed according to the blooming period for target species and known reference populations, if available, and/or local herbaria should be visited prior to surveys to confirm the appropriate phenological state of the target species. If special-status plants are not found within the off-site improvement areas, measures pertaining to special-status plants in the off-site improvement areas are not necessary. All survey results shall be submitted to the City of Antioch Planning Division prior to approval of grading permits. *If special-status plant species are found during the focused special-status plant surveys in the off-site improvement areas, a qualified biologist shall establish avoidance zones around the plant species. The avoidance zones around the plant populations shall clearly demarcate areas for avoidance. Avoidance measures and buffer distances may vary between species and the specific avoidance zone distance shall be determined in coordination with the City of Antioch Planning Division.* *If the plant populations cannot be avoided, the applicant shall hire a qualified biologist to prepare a seed collection and replanting plan in coordination with the*	

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		City of Antioch to reduce impacts to the identified special-status plant populations, subject to review and approval by the City of Antioch Planning Division. *Alternatively, the project applicant could comply with one of the following conditions:* *1. Comply with the applicable terms and conditions of the ECCC HCP/NCCP, as determined in written "Conditions of Coverage" by the Conservancy, provided that the City has first entered into an agreement with the Conservancy for coverage of impacts to ECCC HCP/NCCP Covered Species; or* *2. Comply with a habitat conservation plan and/or natural community conservation plan developed and adopted by the City, including payment of applicable fees, provided that CDFW and USFWS have approved the conservation plan.*	
4.4-2 Have a substantial adverse effect, either directly or through habitat modifications, on valley elderberry longhorn beetle.	S	*Multi-Generational Plan and Traditional Plan* *4.4-2 Prior to the initiation of any construction activities for each phase, a qualified biologist shall establish a minimum 100-foot no-disturbance buffer around the elderberry shrub identified within the project site. The on-site no-disturbance buffer shall be maintained*	LS

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		throughout all construction activities. High-visibility Environmental Sensitive Area fencing and signage shall be placed at least 100 feet from the dripline of each elderberry shrub. If the elderberry shrub cannot be avoided by 100 feet, consultation with USFWS is required.	
4.4-3 Have a substantial adverse effect, either directly or through habitat modifications, on vernal pool fairy shrimp and the vernal pool tadpole shrimp.	S	*Multi-Generational Plan and Traditional Plan* *4.4-3(a) Prior to any approval of grading permits, the project applicant shall consult with the USFWS regarding impacts to vernal pool fairy shrimp and vernal pool tadpole shrimp from the proposed project. The project sponsor shall obtain the appropriate take authorization (Section 7 Biological Opinion) from the USFWS prior to approval of grading permits. The project applicant shall comply with all terms of the endangered species permits including any mitigation requirements and provide proof of compliance to the City of Antioch Planning Division prior to issuance of a grading permit.* *Alternatively, the project applicant could comply with one of the following conditions:* *1. Comply with the applicable terms and conditions of the East Contra Costa County Habitat Conservation Plan/Natural Community*	LS

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		Conservation Plan (ECCC HCP/NCCP), as determined in written "Conditions of Coverage" by the East Contra Costa County Habitat Conservancy (Conservancy), provided that the City has first entered into an agreement with the Conservancy for coverage of impacts to ECCCHCP/NCCP Covered Species; or *2. Comply with a habitat conservation plan and/or natural community conservation plan developed and adopted by the City, including payment of applicable fees, provided that CDFW and USFWS have approved the conservation plan.* *4.4-3(b) Subject to review and approval by the City of Antioch Building Division, project grading shall only occur during the dry season (April 15 – October 30) and only after a qualified biologist has determined that all wetland areas of the site providing potential habitat for vernal pool crustaceans are dry, and individuals of these species, if present, would be in cyst form.*	
4.4-4 Have a substantial adverse effect, either directly or through habitat modifications, on California red-legged frog.	S	*Multi-Generational Plan and Traditional Plan* *4.4-4 Prior to approval of grading permits, the project applicant shall consult with the USFWS and CDFW regarding impacts to California red-legged frog from the proposed project. The project sponsor shall obtain*	LS

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		the appropriate take authorization from the USFWS (Section 7 or 10 of the FESA) and/or from the CDFW (Section 2081 of the California Fish and Game Code). The project applicant shall comply with all required compensatory mitigation determined during consultation with the USFWS and CDFW, and provide proof of compliance to the City of Antioch Planning Division. *Alternatively, the project applicant could comply with one of the following conditions:* *1. Comply with the applicable terms and conditions of the ECCC HCP/NCCP, as determined in written "Conditions of Coverage" by the Conservancy, provided that the City has first entered into an agreement with the Conservancy for coverage of impacts to ECCC HCP/NCCP Covered Species; or* *2. Comply with a habitat conservation plan and/or natural community conservation plan developed and adopted by the City, including payment of applicable fees, provided that CDFW and USFWS have approved the conservation plan.*	

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.4-5 Have a substantial adverse effect, either directly or through habitat modifications, on California tiger salamander.	S	*Multi-Generational Plan and Traditional Plan* *4.4-5 Prior to approval of grading permits, the project applicant shall consult with the USFWS and CDFW regarding impacts to California tiger salamander from the proposed project. The project sponsor shall obtain the appropriate take authorization from the USFWS (Section 7 or 10 of the FESA) and/or from the CDFW (Section 2081 of the California Fish and Game Code). The project applicant shall comply with all required compensatory mitigation determined during consultation with the USFWS and CDFW, and provide proof of compliance to the City of Antioch Planning Division.* *Alternatively, the project applicant could comply with one of the following conditions:* *1. Comply with the applicable terms and conditions of the ECCC HCP/NCCP, as determined in written "Conditions of Coverage" by the Conservancy, provided that the City has first entered into an agreement with the Conservancy for coverage of impacts to ECCC HCP/NCCP Covered Species; or* *2. Comply with a habitat conservation plan and/or*	LS

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		natural community conservation plan developed and adopted by the City, including payment of applicable fees, provided that CDFW and USFWS have approved the conservation plan.	
4.4-6 Have a substantial adverse effect, either directly or through habitat modifications, on foothill yellow-legged frog.	S	*Multi-Generational Plan and Traditional Plan* *4.4-6 Within 48 hours prior to the initiation of any construction activities for each phase, a qualified biologist shall conduct a preconstruction foothill yellow-legged frog clearance survey within the vicinity of Sand Creek. If foothill yellow-legged frogs are found within the project site or off-site improvement areas during the preconstruction surveys, or during construction activities, consultation with CDFW shall occur and a 2081 Incidental Take Permit shall be required. If foothill yellow-legged frogs are not found, further measures pertaining to foothill yellow-legged frogs are not necessary. All survey results shall be submitted to the City of Antioch Planning Division prior to the initiation of any construction activities or where construction has been halted for 30 days or more.* *Alternatively, the project applicant could comply with one of the following conditions:* *1. Comply with the applicable terms and*	LS

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		conditions of the ECCC HCP/NCCP, as determined in written "Conditions of Coverage" by the Conservancy, provided that the City has first entered into an agreement with the Conservancy for coverage of impacts to ECCC HCP/NCCP Covered Species; or *2. Comply with a habitat conservation plan and/or natural community conservation plan developed and adopted by the City, including payment of applicable fees, provided that CDFW and USFWS have approved the conservation plan.*	
4.4-7 Have a substantial adverse effect, either directly or through habitat modifications, on Alameda whipsnake.	S	*Multi-Generational Plan and Traditional Plan* *4.4-7(a) Prior to the start of construction, a qualified biologist shall conduct a training program for all construction personnel including contractors and subcontractors. The training shall include, at a minimum, a description of Alameda whipsnake and their habitats within the project area; an explanation of the species status and protection under State and federal laws; the avoidance and minimization measures to be implemented to reduce take of the species; communication and work stoppage procedures in case a listed species is observed within the project area; and an explanation of the importance of the Environmentally Sensitive Areas (ESAs) and Wildlife Exclusion Fencing (WEF). A fact sheet*	LS

TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		conveying this information shall be prepared and distributed to all construction personnel. The training shall provide interpretation for non-English speaking workers. The same instruction shall be provided to any new workers before they are authorized to perform project work.	
		4.4-7(b) *Prior to the start of each phase of construction, environmentally sensitive areas (ESAs) (defined as areas containing sensitive habitats adjacent to or within construction work areas for which physical disturbance is not allowed) shall be clearly delineated using high visibility orange fencing. The ESA fencing shall remain in place throughout the duration of the proposed action, while construction activities are ongoing, and shall be regularly inspected and fully maintained at all times.*	
		4.4-7(c) *A qualified biologist(s) shall be on-site during initial ground disturbance in portions of the project area that contain suitable habitat for Alameda whipsnake. If any Alameda whipsnakes are encountered during the initial grading, the snake shall be allowed to leave the construction area on its own.*	
		4.4-7(d) *Prior to the start of each phase of construction, wildlife exclusion fencing (WEF) shall be installed at the edge of*	

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		the project footprint in all areas where sensitive species could enter the construction area. The location of the fencing shall be determined by the contractor and the qualified biologist in cooperation with the USFWS and CDFW prior to the start of staging or ground-disturbing activities. A conceptual fencing plan shall be submitted to the USFWS and CDFW for review and approval prior to WEF installation. The location, fencing materials, installation specifications, and monitoring and repair criteria shall be approved by the USFWS and CDFW prior to start of construction. The WEF shall remain in place throughout the duration of the project and shall be regularly inspected and fully maintained. Repairs to the WEF shall be made within 24 hours of discovery. Upon project completion the WEF shall be completely removed, the area cleaned of debris and trash, and returned to natural conditions. An exception to the foregoing fencing measures is that for work sites where the duration of work activities is very short (e.g., three days or less) and that occur during the dry season, and the installation of exclusion fencing will result in more ground disturbance than from project activities, then the boundaries and access areas and sensitive habitats may be staked and flagged by the qualified biologist prior to disturbance and species monitoring would occur during all project activities at	

TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		that site. Modifications to this fencing measure may be made on a case-by-case basis with approval from the USFWS and CDFW. *4.4-7(e) As an alternative to Mitigation Measures 4.4-7(a) through 4.4-7(d) above, the project applicant could comply with one of the following conditions:* *1. Comply with the applicable terms and conditions of the ECCC HCP/NCCP, as determined in written "Conditions of Coverage" by the Conservancy, provided that the City has first entered into an agreement with the Conservancy for coverage of impacts to ECCC HCP/NCCP Covered Species; or* *2. Comply with a habitat conservation plan and/or natural community conservation plan developed and adopted by the City, including payment of applicable fees, provided that CDFW and USFWS have approved the conservation plan.*	
4.4-8 Have a substantial adverse effect, either directly or through habitat modifications, on Blainville's horned lizard and silvery legless lizard.	S	*Multi-Generational Plan and Traditional Plan* *4.4-8 Within 14 days prior to the initiation of any construction activities for each phase, a qualified biologist shall conduct preconstruction surveys for Blainville's horned lizards and silvery legless lizards. If Blainville's horned*	LS

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		lizards and/or silverly legless lizards are found prior to the initiation of, and/or during, construction activities, a qualified biologist shall relocate them outside of the project area, subject to review and approval by the appropriate resource agencies (i.e., CDFW, USFWS, and the City of Antioch Planning Division). All survey results shall be submitted to the City of Antioch Planning Division prior to the initiation of any construction activities or where construction has been halted for 30 days or more. *Alternatively, the project applicant could comply with one of the following conditions:* *1. Comply with the applicable terms and conditions of the ECCC HCP/NCCP, as determined in written "Conditions of Coverage" by the Conservancy, provided that the City has first entered into an agreement with the Conservancy for coverage of impacts to ECCC HCP/NCCP Covered Species; or* *2. Comply with a habitat conservation plan and/or natural community conservation plan developed and adopted by the City, including payment of applicable fees, provided that CDFW and USFWS have approved the conservation plan.*	

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.4-9 Have a substantial adverse effect, either directly or through habitat modifications, on northwestern pond turtle.	S	*Multi-Generational Plan and Traditional Plan* *4.4-9 Within 14 days prior to the initiation of any construction activities for each phase, a qualified biologist shall conduct preconstruction surveys for northwestern pond turtles. If northwestern pond turtles are found prior to the initiation of, and/or during, construction activities, a qualified biologist shall relocate them outside of the project area, subject to review and approval by the appropriate resource agencies (i.e., CDFW, USFWS, and the City of Antioch Planning Division). All survey results shall be submitted to the City of Antioch Planning Division prior to the initiation of any construction activities or where construction has been halted for 30 days or more.* *Alternatively, the project applicant could comply with one of the following conditions:* *1. Comply with the applicable terms and conditions of the ECCC HCP/NCCP, as determined in written "Conditions of Coverage" by the Conservancy, provided that the City has first entered into an agreement with the Conservancy for coverage of impacts to ECCC HCP/NCCP Covered Species; or*	LS

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		2. Comply with a habitat conservation plan and/or natural community conservation plan developed and adopted by the City, including payment of applicable fees, provided that CDFW and USFWS have approved the conservation plan.	
4.4-10 Have a substantial adverse effect, either directly or through habitat modifications, on burrowing owl.	S	*Multi-Generational Plan and Traditional Plan* *4.4-10(a) Prior to the initiation of any construction activities for each phase during burrowing owl breeding season (February 1 through August 31), burrowing owl surveys shall be conducted by a qualified biologist walking the entire project site, including all off-site improvement areas, and (where possible) in areas within 150 meters (approx. 500 feet) of the proposed project impact zone. The 150-meter buffer zone is surveyed to identify burrows and owls outside of the proposed project area which may be impacted by factors such as noise and vibration (heavy equipment) during project construction. If the qualified biologist does not find evidence of burrowing owls, further mitigation is not required. All survey results shall be submitted to the City of Antioch Planning Division prior to the initiation of any construction activities or where construction has been halted for 30 days or more.*	LS

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		If the qualified biologist finds evidence of burrowing owls, all project-related activities shall avoid nest sites during the remainder of the breeding season or while the nest remains occupied by adults or young (nest occupation includes individuals or family groups foraging on or near the site following fledging). Avoidance is establishment of a minimum 300-foot buffer zone around nests. Construction and other project-related activities may occur outside of the 300-foot buffer zone. Construction and other project-related activities may be allowed inside of the 300-foot non-disturbance buffer during the breeding season if the nest is not disturbed, and the project activities are monitored by a qualified biologist and subject to review and approval by the appropriate resource agencies (i.e., CDFW, USFWS, and the City of Antioch Planning Division). *If monitoring by the qualified biologist indicates that the nest is abandoned prior to the end of nesting season and the burrow is no longer in use, the non-disturbance buffer zone may be removed if approved by CDFW. The qualified biologist shall excavate the burrow in accordance with the latest CDFW guidelines for burrowing owl to prevent reoccupation subject to review and approval from CDFW.*	

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		4.4-10(b) *Prior to the initiation of any construction activities associated with the proposed project, including off-site improvements, during the burrowing owl non-breeding season (September 1 through January 31), the qualified biologist shall establish a minimum 300-foot non-disturbance buffer around identified occupied burrows. If the qualified biologist does not find evidence of occupied burrows, further mitigation is not required. Construction activities outside of the 300-foot non-disturbance buffer are allowed. Subject to review and approval by the appropriate resource agencies (i.e., CDFW, USFWS, and the City of Antioch Planning Division), construction activities within the non-disturbance buffer may be allowed if the following criteria are met to prevent owls from abandoning over-wintering sites:* • *A burrowing owl exclusion plan shall be developed for the project and approved by CDFW. The approved exclusion plan shall include the results of the preconstruction surveys and proposed methods for the installation and monitoring of one-way doors and the exclusion of burrowing owls;* • *Upon approval by CDFW a qualified biologist shall install a one-way door at the entrance of*	

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		each occupied burrow. The burrows shall then be monitored twice daily for 48 hours to ensure that the owls have vacated the burrow. After the burrows have been vacated at the end of the 48-hour monitoring period the one-way doors shall be removed and the burrow shall be hand-excavated to its terminus and completely backfilled. The site shall then be monitored daily for one week to ensure that the site is not reoccupied by burrowing owls. *Alternatively, the project applicant could comply with one of the following conditions:* *1. Comply with the applicable terms and conditions of the ECCC HCP/NCCP, as determined in written "Conditions of Coverage" by the Conservancy, provided that the City has first entered into an agreement with the Conservancy for coverage of impacts to ECCC HCP/NCCP Covered Species; or* *2. Comply with a habitat conservation plan and/or natural community conservation plan developed and adopted by the City, including payment of applicable fees, provided that CDFW and USFWS have approved the conservation plan.*	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.4-11 Have a substantial adverse effect, either directly or through habitat modifications, on Swainson's hawk and other nesting raptors.	S	*Multi-Generational Plan and Traditional Plan* *4.4-11(a) Within 14 days prior to the initiation of any construction activities for each phase, a qualified biologist shall conduct preconstruction nesting bird survey of all suitable habitat within the project area, including the off-site improvement areas, during the nesting season (February 1 – August 31). Preconstruction surveys shall be conducted within 0.5 mile of the project area for Swainson's hawk and 300 feet for other nesting raptors. If the qualified biologist does not find evidence of active nests, further mitigation is not required. All survey results shall be submitted to the City of Antioch Planning Division prior to the initiation of any construction activities or where construction has been halted for 30 days or more.* *If active nests are found, an on-site no-disturbance buffer around the nest shall be established. The buffer distance shall be established by a qualified biologist in consultation with CDFW, but is recommended to be 300 feet for Swainson's hawk and other nesting raptors. The buffer shall be maintained until the fledglings are capable of flight and become independent of the nest, as determined by the qualified biologist. Once the young are independent of the nest, further measures are not*	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		necessary. *Preconstruction nesting bird surveys are not required for construction activity outside the nesting season.*	
		4.4-11(b) *The grassland habitat present at the proposed project site is considered suitable foraging habitat for Swainson's hawks. The loss of potential Swainson's hawk foraging habitat shall be mitigated prior to issuance of a grading permit via the permanent preservation of Swainson's hawk foraging habitat pursuant to the CDFW's Mitigation Guidelines at a 1:1 ratio. Acceptable mitigation may include one of the following options:* • *The project applicant shall acquire Fee Title of Swainson's hawk habitat, or acquire the right to record a conservation easement over lands that can be managed for Swainson's hawk (hereinafter Habitat Management Lands). Any land acquired through Fee Title shall be donated to a suitable conservation organization for management and the applicant shall be assessed a management endowment fee for the long-term management of the Habitat*	

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		Management Lands by a CDFW-approved conservation organization; or • *In lieu of fee title acquisition of mitigation land, or in lieu of recording a conservation easement over suitable Swainson's hawk foraging habitat, the applicant shall purchase Swainson's hawk mitigation credits from a CDFW-approved Swainson's hawk Conservation Bank. As there are no Swainson's hawk conservation banks that have a service area that covers the project site, an out of service area Swainson's hawk Conservation Bank shall be allowed as determined appropriate based on consultation with CDFW.* *Alternatively, the project applicant could comply with one of the following conditions:* *1. Comply with the applicable terms and conditions of the ECCC HCP/NCCP, as determined in written "Conditions of Coverage" by the Conservancy, provided that the City has first entered into an agreement with the Conservancy for coverage of impacts to ECCC HCP/NCCP Covered Species; or* *2. Comply with a habitat conservation plan and/or*	

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		natural community conservation plan developed and adopted by the City, including payment of applicable fees, provided that CDFW and USFWS have approved the conservation plan.	
4.4-12 Have a substantial adverse effect, either directly or through habitat modifications, on nesting special-status bird species and nesting common bird species.	S	*Multi-Generational Plan and Traditional Plan* *4.4-12 Within 14 days prior to the initiation of any construction activities for each phase, a qualified biologist shall conduct preconstruction nesting bird survey of all suitable habitat within the project area, including off-site improvement areas, during the nesting season (February 1 – August 31). Preconstruction surveys shall be conducted within 500 feet for tricolored blackbird, and 100 feet of the project area for nesting songbirds. If the qualified biologist does not find evidence of active nests, further mitigation is not required. All survey results shall be submitted to the City of Antioch Planning Division prior to the initiation of any construction activities or where construction has been halted for 30 days or more.* *If active nests are found, an on-site no-disturbance buffer around the nest shall be established. The buffer distance shall be established by a qualified biologist in consultation with CDFW, but is recommended to be 50 feet for non-raptor songbirds. The buffer shall be*	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		maintained until the fledglings are capable of flight and become independent of the nest. Once the young are independent of the nest, further measures are not necessary. *Preconstruction nesting bird surveys are not required for construction activity outside the nesting season.* *Alternatively, the project applicant could comply with one of the following conditions:* *1. Comply with the applicable terms and conditions of the ECCC HCP/NCCP, as determined in written "Conditions of Coverage" by the Conservancy, provided that the City has first entered into an agreement with the Conservancy for coverage of impacts to ECCC HCP/NCCP Covered Species; or* *2. Comply with a habitat conservation plan and/or natural community conservation plan developed and adopted by the City, including payment of applicable fees, provided that CDFW and USFWS have approved the conservation plan.*	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.4-13 Have a substantial adverse effect, either directly or through habitat modifications, on American badger.	S	*Multi-Generational Plan and Traditional Plan* *4.4-13 Within 14 days prior to the initiation of any construction activities for each phase, a qualified biologist shall conduct a preconstruction American badger survey within the project area. If American badgers or burrows with American badger signs are found within the project site or off-site improvement areas during the preconstruction surveys, consultation with CDFW shall occur prior to the initiation of any construction activities to determine an appropriate burrow excavation and/or relocation method. If American badgers are not found, further measures pertaining to American badgers are not necessary. All survey results shall be submitted to the City of Antioch Planning Division prior to the initiation of any construction activities or where construction has been halted for 30 days or more.* *Alternatively, the project applicant could comply with one of the following conditions:* *1. Comply with the applicable terms and conditions of the ECCC HCP/NCCP, as determined in written "Conditions of Coverage" by the Conservancy, provided that the City has*	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		first entered into an agreement with the Conservancy for coverage of impacts to ECCC HCP/NCCP Covered Species; or *2. Comply with a habitat conservation plan and/or natural community conservation plan developed and adopted by the City, including payment of applicable fees, provided that CDFW and USFWS have approved the conservation plan.*	
4.4-14 Have a substantial adverse effect, either directly or through habitat modifications, on San Joaquin kit fox.	S	*Multi-Generational Plan and Traditional Plan* *4.4-14 The project shall implement the following avoidance measures for potential effects on San Joaquin kit fox during construction, including construction of off-site improvements:* • *Prior to any ground disturbance for each phase, a USFWS/CDFW-qualified biologist shall conduct a pre-construction survey within the proposed disturbance footprint and a surrounding 250-foot radius. The survey shall establish the presence or absence of San Joaquin kit foxes and/or suitable dens and evaluate use by kit foxes in accordance with USFWS survey guidelines (USFWS 1999). The pre-construction survey shall be conducted no more than 30 days prior to ground disturbance.*	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		On the parcel where the activity is proposed, the biologist shall survey the proposed disturbance footprint and a 250-foot radius from the perimeter of the proposed footprint to identify San Joaquin kit foxes and/or suitable dens. Adjacent parcels under different land ownership are not required to be surveyed. The status of all surveyed dens shall be determined and mapped. Written results of pre-construction surveys shall be submitted to USFWS within 5 working days after survey completion and before the start of ground disturbance. Concurrence is not required prior to ground disturbance. If San Joaquin kit foxes and/or suitable dens are not identified in the survey area, further mitigation is not necessary. All survey results shall be submitted to the City of Antioch Planning Division prior to the initiation of any construction activities or where construction has been halted for 30 days or more. • *If San Joaquin kit foxes and/or suitable dens are identified in the survey area, the measures described below shall be implemented.*	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		o *If a San Joaquin kit fox den is discovered in the proposed development footprint, the den shall be monitored for 3 days by a USFWS/CDFW–qualified biologist using a tracking medium or an infrared beam camera to determine if the den is currently being used.* o *Unoccupied dens shall be destroyed immediately to prevent subsequent use.* o *If a natal or pupping den is found, USFWS and CDFW shall be notified immediately. The den shall not be destroyed until the pups and adults have vacated and then only after further consultation with USFWS and CDFW.* o *If kit fox activity is observed at the den during the initial 3-day monitoring period, the den shall be monitored for an additional 5 consecutive days from the time of the first observation to allow any resident animals to move to another den while den use is actively discouraged. For dens other than natal or pupping dens, use of the den can be discouraged by partially plugging the entrance with soil such that any resident*	

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		animal can easily escape. Once the den is determined to be unoccupied it may be excavated under the direction of the biologist. Alternatively, if the animal is still present after 5 or more consecutive days of plugging and monitoring, the den may have to be excavated when, in the judgment of the biologist, it is temporarily vacant (i.e., during the animal's normal foraging activities). • *If dens are identified in the survey area outside the proposed disturbance footprint, exclusion zones around each den entrance or cluster of entrances shall be demarcated. The configuration of exclusion zones should be circular, with a radius measured outward from the den entrance(s). Ground disturbance activities shall not occur within the exclusion zones. Exclusion zone radii for potential dens shall be at least 50 feet and shall be demarcated with four to five flagged stakes. Exclusion zone radii for known dens shall be at least 100 feet and shall be demarcated with staking and flagging that encircles each den or cluster of dens but does not prevent access to the den by*	

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		kit fox. *Alternatively, the project applicant could comply with one of the following conditions:* *1. Comply with the applicable terms and conditions of the ECCC HCP/NCCP, as determined in written "Conditions of Coverage" by the Conservancy, provided that the City has first entered into an agreement with the Conservancy for coverage of impacts to ECCC HCP/NCCP Covered Species; or* *2. Comply with a habitat conservation plan and/or natural community conservation plan developed and adopted by the City, including payment of applicable fees, provided that CDFW and USFWS have approved the conservation plan.*	
4.4-15 Have a substantial adverse effect, either directly or through habitat modifications, on ringtail.	S	*4.4-15* *Prior to the initiation of any construction activities for each phase, a qualified biologist shall conduct a preconstruction ringtail survey within the project area. If occupied ringtail dens are found within the project site or off-site improvement areas during the preconstruction surveys, the occupied dens shall be marked and mapped, and a 200-foot avoidance buffer shall be mapped around the occupied den. Occupied dens shall be monitored daily by a qualified biologist*	LS

TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		and destroyed after they are confirmed to be abandoned by ringtails. If occupied ringtail dens cannot be avoided, a qualified biologist shall passively relocate the ringtail from impact areas. If occupied ringtail dens are not found, further measures pertaining to ringtails are not necessary. All survey results shall be submitted to the City of Antioch Planning Division prior to the initiation of any construction activities or where construction has been halted for 30 days or more. *Alternatively, the project applicant could comply with one of the following conditions:* *1. Comply with the applicable terms and conditions of the ECCC HCP/NCCP, as determined in written "Conditions of Coverage" by the Conservancy, provided that the City has first entered into an agreement with the Conservancy for coverage of impacts to ECCC HCP/NCCP Covered Species; or* *2. Comply with a habitat conservation plan and/or natural community conservation plan developed and adopted by the City, including payment of applicable fees, provided that CDFW and USFWS have approved the conservation plan.*	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.4-16 Have a substantial adverse effect, either directly or through habitat modifications, on special status bat species, including pallid bat, Townsend's big-eared bat, greater mastiff bat, and western red bat.	S	*Multi-Generational Plan and Traditional Plan* *4.4-16 Prior to the initiation of any construction activities for each phase, including construction of off-site improvements, a qualified biologist shall conduct preconstruction roosting bat surveys for all suitable roosting habitat (i.e., trees and manmade structures) that would be impacted during construction activities. If impacted suitable roosting habitat is identified, a qualified biologist shall conduct an evening bat emergence survey that may include acoustic monitoring to determine whether bats are present. If pallid bat, Townsend's big eared bat, greater mastiff bat, and/or western red bat are found, consultation with CDFW shall be required prior to the initiation of any construction activities. If special-status bats are not found during the preconstruction surveys, further measures pertaining to special-status bat are not necessary. All survey results shall be submitted to the City of Antioch Planning Division prior to the initiation of any construction activities or where construction has been halted for 30 days or more.* *Alternatively, the project applicant could comply with one of the following conditions:*	LS

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		1. Comply with the applicable terms and conditions of the ECCC HCP/NCCP, as determined in written "Conditions of Coverage" by the Conservancy, provided that the City has first entered into an agreement with the Conservancy for coverage of impacts to ECCC HCP/NCCP Covered Species; or *2. Comply with a habitat conservation plan and/or natural community conservation plan developed and adopted by the City, including payment of applicable fees, provided that CDFW and USFWS have approved the conservation plan.*	
4.4-17 Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to marshes, vernal pools, coastal, etc.) or waters of the State through direct removal, filling, hydrological interruption, or other means.	S	*Multi-Generational Plan and Traditional Plan* *4.4-17 Prior to discharging any dredged or fill materials into any waters of the U.S. within the project site and/or the off-site improvement areas, the applicant shall obtain permit authorization to fill wetlands under Section 404 of the federal CWA (Section 404 Permit) from USACE. The Section 404 Permit application shall include an assessment of directly impacted, avoided, and preserved acreages to waters of the U.S. Mitigation measures shall be developed as part of the Section 404 Permit to ensure no net loss of wetland function and values. Mitigation for direct impacts to waters of the U.S. within the project site and/or the off-site improvement areas would*	LS

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		occur at a minimum of 1:1 ratio for direct impacts; however, final mitigation requirements shall be developed in consultation with USACE. In addition, a Water Quality Certification or waiver pursuant to Section 401 of the CWA must be obtained for Section 404 permit actions. Proof of compliance with the mitigation measure shall be submitted to the City of Antioch Planning Division prior to the issuance of grading permits.	
4.4-18 Have a substantial adverse effect on Department of Fish and Wildlife Fish and Game Code Section 1602 jurisdictional areas.	S	*Multi-Generational Plan and Traditional Plan* *4.4-18 Prior to the initiation of any construction activities within the project site and/or the off-site improvement areas that would impact features subject to CDFW Section 1602 jurisdiction (e.g., intermittent tributary [Sand Creek], ephemeral tributaries, and non-tributary ephemeral drainages), the applicant shall obtain a SBAA pursuant to Section 1602 of the California Fish and Game Code. The SBAA shall be obtained for any activity that would impact the bed, bank, or channel of any river, stream or lake. Mitigation measures shall be developed during consultation with CDFW as part of the SBAA permit process to ensure protections for affected fish and wildlife resources.*	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		The following measures are required to minimize potential impacts to the bed, bank, or channel of rivers, streams, or lakes within the project site and/or the off-site improvement areas. • *The project shall be designed to maintain pre-project flows and prevent sedimentation downstream of the project.* • *Potential light and noise impacts to Sand Creek shall be minimized through the use of setback buffers (minimum of 50 feet) as well as native plantings and landscaping. Lights shall be directed and/or shaded away from Sand Creek. The vehicular bridge crossing over Sand Creek shall have native plantings to reduce light pollution.* *Proof of compliance with the mitigation measure shall be submitted to the City of Antioch Planning Division prior to the issuance of grading permits.*	
4.4-19 Substantially interfere with movement of native, resident, or migratory fish or wildlife species or with established native resident or migratory wildlife corridors.	LS	*None required.*	N/A

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.4-20 Conflict with any local policies or ordinances protecting biological resources, such as the City of Antioch's Tree Preservation and Regulation Ordinance.	S	*Multi-Generational Plan and Traditional Plan* *4.4-20 Prior to the approval of each Tentative Map for The Ranch Project, a project level tree survey shall be prepared for the review and approval from the City of Antioch Planning Division. The project level tree survey shall identify how many, and indicate which trees are protected under the City of Antioch Tree Ordinance as "mature trees" or "landmark trees." In addition, the project level tree survey shall show compliance with the City of Antioch's Tree Preservation and Regulation ordinance, including grade cuts and fills, hardscapes, structures, and utility lines shall be located outside of the drip line of any trees being preserved within the project area. All survey results shall be submitted to the City of Antioch Planning Division prior to the approval of each Tentative Map.*	LS
4.4-21 Conflict with an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan.	NI	*None required.*	N/A

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.4-22 Cumulative loss of biological resources in the City of Antioch.	LS	*None required.*	N/A
4.5 Cultural Resources			
4.5-1 Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.	S	*Multi-Generational Plan and Traditional Plan* *4.5-1(a) Prior to tentative map approval, if development of the project would not occur in areas identified as containing portions of site P-07-000008 and/or Locus 1 of site P-07-000010, further mitigation is not necessary. However, if development of the project would occur in areas identified as containing portions of site P-07-000008 and/or Locus 1 of site P-07-000010, and the sites cannot be avoided or preserved, the City, the U.S. Army Corps of Engineers, and the qualified archeologist shall coordinate to determine the appropriate course of action, which could include data recovery, scientific analysis, and professional museum curation of material.* *4.5-1(b) Prior to issuance of grading permits for any off-site improvements, the applicant shall hire an archaeologist meeting the Secretary of the Interior's professional standards for historical archaeology to conduct subsurface testing to determine the extent of the archaeological deposit of P-07-000008 within the*	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		boundaries of the off-site improvement area. If deposits of P-07-000008 are not located within the boundaries of the off-site improvement area, further mitigation is not necessary. However, if deposits of P-07-000008 are located within the boundaries of the off-site improvement area and cannot be avoided, the City and the qualified archeologist shall coordinate to determine the appropriate course of action, which could include some combination of preservation in place, data recovery, and public interpretation.	
		4.5-1(c) Prior to issuance of grading permits for any off-site improvements, the applicant shall hire an archaeologist meeting the Secretary of the Interior's professional standards for historical archaeology to determine the extent of the following recorded cultural resources within the boundaries of the off-site improvement area: RIA-001, RIA-002, RIA-003, RIA-004, and RIA-005. If the resources are not located within the boundaries of the off-site improvement area, further mitigation is not necessary. However, if any of the resources are located within the boundaries of the off-site improvement area, work shall not occur in the area until the qualified archaeologist completes a significance evaluation pursuant to Section 106 of the National Historic Preservation Act. If any of the resources are deemed	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		significant and cannot be avoided, the City and the qualified archeologist shall coordinate to determine the appropriate course of action, which could include some combination of preservation in place, data recovery, and public interpretation.	
4.5-2 Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 1564.5, directly or indirectly destroy a unique paleontological resource or unique geologic features, or disturb any human remains, including those interred outside of formal cemeteries.	S	*Multi-Generational Plan and Traditional Plan* *4.5-2(a) In the event that any prehistoric subsurface archeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits, animal bone, obsidian and/or mortars are discovered during earth-moving activities, all work within 100 feet of the resource shall be halted, and the applicant shall consult with a qualified archeologist. Representatives of the City and the qualified archeologist shall coordinate to determine the appropriate course of action. All significant cultural materials recovered shall be subject to scientific analysis and professional museum curation.* *4.5-2(b) If a human bone or bone of unknown origin is found during earth-moving activities, all work shall stop within 100 feet of the find, and the County Coroner shall be contacted immediately. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission, who shall notify*	LS

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Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		the person most likely believed to be a descendant. The most likely descendant shall work with the contractor to develop a program for re-internment of the human remains and any associated artifacts. No additional work is to take place within the immediate vicinity of the find until the identified appropriate actions have taken place. *4.5-2(c)* *If a Native American site is discovered, the evaluation process shall include consultation with the appropriate Native American representatives.* *If a Native American archeological, ethnographic, or a spiritual resource is discovered, all identification and treatment shall be conducted by qualified archeologists, who are certified by the Society of Professional Archeologists (SOPA) and/or meet the federal standards as stated in the Code of Federal Regulations (36 CFR 61), and are Native American representatives, who are approved by the local Native American community as scholars of the cultural traditions.* *In the event that no such Native American is available, persons who represent tribal governments and/or organizations in the locale in which resources could be affected shall be consulted. If historic archeological*	

TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		sites are involved, all identified treatment is to be carried out by qualified historical archeologists, who shall meet either Register of Professional Archeologists (RPA), or 36 CFR 61 requirements. *4.5-2(d)* *The applicant shall retain the services of a professional paleontologist/archaeologist to educate the construction crew that will be conducting grading and excavation at the project site. The education shall consist of an introduction to the geology of the project site and the kinds of fossils, archeological, and/or Native American resources that may be encountered, as well as what to do in case of a discovery.* *Should any paleontological resources be unearthed by the construction crew, such as vertebrate fossils (e.g., teeth, bones), an unusually large or dense accumulation of intact invertebrates, or well-preserved plant material (e.g., leaves), then ground-disturbing activity shall be diverted to another part of the project site and the paleontologist shall be called on-site to assess the find and, if significant, recover the find in a timely matter. Finds determined significant by the paleontologist shall then be conserved and deposited with a recognized repository, such as the University of California Museum of Paleontology. The alternative mitigation would be to*	

TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		leave the significant finds in place, determine the extent of significant deposit, and avoid further disturbance of the significant deposit. Proof of the construction crew awareness training shall be submitted to the City's Community Development Department in the form of a copy of training materials and the completed training attendance roster.	
4.5-3 Directly or indirectly disturb or destroy a unique tribal cultural resource, such as a site, feature, place, cultural landscape, sacred place or object with cultural value to a California Native American tribe.	S	*Multi-Generational Plan and Traditional Plan* *4.5-3 Implement Mitigation Measures 4.5-2(a) through (d).*	LS
4.5-4 Cumulative loss of cultural and tribal resources.	LS	*None required.*	N/A
4.6 Geology, Soils, and Mineral Resources			
4.6-1 Exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong	S	*Multi-Generational Plan and Traditional Plan* *4.6-1(a) Prior to issuance of any grading permits, all recommendations set forth in the Geotechnical Exploration prepared for the proposed project shall be reflected on the project grading and foundation plans, subject to review and approval by the City Engineer.*	LS

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seismic ground shaking, seismic-related ground failure, including liquefaction, and landslides.		*4.6-1(b)* *Prior to issuance of any grading permits, the project applicant shall submit to the City of Antioch Engineering Department, for review and approval, a design-level geotechnical engineering report produced by a California Registered Civil Engineer or Geotechnical Engineer and identify grading and building practices necessary to achieve compliance with the latest adopted edition of the California Building Standards Code's geologic, soils, and seismic requirements. The design-level report shall also include an analysis of the geologic hazards at the proposed bridge locations, including landslides, expansive/unstable soils, and seismic-related hazards such as liquefaction, and identify measures to address construction requirements to mitigate, at a minimum, groundshaking and unstable soils, including liquefiable and expansive soils. Measures to address the aforementioned geological concerns could include the following:* • *The use of post-tensioned concrete mat foundations or similarly stiffened foundations systems which are designed to resist the deflections associated with soil expansion and liquefaction-induced settlement.;*	

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Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		• *The over-excavation of soil, where existing structure foundations or non-engineered fill exist, in order to place the soil back on-site as engineered fill; and* • *Soil borings and/or cone penetration tests within the development areas and laboratory soil testing to provide data for the preparation of specific recommendations regarding grading, foundations, and drainage for the proposed construction.*	
4.6-2 Risks to people and structures associated with expansive soils or 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 lateral spreading, or collapse.	S	*Multi-Generational Plan and Traditional Plan* *4.6-2 Implement Mitigation Measures 4.6-1(a) and 4.6-1(b).*	LS
4.6-3 Risks associated with substantial erosion or loss of topsoil.	S	*Multi-Generational Plan and Traditional Plan* *4.6-3 Prior to issuance of any grading permits, the project applicant shall submit, for review and approval by the City Engineer, an erosion control plan that uses standard construction practices to limit the erosion effects during construction of the proposed project. Measures shall include, but are not limited to, the*	LS

TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		following: • *Hydro-seeding;* • *Placement of erosion control measures within drainageways and ahead of drop inlets;* • *The temporary lining (during construction activities) of drop inlets with "filter fabric" (a specific type of geotextile fabric);* • *The placement of straw wattles along slope contours;* • *Directing subcontractors to a single designation "wash-out" location (as opposed to allowing them to wash-out in any location they desire);* • *The use of siltation fences; and* • *The use of sediment basins and dust palliatives.*	
4.6-4 Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State or of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.	LS	*None required.*	N/A

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4.6-5 Cumulative increase in the potential for geological related impacts and mineral resource impacts.	LS	*None required.*	N/A
4.7 Hazards and Hazardous Materials			
4.7-1 Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials within one-quarter mile of a school.	LS	*None required.*	N/A
4.7-2 Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	S	*Multi-Generational Plan and Traditional Plan* *4.7-2(a) Prior to commencement of grading and construction, the construction contractor, the pipeline operator, and a representative from the City's Engineering Department shall meet on the project site and prepare site-specific safety guidelines for construction in the field to the satisfaction of the City Engineer. The safety guidelines and field-verified location of the pipelines shall be noted on the improvement plans and be included in all construction contracts involving the project site.* *4.7-2(b) Prior to commencement of grading and construction, all petroleum pipelines within the areas of the project site*	LS

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Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		planned for development shall be abandoned and/or removed in accordance with applicable federal, State, and/or local standards to the satisfaction of the Contra Costa County Environmental Health Department and the City Engineer. If any indicators of apparent soil contamination (soil staining, odors, debris fill material, etc.) are found at the project site associated with the petroleum pipelines, the impacted area shall be isolated from surrounding, non-impacted areas. The project environmental professional shall obtain samples of the potentially impacted soil for analysis of the contaminants of concern and comparison with applicable regulatory residential screening levels (i.e., Environmental Screening Levels, California Human Health Screening Levels, Regional Screening Levels, etc.). Where the soil contaminant concentrations exceed the applicable regulatory residential screening levels, the impacted soil shall be excavated and disposed of offsite at a licensed landfill facility to the satisfaction of the Contra Costa Environmental Health Department. If soil contaminants do not exceed the applicable regulatory residential screening levels, further action is not required. *4.7-2(c)* *Prior to issuance of a demolition permit by the City for any on-site structures, the project applicant shall*	

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Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		provide a site assessment that determines whether any structures to be demolished contain asbestos. If structures do not contain asbestos, mitigation is not required. If asbestos-containing materials are detected, the applicant shall prepare and implement an asbestos abatement plan consistent with federal, State, and local standards, subject to approval by the City Engineer, City Building Official, and the Bay Area Air Quality Management District. *Implementation of the asbestos abatement plan shall include the removal and disposal of the asbestos-containing materials by a licensed and certified asbestos removal contractor, in accordance with local, State, and federal regulations. In addition, the demolition contractor shall be informed that all building materials shall be considered as containing asbestos. The contractor shall take appropriate precautions to protect his/her workers, the surrounding community, and to dispose of construction waste containing asbestos in accordance with local, State, and federal regulations subject to the City Engineer, City Building Official, and the Bay Area Air Quality Management District.* *4.7-2(d)* *Prior to issuance of a demolition permit by the City for any on-site structures, the project applicant shall*	

TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		provide a site assessment that determines whether any structures to be demolished contain lead-based paint. If structures do not contain lead-based paint, mitigation is not required. If lead-based paint is found, all loose and peeling paint shall be removed and disposed of by a licensed and certified lead paint removal contractor, in accordance with federal, State, and local regulations. The demolition contractor shall be informed that all paint on the buildings shall be considered as containing lead. The contractor shall take appropriate precautions to protect his/her workers, the surrounding community, and to dispose of construction waste containing lead paint in accordance with federal, State, and local regulations subject to approval by the City Engineer. *4.7-2(e)* *Prior to any ground disturbance activities within 50 feet of the well on the project site, the applicant shall hire a licensed contractor to obtain an abandonment permit from the Contra Costa County Environmental Management Department, and properly abandon the on-site well and/or septic tank, pursuant to review and approval by the City Engineer.*	
4.7-3 Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code	NI	*None required.*	N/A

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	Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.			
4.7-4	**Interference with an adopted emergency response plan or emergency evacuation plan.**	LS	*None required.*	N/A
4.7-5	**Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.**	LS	*None required.*	N/A
4.7-6	**For a project located within an airport land use plan, or within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area.**	NI	*None required.*	N/A
4.7-7	**Cumulative increase in the number of people who could be exposed to potential hazards associated with wildfires and**	LS	*None required.*	N/A

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	an increase in the transport, storage, and use of hazardous materials from development of the proposed project in combination with other reasonable foreseeable projects in the region.			
	4.8 Hydrology and Water Quality			
4.8-1	**Substantially alter the existing drainage pattern of the site or area, or create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems.**	LS	*None required.*	N/A
4.8-2	**Violate any water quality standards or waste discharge requirements, provide substantial additional sources of polluted runoff, or otherwise substantially degrade water quality during construction.**	LS	*None required.*	N/A
4.8-3	**Violate any water quality standards or waste discharge requirements, provide**	LS	*None required.*	N/A

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	Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
	substantial additional sources of polluted runoff, or otherwise substantially degrade water quality during operations.			
4.8-4	**Substantially deplete groundwater supplies or interfere substantially with groundwater recharge.**	LS	*None required.*	N/A
4.8-5	**Place housing or other structures within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or flood hazard delineation map, or place within a 100-year floodplain structures which would impede or redirect flood flows.**	S	*Multi-Generational Plan and Traditional Plan* *4.8-5 Prior to the approval of tentative maps for the project, if design plans for the pedestrian bridge and utility connections across Sand Creek do not feature piers or other forms of support within the 100-year floodplain of Sand Creek, further mitigation is not necessary. If design plans for the pedestrian bridge or utility connections across Sand Creek indicate that piers or other forms of support would be constructed within the 100-year floodplain of Sand Creek, the project applicant shall obtain the necessary permits for work within Sand Creek. In addition, prior to the issuance of the first building permit, a hydraulic study shall be conducted to assess the current streambed flow of Sand Creek and how the new infrastructure would affect the streambed and/or the 100-year floodplain. If the hydraulic study identifies improvements needed to the Sand Creek*	LS

TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		channel, the applicant shall implement the improvements and obtain the necessary permits for work within Sand Creek. Furthermore, if the hydraulic study shows that the new infrastructure would affect the 100-year floodplain in a manner that would alter the FEMA flood hazard zone boundaries, the project applicant shall submit a map showing the updated flood hazard zone boundaries to FEMA for flood insurance purposes under the National Flood Insurance Program. *Although alteration of the on-site flood hazard zone boundaries may occur, improvements that would result in an increase in floodwater surface elevations shall not occur off the project site. In the case that any proposed structures or stormwater basin berms on the project site would be located within the updated flood hazard zone boundaries, the project applicant shall obtain a Conditional Letter of Map Revision Based on Fill from FEMA that demonstrates that all proposed structures would be set above the base flood elevation.* *The hydraulic study, as well as confirmation that all necessary permits for work within Sand Creek have been obtained, shall be submitted to the City Engineer and Community Development Department for review and approval prior to issuance of the first building permit*	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		for the construction of the pedestrian bridge and utility crossings.	
4.8-6 Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.	LS	*None required.*	N/A
4.8-7 Inundation by seiche, tsunami, or mudflow.	NI	*None required.*	N/A
4.8-8 Cumulative impacts to hydrology and water quality.	S	*Multi-Generational Plan and Traditional Plan* *4.8-8 Implement Mitigation Measure 4.8-5.*	LS
4.9 Land Use and Planning/Population and Housing			
4.9-1 Physical division of an established community.	LS	*None required.*	N/A
4.9-2 Consistency with the Antioch General Plan.	LS	*None required.*	N/A
4.9-3 Consistency with existing zoning.	LS	*None required.*	N/A
4.9-4 Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an	LS	*None required.*	N/A

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
undeveloped area or extension of major infrastructure).			
4.9-5 Displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere.	LS	*None required.*	N/A
4.9-6 Cumulative land use and planning policy consistency.	LS	*None required.*	N/A
4.9-7 Cumulative population and housing impacts.	LS	*None required.*	N/A
4.10 Noise			
4.10-1 Transportation noise at existing sensitive receptors.	LS	*None required.*	N/A
4.10-2 Transportation noise at new sensitive receptors.	S	*Multi-Generational Plan and Traditional Plan* *4.10-2(a) In conjunction with submittal of Improvement Plans, the applicant shall show on the Improvement Plans that sound walls and/or landscaped berms shall be constructed along Deer Valley Road. The barrier heights shall be 8-feet in height for residences between the northern project boundary Road and Sand Creek Road. The specific height and location of the noise barrier shall be confirmed based upon the final approved site and grading plans. Noise barrier walls*	LS

TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		shall be constructed of concrete panels, concrete masonry units, earthen berms, or any combination of these materials. Wood is not recommended due to eventual warping and degradation of acoustical performance. If roadway elevations and building pad elevations are not equal, the barrier heights and locations should be reviewed once grading plans are available for these locations. If multi-family residential is proposed along this area, common outdoor activity areas can be shielded by building facades as a means of achieving the exterior noise level standard. The Improvement Plans shall be subject to review and approval by the City Engineer. *4.10-2(b)* *Prior to the approval of the first Tentative Map for The Ranch Project, a detailed project level analysis of interior noise levels for the second-floor facades adjacent to Deer Valley Road shall be conducted to determine if the interior noise levels exceed the City of Antioch noise level standards presented in the City of Antioch General Plan, subject to review and approval by the City Engineer.*	
4.10-3 Operational noise from activities on-site post development.	S	*Multi-Generational Plan and Traditional Plan* *4.10-3* *Prior to the approval of the Village Center project, the applicant shall submit a site-specific noise study with an*	SU

TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		analysis of any significant noise generators and recommended measures to reduce the noise levels at all sensitive receptors to below the City's 60 dB L_{dn} exterior threshold and 45 dB L_{dn}, interior threshold. Potential measures could include, but would not be limited to, inclusion of noise buffers in site design, restriction of two-story homes, or incorporation of noise-insulating building materials such as windows with a sound transmission class rating of 35-38 and resilient channels for walls. The site-specific noise study shall include mitigation measures necessary to reduce exterior and interior noise levels to the foregoing thresholds of significance. The site-specific noise study shall be subject to review and approval by the City of Antioch Community Development Department.	
4.10-4 Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.	LS	*None required.*	N/A
4.10-5 Substantial temporary or periodic increase in ambient noise levels in the project vicinity.	S	*Multi-Generational Plan and Traditional Plan* *4.10-5(a) Noise-generating activities at the construction site or in areas adjacent to the construction site that are associated with the proposed project in any way shall adhere to the requirements of the City of Antioch Zoning Ordinance with respect to hours of operations, subject*	LS

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		to review and approval by the City Building Official. Specifically, construction activities shall not occur during the hours specified below: • *On weekdays prior to 7:00 AM and after 6:00 PM;* • *On weekdays within 300 feet of occupied dwellings, prior to 8:00 AM and after 5:00 PM; and* • *On weekends and holidays, prior to 9:00 AM and after 5:00 PM, irrespective of the distance from the occupied dwellings.* *4.10-5(b)* *Prior to issuance of the grading permit, the project contractor shall ensure that all intake and exhaust ports on power construction equipment shall be shrouded or shielded from sensitive receptors according to industry best practices, subject to review and approval by the City Building Official.* *4.10-5(c)* *Prior to issuance of the grading permit, the project contractor shall designate a disturbance coordinator and conspicuously post the coordinator's number around the project site and in adjacent public spaces, subject to review and approval by the City Building Official. The disturbance coordinator shall receive any*	

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		and all public complaints about construction noise disturbances and shall be responsible for determining the cause of the complaint and implementing any feasible measures to be taken to alleviate the problem. *4.10-5(d)* *Prior to the issuance of the grading permit, the applicants shall submit a construction-related noise mitigation plan to the City Building Official for review and approval. The plan shall depict the location of construction equipment and how the noise from this equipment will be mitigated during construction of the project through the use of such methods as:* • *The construction contractor shall use temporary noise-attenuation fences, where feasible, to reduce construction noise impacts on adjacent noise sensitive land uses.* • *During all project site excavation and grading on-site, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.*	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		• *The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction. In addition, the project contractor shall place such stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.* • *The construction contractor shall prohibit unnecessary idling of internal combustion engines.*	
4.10-6 Aircraft noise.	NI	*None required.*	N/A
4.10-7 Cumulative impacts on noise-sensitive receptors.	S	*Multi-Generational Plan and Traditional Plan* *4.10-7 Implement Mitigation Measures 4.10-2(a), 4.10-2 (b) and 4.10-5(a-d).*	LS
4.11 Public Services, Recreation, and Utiltties			
4.11-1 Result in insufficient water supply.	LS	*None required.*	N/A
4.11-2 Result in inadequate wastewater capacity or the construction of new wastewater delivery, collection or treatment facilities, or	LS	*None required.*	N/A

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
expansion of existing facilities, which could cause significant environmental effects.			
4.11-3 Result in inadequate solid waste capacity to accommodate the project's solid waste dsiposal needs in compliance with applicable laws.	LS	*None required.*	N/A
4.11-4 Result in the need to construct new fire protection facilities.	LS	*None required.*	N/A
4.11-5 Result in the construction of new law enforcement facilities, the construction of which could cause a significant impact.	LS	*None required.*	N/A
4.11-6 Result in inadequate school capacity requiring the construction of new school facilities.	LS	*None required.*	N/A
4.11-7 Result in inadequate or substantial deterioration of parks and recreation facilities causing the need to construct new or expand existing facilities, the construction of which could cause significant	LS	*None required.*	N/A

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
impacts.			
4.11-8 Result in inadequate library services requiring the construction of new library facilities.	LS	*None required.*	N/A
4.11-9 Result in inadequate electricity and natural gas services requiring the construction of new facilities.	LS	*None required.*	N/A
4.11-10 Cumulative impacts on public services and utilities.	LS	*None required.*	N/A
4.12 Transportation and Circulation			
4.12-1 Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system during construction.	S	*Multi-Generational Plan and Traditional Plan* *4.12-1 Prior to issuance of grading and building permits, the project applicant shall submit a Traffic Control Plan, subject to review and approval by the City Engineer. The requirements within the Traffic Control Plan shall include, but are not necessarily limited to, the following elements:* • *Project staging plan to maximize on-site storage of materials and equipment;* • *A set of comprehensive traffic control measures, including scheduling of major truck trips and*	LS

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		deliveries to avoid peak hours; lane closure proceedings; signs, cones, flaggers, and other warning devices for drivers; and designation of construction access routes; • *Permitted construction hours;* • *Identification of parking areas for construction employees, site visitors, and inspectors, including on-site locations; and* • *Provisions for street sweeping to remove construction-related debris on public streets.*	
4.12-2 Study intersections under the Existing Plus Project Condition.	S	*Multi-Generational Plan and Traditional Plan* *4.12-2(a) Prior to issuance of building permits for Phase 1 of the proposed project, the project applicant shall fund installation of Adaptive Signal Control Technologies or other traffic signal interconnect systems approved by the City at the following intersections:* • *Slatten Ranch Road at SR 4 Westbound Ramps;* • *Slatten Ranch Road/Sunset Drive at Hillcrest Avenue;* • *Hillcrest Avenue at SR 4 Eastbound Ramps; and* • *East Tregallas Road/Larkspur Drive at Hillcrest Avenue.*	SU

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Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		The applicant shall fund the installation of Adaptive Signal Control Technologies or other traffic signal interconnect systems, and the City shall implement such systems in compliance with all relevant guidance from the U.S. Department of Transportation Federal Highway Administration, Caltrans, and the City, as applicable. *4.12-2(b) Prior to issuance of building permits for Phase 1 of the proposed project, the project applicant shall pay regional transportation impact fees to the East Contra Costa Regional Fee and Financing Authority (ECCRFFA).* *4.12-2(c) Prior to issuance of building permits for Phase 1 of the proposed project, the project applicant shall pay its fair share to the City towards the signalization of the Deer Valley Road/Balfour Road intersection in conjunction with other planned improvements, which include the construction of a southbound left-turn lane, as well as separate westbound left and right-turn lanes.*	
4.12-3 Study freeway facilities under the Existing Plus Project Condition.	S	*Multi-Generational and Traditional Plan* *4.12-3 Implement Mitigation Measure 4.12-2(b).*	SU
4.12-4 Study intersections under the Near-Term Plus Project Condition.	S	*Multi-Generational Plan and Traditional Plan* *4.12-4(a) Implement Mitigation Measure 4.12-2(a).*	SU

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		4.12-4(b) *Prior to issuance of building permits for Phase 1 of the proposed project, the project applicant shall contribute their fair share to intersection improvements at the Lone Tree Way/SR 4 Eastbound Ramp intersection that would result in acceptable operations, including widening the southbound off-ramp to provide a second right-turn only lane. In addition, traffic signals at the intersection shall be retimed. Given that widening of the southbound off-ramp could result in secondary impacts to pedestrians by increasing the pedestrian crossing distance, the potential secondary impact to pedestrians for all hours of the day shall be balanced against an intersection modification to improve vehicle travel during peak time periods. It should be noted that although the Lone Tree Way/SR 4 Eastbound Ramp intersection is located within the City of Antioch, the intersection is under the jurisdiction of Caltrans.* *4.12-4(c)* *Prior to issuance of building permits for Phase 2 of the proposed project, the project applicant shall construct the Sand Creek Road extension between Deer Valley Road and the currently planned terminus at the Dozier-Libbey Medical High School. Completion of the extension would shift traffic from the Prewett Ranch Drive/Deer Valley Road intersection, resulting in acceptable operations at the intersection.*	

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TABLE 2-3
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		4.12-4(d) *Prior to issuance of building permits for Phase 3 of the proposed project, the project applicant shall pay regional transportation impact fees to the ECCRFFA that would fund construction of additional improvements at the Sand Creek Road/SR 4 Eastbound Ramps interchange, which includes a slip-ramp for the eastbound Sand Creek to southbound SR 4 movement and eliminating the conflicting left-turn movement at the intersection. Proof of payment shall be submitted to the City of Antioch Community Development Department.* *4.12-4(e)* *Implement Mitigation Measure 4.12-2(c) (Balfour Road/Deer Valley Road).*	
4.12-5 Study freeway facilities under Near-Term Plus Project Conditions.	S	*Multi-Generational and Traditional Plan* *4.12-5* *Implement Mitigation Measure 4.12-2(b).*	SU
4.12-6 Would the project substantially increase traffic hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment), or result in inadequate emergency access.	LS	*None required.*	N/A

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.12-7 Conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.	LS	*None required.*	N/A
4.12-8 Study intersections under the Cumulative Plus Project Condition.	S	*Multi-Generational Plan and Traditional Plan* *4.12-8(a) Implement Mitigation Measure 4.12-2(a) (Adaptive Signal Control Technologies).* *4.12-8(b) Prior to issuance of building permits for the proposed project, the project applicant shall pay regional transportation impact fees to the ECCRFFA that would fund construction of additional improvements along the SR 4 corridor. Such improvements may improve operations at the Hillcrest Avenue/ SR 4 Eastbound Ramps intersection.* *4.12-8(c) Prior to occupancy of the proposed buildings for Phase 2 of the proposed project, the project applicant shall restripe the westbound approach of the Lone Tree Way/Davidson Drive intersection to convert the westbound through lane to a left-thru shared lane. As the intersection currently operates with east-west split*	SU

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Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		phasing, the traffic signal would not need to be modified.	
		4.12-8(d) Prior to issuance of building permits for Phase 1 of the proposed project, the project applicant shall modify the traffic signal at the intersection of Lone Tree Way/Hillcrest Avenue to provide a westbound right-turn overlap phase and a southbound right-turn overlap phase.	
		4.12-8(e) Implement Mitigation Measure 4.12-4(b) (Lone Tree Way/SR 4 Eastbound Ramps intersection).	
		4.12-8(f) Implement Mitigation Measure 4.12-4(d) (Sand Creek Road/SR 4 Eastbound Ramps intersection).	
		4.12-8(g) Implement Mitigation Measure 4.12-2(c) (Balfour Road/Deer Valley Road).	
		4.12-8(h) Prior to occupancy of the proposed buildings for Phase 1 of the proposed project, the project applicant shall construct the Sand Creek Road extension from Deer Valley Road to Dallas Ranch Road (one lane each way).	

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Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.12-9 Study freeway facilities under Cumulative Plus Project Conditions.	S	*Multi-Generational Plan and Traditional Plan* *4.12-9 Implement Mitigation Measure 4.12-2(b).*	SU
4.12-10 Cumulatively conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.	LS	*None required.*	N/A

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