

Executive Summary

This Draft Environmental Impact Report (EIR) evaluates the potential environmental impacts of the proposed Hillcrest Station Areas Specific Plan (proposed Plan). The City of Antioch is the “lead agency” for this EIR, as defined by the California Environmental Quality Act (CEQA). As the lead agency, the City is required to evaluate the potential effects of the Plan in an EIR.

An EIR is intended to inform decision-makers and the general public of the potential significant environmental impacts of a proposed project. This EIR is a program EIR that examines the potential effects resulting from implementing designated land uses and policies in the proposed Plan. The impact assessment evaluates the Specific Plan as a whole and identifies the broad, regional effects that may occur with its implementation. As a programmatic document, this EIR does not assess site-specific impacts. Any future development project made possible by the Specific Plan will be subject to individual, site-specific environmental review, as required by State law.

This EIR identifies the proposed Plan policies that minimize potentially significant impacts. The EIR also evaluates reasonable alternatives to the proposed project that may reduce or avoid one or more significant environmental effects and would feasibly attain most of the basic objectives. These alternatives include a “No Project” alternative that represents the result of not implementing the project (CEQA Guidelines 15126.6(a)) Based on the alternatives analysis, an environmentally superior alternative is identified.

E.1 PROPOSED PROJECT

The proposed Hillcrest Station Area Specific Plan consists of policies and proposals to guide the future growth within the Hillcrest Station Area, referred to in this document as the Planning Area (see Chapter 2: Project Description for discussion and map). The project includes the Hillcrest Station Area Specific Plan, as well as the subsequent actions needed to implement the Plan and make it consistent with existing plans and regulations. The City will adopt an amendment to the Antioch General Plan concurrently with adoption of the proposed Plan. The General Plan amendment will include changes to the Land Use and Circulation Elements. Implementation of the proposed Plan will also include, but is not limited to, such tasks as amending the City of Antioch Zoning Ordinance and Map, updating the City’s Capital Improvements Program (CIP), and establishing development impact fees.

PLAN OBJECTIVES

The Planning Area presents a tremendous opportunity for high quality, transit-oriented development with great visibility from two freeways. The proposed Plan presents a strategy for creating a mixed-use community that includes high-density housing, new office and commercial development, and a well-planned, linked circulation and infrastructure backbone. The area can be transformed into a signature area of Antioch, with high quality development and interesting pedestrian areas that add to the City’s quality of life. The key objectives of the Hillcrest Station Area Specific Plan are to:

Land Use and Development

- Establish a signature area of Antioch with high quality development and dynamic pedestrian areas that add to the quality of life of the city.
- Designate sites for new employment uses that add quality jobs and improve the City's job/housing balance. Accommodate at least 5,000 jobs in order to create a sub-regional employment center.
- Create a transit village residential neighborhood, with a variety of high-density housing types within walking and bicycling distance of the transit station.
- Designate sites for retail uses that can take advantage of the freeway visibility and access.

Circulation

- Generate transit ridership to support the public investment in eBART.
- Construct roads to serve new development.
- Minimize impacts on regional highway facilities and on surrounding residential neighborhoods.
- Enhance multi-modal access and connectivity for pedestrians, bicyclists, automobile drivers, bus, and eBART passengers.

Environmental Protection

- Provide appropriate protection for wildlife habitat, biological resources, and other sensitive natural features of the Hillcrest Station Area.
- Ensure that land uses and circulation routes are compatible with the surrounding neighborhoods.
- Ensure that sensitive receptors such as homes and schools are adequately protected from noise and air emissions.

Infrastructure and Financing

- Establish infrastructure for roads, water, sewer, storm drainage, utilities, and other systems needed to support development.
- Establish parks, trails, and other community facilities necessary to serve future development.
- Establish financing mechanisms to pay for the infrastructure and services required to support development.
- Ensure that the revenues generated from the area and the expenses to provide services do not adversely affect the fiscal stability of the City.

E.2 PROJECTED SPECIFIC PLAN BUILDOUT

Full development under the proposed Plan is referred to as “buildout.” Although the proposed Plan applies until the 2035 planning horizon, the Plan is not intended to specify or anticipate when buildout will actually occur; nor does the designation of a site for a certain land use necessarily mean the site will be built with that use until 2035. The Specific Plan creates a land use and regulatory framework that allows up to 2,500 residential units and 2.5 million square feet of commercial uses in the Station Area. The Plan framework defines three development areas which will be subject to master plans. The western portion of the Station Area is a transit village designed around the eBART station. The eastern portion of the Station Area is planned as a mixed-use town center around the future Phillips Lane Interchange; it could also include a second eBART station located adjacent to the Union Pacific Railroad right-of-way (UP ROW). The area between SR 4 and the UP ROW in the western portion of the Station Area has a more auto-oriented character, and is referred to as the “Freeway Area.” Refer to the Project Description in Chapter 2 for more detailed analysis of Plan buildout.

HOUSING AND POPULATION GROWTH

Buildout projections include a maximum of 2,500 residential units, which is the maximum allowed under the Station Area Plan policies. The majority of the housing will be in multi-unit structures, some of which will be in mixed-use buildings.

Table E-1 Buildout Projections: Housing Units and Population

	<i>Multi-family Units</i>	<i>Population</i>
Transit Village	1,000	2,000
Town Center	1,500	3,000
Total	2,500	5,000

Source: Dyett and Bhatia, 2008.

COMMERCIAL AREA AND EMPLOYMENT GROWTH

The land use designations support up to 2.5 million square feet of commercial uses with approximately 5,600 new jobs based on the buildout projections. Up to 1.2 million square feet of office space may be built in the Station Area, most of which is designated in the Transit Village area. Up to 1.0 million square feet of retail space is projected at buildout of the Station Area. The majority of the retail space is anticipated to be built in the Town Center area.

Table E-2 Buildout Projections: Commercial Square Footage and Jobs

	<i>Office SF</i>	<i>Retail SF</i>	<i>Hotel Rooms</i>	<i>Jobs</i>
Transit Village	730,000	120,000	-	2,300
Town Center	300,000	730,000	325	2,500
Freeway Area	170,000	150,000	-	800
Total	1,200,000	1,000,000	325	5,600

Source: Dyett and Bhatia, 2008.

E.3 REGIONAL PLAN CONSISTENCY

BART SYSTEM EXPANSION POLICY

BART adopted a System Expansion Policy in 1999. The eBART project is the first application of the BART policy. The policy requires that BART set Ridership Targets (Thresholds) for the eBART service in the Pittsburgh to Antioch Corridor, which has been defined as a total of 5,801 patron entries and exits for an average weekday in 2030. As a “terminal” station, the Hillcrest Station is projected to serve many commuters from East Contra Costa County. Based on standard modeling methodology that incorporates assumptions regarding land use and transportation policies (including draft Ridership Development Plans), and projected growth, BART estimates that in 2030 there will be 10,100 total daily riders. The Hillcrest Station is projected to serve more than 80 percent of the riders (8,200). Thus, the eBART service should far exceed BART ridership targets. (East Contra Costa County BART Extension Draft EIR, September 2008)

MTC TRANSIT-ORIENTED DEVELOPMENT GOALS

The Metropolitan Transportation Commission (MTC) adopted a Transit-Oriented Development (TOD) Policy in 2005. Resolution 3434 specifies that by 2030, a total of 6,600 existing and new units must be located within a half-mile of the three stations on the eBART corridor. Table E-3 illustrates the number of projected corridor housing units, assuming that the Railroad Avenue Specific Plan is adopted by the City of Pittsburg without significant reductions in proposed densities. The estimated 10,403 units far exceed the minimum 6,600 units required.

Table E-3 Existing and Planned Corridor Housing

	<i>Existing</i>	<i>Planned</i>	<i>Total</i>
Pittsburg/Bay Point	1,873	1,595	3,468
Railroad Avenue	1,477	1,590	3,067
Hillcrest Median	999	1,000	1,999
Subtotal	4,349	4,185	8,534
Future Phillips Station	369	1,500	1,869
Total	4,718	5,685	10,403

Source: eBART Draft EIR, 2008; ABAG Projections 2005; Pittsburg/Bay Point Specific Plan, 1997; Draft Railroad Avenue Specific Plan, 2008.

E.4 ALTERNATIVES TO THE PROPOSED PLAN

Two alternative development scenarios are evaluated in this EIR. The Alternative Plan is based on BART's proposed project. The No Project scenario is based on the Antioch 2003 General Plan Update, which represents the continuation of the existing plans and policies if the proposed Plan is not adopted. Table E-4 summarizes the buildout of the proposed plan, the Alternative Plan and the No Project scenario. The Northside East Station Plan was evaluated but found to be infeasible due to the location of the only eBART station outside of the SR 4 median.

Table E-4 Buildout of Alternatives

	<i>Proposed Plan</i>	<i>Alternative Plan</i>	<i>No Project</i>
Residential Units	2,500	650	1,200
Population	5,000	1,680	2,400
Office Area (sf)	1,200,000	630,000	3,000,000
Retail Area (sf)	1,000,000	370,000	500,000
Hotel Rooms	325	-	-
Total Commercial Area (sf)	2,500,000	1,000,000	3,500,000
Employment	5,600 *	2,300 *	4,035 **
Total Daily Trips	45,143	19,827	35,994
Estimated eBART Riders ***	2,060	620	1,124

1. * Estimated employment for the Proposed Plan and Alternative Plan was calculated using the following assumptions:

- Retail employment is assumed to generate one job for every 500 square feet of gross floor area, based on total gross acres of land.
- Office employment is assumed to generate one job for every 350 square feet of gross floor area, based on total gross acres of land.
- Hotel employment is assumed to generate 0.8 job per hotel room.

2. ** Estimated employment for the No Project scenario was calculated using the following assumptions:

- Retail employment in the TOD area is assumed to generate one job for every 500 square feet of gross floor area, based on total gross acres of land.
- Business park employment is assumed to generate one job for every 1,000 square feet of gross floor area, based on total gross acres of land.

3. *** Estimated eBART ridership is based on the following assumptions:

- 0.1 rider per job
- 0.6 rider per housing unit

Source: Dyett and Bhatia, 2008.

ALTERNATIVE PLAN

The Alternative Plan is based on the BART Proposed Project, which includes one eBART station in the SR 4 median close to Hillcrest Avenue at the Median Station location. The assumed 2035 circulation network is the same as the proposed Plan, with two key exceptions. The Alternative Plan does not include the construction of a Phillips Lane interchange within the planning period; and does not include a potential second station in the eastern portion of the Planning Area.

Because the Phillips Lane interchange is not assumed to be built, the Phillips Lane extension would be constructed as a 2-lane collector rather than as a 4-lane arterial.

The Alternative Plan assumes a much lower intensity of development than the proposed Plan. The Phillips Lane Interchange is not assumed to be built, and there will be major traffic and circulation constraints. Lower intensity development is assumed in the eastern portion of the site that is further from freeway interchanges. Very little development is expected to occur in the southeast quadrant in the area where there are steep hills. The PG&E electrical transmission towers and lines that cross north-south in the eastern Planning Area would remain in their current location, rather than being relocated as in the proposed Plan.

The Alternative Plan features residential and office use near the station to support the transit investment. The eastern portion is designated as lower intensity uses such as business park and a mixed-use neighborhood focused on commercial and residential uses. The Alternative Plan supports 650 residential units with approximately 1,680 new residents. The designated land uses and transportation system would support approximately 1.0 million square feet of commercial uses, 630,000 square feet of office and 370,000 square feet of retail, with about 2,300 new jobs at buildout.

NO PROJECT – EXISTING ANTIOCH GENERAL PLAN

The no project scenario is based on the current General Plan, which was updated in 2003. The Zoning Ordinance was updated to implement the General Plan in 2005. Therefore, this scenario illustrates the expected development if the Planning Area’s existing policies and land use regulations were to remain in place, and planned circulation improvements were to be constructed, including BART service. The major differences between the proposed Plan and the General Plan are listed in Table E-5.

Table E-5 General Plan and Proposed Plan Assumptions

<i>Difference</i>	<i>General Plan</i>	<i>Proposed Plan</i>
Planning Horizon	2030	2035
BART Station Location	Near railroad track and Viera Ave	In SR 4 Median near Hillcrest Avenue
Phillips Lane Interchange	Not included	Assumed to be built, but not part of Specific Plan
Viera Avenue	Not extended	Re-aligned and extended to Slatten Ranch Road with railroad grade separation
Willow Avenue	Improved with a railroad grade separation	Does not include a grade separation or specific improvements
Eastern set of PG&E Transmission Towers and Lines	Not relocated	Relocated along the SR 4/SR 160 right-of-way

The General Plan identifies the Planning Area as the SR 4 Industrial Frontage Focus Area. The designated land uses are mostly low-intensity uses such as business park. Transit-oriented development is designated near a BART station located in the Planning Area near the Union

Pacific railroad tracks. Based on the land use designations in the 2003 General Plan, and the detailed text and tables in the General Plan that explain allowed densities, this area would support approximately 1,200 housing units and 4,035 jobs.

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Overall, the Alternative Plan would have the least environmental impact of the alternatives that were evaluated due to its lower development density and least amount of population and jobs. However, there would be significant environmental impacts related to circulation and noise and the Alternative Plan does not achieve the objectives for the Hillcrest Station Area as effectively as the proposed Plan.

The benefits of less intensive development are derived from exposing fewer people and less development to environmental hazards such as flooding, earthquakes, fires, etc. and potentially using fewer resources to construct and operate the development. Under the Alternative Plan, the hills in the southeastern quadrant of the Planning Area may not be developed during the planning horizon; however, development in this area is not precluded. Maintaining the hills and the unnamed creek tributary would decrease potential impacts of most of the environmental topics analyzed. Less intensive development would require fewer public services and less water, energy, and overall infrastructure.

On the other hand, the Alternative Plan does not achieve some of the primary objectives of the Hillcrest Station Area Specific Plan, such as creating an employment center; generating transit ridership; and minimizing impacts on regional highway facilities. The Alternative Plan would support 60 percent fewer jobs than the proposed Plan. Even though the jobs per housing unit ratio would be higher, the 2,300 jobs supported by the land uses in the Alternative Plan would account for less than 6 percent of the City's total employment. The General Plan land uses for the Planning Area would support more than 4,000 jobs, and the Specific Plan objective is to accommodate at least 5,000 jobs. Therefore, the Alternative Plan does not meet the City's goal of creating an employment center near transit and regional road network.

Another important goal of the Hillcrest Specific Plan is to serve as the Ridership Development Plan for the eBART project. The land uses are to generate ridership and support the large public investment. The Alternative Plan would only generate about 7 percent of the total eBART ridership projected for the Hillcrest Station, as compared to the proposed Plan, which will generate about 25 percent of the ridership. Therefore, the majority of the riders will be driving or taking the bus to the station, exacerbating traffic congestion and increasing parking demand.

Most critically, the Alternative Plan does not mitigate for the traffic impacts it would have on the local and regional roads. The land use and circulation plans are not as well integrated and traffic congestion is not as well mitigated as in the proposed Plan. The Alternative Plan creates 55 percent fewer daily automobile trips, but the resultant traffic congestion is projected to be much worse than under the proposed Plan. The operations of four intersections and freeway operations on SR 4 would fail under the Alternative Plan. The less intensive development also means that there is a lower internal trip capture rate, which results in a higher than average vehicle miles traveled VMT per resident and employee than the proposed Plan. Therefore, the reductions in traffic congestion, air pollution and greenhouse gas emissions, and noise are not proportionate with the reduction in population.

E.5 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL IMPACTS

The proposed policies of the Hillcrest Station Area Specific Plan described in Chapter 3 in the EIR would avoid or eliminate most potentially significant impacts. However, two impacts classified as significant and unavoidable have been identified in the issue areas of circulation and noise.

CIRCULATION

Intersection Operations

Implementation of the proposed Hillcrest Station Area Specific Plan would result in two intersections operating at less than the adopted standard: Hillcrest Avenue at East Tregallas Drive/Larkspur Avenue intersection and Hillcrest Avenue at SR 4 Eastbound Ramp intersection. The City has considered additional measures to comply with the LOS criteria at these two intersections. Measures considered include realigning Tregallas Drive and Larkspur Avenue to the south to improve vehicle storage between this intersection and the SR 4 eastbound off-ramp intersection. This change was determined to be infeasible during the planning horizon because it would require the acquiring and demolition of active and viable commercial properties, residential properties, and a church south of the Planning Area. Other measures considered, such as realigning the Hillcrest Avenue corridor and/or constructing new/modified ramps to/from SR 4 eastbound, would have similar right-of-way impacts.

Two other intersections have the potential to have significant and unavoidable impacts: the Hillcrest Avenue/East 18th Street intersection and the Neroly Road/Oakley Road intersection. Both of these intersections are outside the Planning Area and beyond the scope of the defined project. The proposed Specific Plan includes policies to support improving the operations of these intersections, but if improvements are not made than these two intersections would also operate at unacceptable LOS E or F conditions in 2035 with buildout of the Specific Plan.

Freeway Operations

There are also potential significant and unavoidable impacts to freeway operations due to the implementation of the eBART project, regional growth, and the Hillcrest Station Area Specific Plan. By 2035, due to the eBART project and regional growth, it is projected that freeway traffic will experience delay indexes of up to 3.3, traveling at 21 miles per hour average speed. The addition of development in the Hillcrest Station Area would exacerbate this congestion even further.

The construction of the SR 4/Phillips Lane Interchange has been identified by the City as the most feasible solution. If a new interchange is implemented, the delay index would remain the same or improve in the AM peak hours, and worsen only slightly in PM peak hours. This mitigation would allow the freeway to operate within the adopted standards.

The City has considered measures to address the severe traffic congestion at the Hillcrest Avenue Interchange beyond those identified in the SR 4 East Widening Project including additional ramp widening, alternative interchange configurations, and realigning local roads to improve interchange efficiency. These changes would all require the acquiring and demolition of active and viable commercial properties, residential properties, and a church south of the Planning Area. The alternatives were considered infeasible given the substantial impact to the right-of-way.

NOISE

The current City standards state that development near SR 4, the SR 4 Bypass, and the eBART project may not result in increases greater than five CNEL above existing noise levels. Four locations within the Planning Area exceed this standard. Each of these locations is adjacent to the Union Pacific Mococo railroad, and freight rail will be the primary noise source. If Union Pacific resumes freight rail service on the Mococo line, and if no grade separation is provided at Hillcrest Avenue, the noise impacts are significant. However this impact is due to the resumption of rail service, and is not an impact of the Specific Plan.

There are mitigation actions that could reduce the noise levels to a less than significant level. The grade separation at Hillcrest Avenue and the Union Pacific rail line, and a grade separation lowering the elevation of the rail line itself into a below-grade channel, would mitigate the noise impact. However since those projects are not within City control, and there is no identified funding source, these cannot be assumed as mitigations. Therefore the impacts of the railroad line noise on the proposed development under the Specific Plan are significant and unavoidable.

The policies of the Specific Plan ensure that noise impacts are mitigated to the maximum extent feasible, and that in areas where exterior noise levels cannot be met, interior noise levels are reduced below the minimum standard in order to compensate for the noise in exterior spaces.

E.6 SUMMARY OF IMPACTS

Table E-6 presents the potential environmental impacts that would result from the implementation of the Hillcrest Station Area Specific Plan, along with the proposed policies that reduce each impact and the ultimate finding of significance. Detailed discussions of the impacts and policies are in Chapter 3. Cumulative impacts are generally addressed in Chapter 5. The detailed discussions of the cumulative impact analysis for the following sections are in Chapter 3: Circulation and Traffic, Air Quality, Climate Change and Energy, Noise, Biological Resources and Hydrology and Water Quality.

Table E-6 Summary of Impacts and Proposed Specific Plan Policies that Reduce the Impact

<i>Impact #</i>	<i>Impact Statement</i>	<i>Proposed Specific Plan Policies that Reduce the Impact</i>	<i>Significance</i>
3.1 Aesthetics and Visual Resources			
3.1-1	Construction of new development under the proposed Plan could adversely affect visual resources in the short-term during period of construction by blocking or disrupting views.	<p>UD-17 Reduce the visibility of construction yards and staging areas to the maximum extent possible.</p> <ul style="list-style-type: none"> Construction yards and staging areas shall be located as close to construction areas to the extent practicable away from residential and commercial areas, community traffic, pedestrian use, and local views. Low contrast fencing and screening shall be used to minimize contrast with surrounding environment. 	Less than Significant
3.1-2	New development under the proposed Plan could adversely affect scenic views, scenic resources, or the existing visual character of the Planning Area.	<p>UD-12 Site or design projects to consider their intrusion into important view-sheds towards Mount Diablo and the San Joaquin River.</p> <p>UD-13 Incorporate view opportunities towards Mount Diablo into site plans, such that views of Mount Diablo are available from both public streets and public open spaces at specified locations.</p> <p>UD-14 Design buildings to take advantage of views to Mount Diablo, and views of the San Joaquin River from taller buildings.</p> <p>UD-18 The hillside areas of the site adjacent to SR 4 may be graded to accommodate development. Low-lying areas may be filled to create level development sites.</p> <ul style="list-style-type: none"> All grading and cut and fill activities must be consistent with the environmental protection and hazard policies in Chapter 5. Graded slopes and exposed earth surfaces shall be re-vegetated at the earliest opportunity. <p>UD-19 Design projects to minimize abrupt changes in scale and massing between the project and surrounding natural or man-made forms, such as hillsides, adjacent freeways, and low-lying wetlands. Where appropriate, step buildings up or down to be compatible with the scale of natural features.</p> <p>UD-26 Locate streets adjacent to parks, pedestrian trails, and detention basins, in order to allow public access to and public views of these recreation and water areas. Avoid locating private rear yards along these public recreation and water areas; this precludes public access and views and can also pose security problems.</p> <p>UD-5 Design the Freeway Area such that businesses can take advantage of the freeway visibility and access, and SR 4 becomes a visually attractive freeway corridor.</p> <ul style="list-style-type: none"> Provide landscape buffers adjacent to the rail line and the highway per the policies regarding landscape buffers. Commercial facades facing the freeway and Slatten Ranch Road should both be designed with high-quality materials due to their visibility. Design the freeway-facing building facades with windows, equivalent in design quality to a front façade, in order to present an attractive appearance from the freeway. Limit the number of freeway-oriented signs allowed 	Less than Significant

Table E-6 Summary of Impacts and Proposed Specific Plan Policies that Reduce the Impact

<i>Impact #</i>	<i>Impact Statement</i>	<i>Proposed Specific Plan Policies that Reduce the Impact</i>	<i>Significance</i>
		<p>within the Hillcrest Station Area. Work with businesses and property owners to create high-quality, consistent freeway signage for the Hillcrest Station Area. Design any freeway-oriented signs such that SR 4 remains a corridor that is eligible for Scenic Highway designation.</p> <p>UD-15 Design project site plans and buildings to preserve the potential for Scenic Highway designation for SR 4 and SR 160 adjacent to the Hillcrest Station Area.</p> <p>UD-16 Work with Contra Costa County and Caltrans to consider the “complete” highway system and minimize impacts on the quality of the views or visual experience, particularly for projects greater than 40 acres in scope.</p>	
3.1-3	New development under the proposed Plan could result in increased light and glare.		Less than Significant
3.2 Air Quality			
3.2-1	New development under the proposed Specific Plan could be inconsistent with the assumptions in the Bay Area 2005 Ozone Strategy.	<p>C-1 Create a connected street network of arterials and collectors that connects with existing local and regional roadways, and provides circulation throughout the Station Area.</p> <p>C-2 Create a connected network of local streets appropriate for a mixed use, pedestrian-oriented environment that extends throughout the Hillcrest Station Area. The network should establish:</p> <ul style="list-style-type: none"> • Blocks that are two to four acres in size to facilitate direct and easy pedestrian access between different land uses and destinations; and, • Maximum block lengths of approximately 450 feet, or 600 feet where a mid-block pedestrian connection is provided (measured on the longest side of the block). <p>C-6 Minimize cul-de-sacs to the maximum extent possible. Where cul-de-sacs are necessary due to barriers such as freeways and detention basins:</p> <ul style="list-style-type: none"> • Provide at least one pedestrian and bicycle path at the circular end in order to connect to other streets and trails, to allow emergency vehicle access when warranted and to minimize response times for emergency access; and, • Consider designing cul-de-sacs with a planted cul-de-sac island to limit the amount of pavement and increase stormwater management opportunities. <p>C-8 All applications for master plans, subdivisions, and development projects shall indicate how streets are connected to existing local and regional roadways, and how a connected network of streets is created throughout the Hillcrest Station Area.</p> <p>LU-3 Create a Transit Village in the western portion of the Hillcrest Station Area north of the Union Pacific Railroad right-of-way, with direct pedestrian, bicycle, bus transit, and automobile connections to the eBART station in the median of SR 4.</p> <p>LU-8 Develop a Town Center in the eastern portion of</p>	Less than Significant

Table E-6 Summary of Impacts and Proposed Specific Plan Policies that Reduce the Impact

Impact #	Impact Statement	Proposed Specific Plan Policies that Reduce the Impact	Significance
		<p>the Hillcrest Station Area that incorporates retail, entertainment, hospitality, and residential uses in a “lifestyle center” or other pedestrian-oriented format.</p> <p>LU-14 Allow compatible retail, restaurant, personal service, and other commercial uses within the Office TOD district. These uses must be on the ground floor and publicly accessible.</p> <p>LU-16 Up to 100 square feet of compatible retail, restaurant, personal service, office, and other commercial uses per residential unit is allowed within the Residential TOD district. These uses must be on the ground floor or second floor, and must be publicly accessible.</p> <p>LU-4 Locate high-density residential development within a half-mile walk from the eBART station.</p> <ul style="list-style-type: none"> • A range of housing types may be included in a development project, some of which may be as low as 10 units per acre provided the total project meets the minimum density standard. • Residential units should be at least 300 feet away from rail and freeway rights-of-way, or incorporate construction measures that mitigate noise and air emission impacts. <p>LU-24 Locate eBART parking so that it is accessible to passengers arriving by car, bus, bicycle, or on foot.</p> <p>LU-27 Provide public bus facilities near each eBART station.</p> <p>C-3 Design streets so that they incorporate medians, landscaping, sidewalks, street trees, travel lanes, bike lanes, and on-street parking, such that they:</p> <ul style="list-style-type: none"> • Are consistent with the desired pedestrian-oriented character and safety; and, • Meet the needs of all users including drivers, pedestrians, persons with disabilities, bicyclists, and transit users. <p>C-36 Develop a multi-modal transit center at the median eBART station that provides access to eBART, buses, taxis, and shuttles. Design the transit facilities to include:</p> <ul style="list-style-type: none"> • Bus transit center and approximately 8-12 bus bays (moved from the Hillcrest Park-and-Ride lot to the eBART Station parking area); • Kiss-and-ride limited term parking area; • Disabled parking; • Shuttle pick up and drop off area; and, • Safe and attractive pedestrian and bike crossings to the station. <p>C-38 Design arterials and arterial intersections, particularly near pedestrian-oriented streets, to accommodate transit services, including bus stops, pull-outs, and shelters.</p> <p>C-39 Prioritize pedestrian and bicyclist safety at intersections and street crossings with measures such as:</p> <ul style="list-style-type: none"> • Contrasting and/or textured paving crosswalks; 	

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		<ul style="list-style-type: none"> • In-ground, blinking crosswalk lights; and, • Pedestrian refuges and bulb-outs. <p>C-41 Require development projects to provide walking and biking routes directly to major destinations such as parks, pedestrian centers, and eBART stations.</p> <p>C-42 Adopt minimum bicycle parking requirements for residential and commercial projects. Bicycle parking should be designed with the following criteria:</p> <ul style="list-style-type: none"> • Short-term parking should be visible from the main entrance of buildings. • Long-term parking should be provided in secure, well-lighted areas. <p>C-46 Sidewalks should have at least a five-foot wide clear path of travel.</p> <p>C-47 Provide bike routes throughout the Station Area, as illustrated in Figure 3-5.</p> <ul style="list-style-type: none"> • Class 1: Continuous multi-purpose trail along East Antioch Creek and the detention basins • Class 2: Slatten Ranch Road, Phillips Lane, and Viera Avenue <p>C-48 Allow bicycle circulation on all local streets, to the extent feasible.</p> <p>C-49 Design and implement a multi-use trail loop around the wetlands and East Antioch Creek. This loop should include at least two pedestrian crossings across the creek.</p> <p>C-50 Provide multi-use trails that connect from East Antioch Creek to existing neighborhood parks north of the Station Area.</p> <p>C-22 Apply a Transportation Demand Management (TDM) program that reduces single-occupant vehicle trips to development exceeding 25,000 square feet of non-residential space. Components of TDM programs could include:</p> <ul style="list-style-type: none"> • Contributions to urban design projects, such as: <ul style="list-style-type: none"> - Bicycle parking, both short- and long-term, located in appropriate places; and, - Direct routes to transit (station, shuttle, or bus) and other key destinations that are well-lit and designed for pedestrian comfort. • Employer-based programs, such as: <ul style="list-style-type: none"> - Carpool and vanpool ride-matching services; - Designated employer TDM contact; - Guaranteed ride home for transit users and car/vanpoolers; - Transit subsidies for employees; - Flexible work schedules, shortened work weeks, or options to telecommute; - Information campaigns using brochures, boards/kiosks, or other communication outlets; and, - Employer provided showers and lockers. • Meeting or exceeding project design standards, 	

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Impact #	Impact Statement	Proposed Specific Plan Policies that Reduce the Impact	Significance
		such as: - Free and preferential parking for carpools, vanpools, low-emission vehicles, and car-share vehicles; - Passenger loading zones; and, - Bicycle- and pedestrian- friendly site planning and building design.	
3.2-2	Implementation of the proposed Specific Plan would expose residents and employees to toxic air contaminants and odors.	EH-1 Require air quality analysis based on project-specific development when permit applications are submitted for sensitive receptor uses (such as hospitals, schools, residential uses, and nursing homes) within 300 feet of SR 4, SR 160, the Union Pacific Railroad tracks, or stationary toxic air contaminant sources. If the results show that the carcinogenic human health risk exceeds the BAAQMD standards for toxic air contaminants, the City shall require upgraded ventilation systems with high efficiency filters or equivalent mechanisms to minimize health risks for future residents. EH-2 Require project sponsors to inform future and/or existing sensitive receptors of any potential health impacts resulting from nearby sources of dust, odors, or toxic air contaminants, and where mitigation cannot reduce these impacts. LU-23 Locate residential units away from railroads and freeways, to minimize impacts from noise and air emissions. Units should be at least 300 feet away from rail and freeway rights-of-way, or incorporate construction measures that mitigate noise and air emission impacts. UD-20 Provide a continuous landscape buffer along both sides of the rail line corridor, outside of the Union Pacific and Chevron easements. The minimum width of the landscaped buffer shall be 25 feet if adjacent to a building; and 15 feet if adjacent to a street. <ul style="list-style-type: none"> • Include landscaping, berming (typically 4 to 5 feet high), and at least one continuous row of trees throughout the area. • This landscape buffer may be located within the Chevron easement if permission, encroachment permits, and maintenance agreements are obtained prior to final approval for a development project. UD-21 Provide a continuous landscape buffer, with a minimum width of approximately 25 feet, immediately adjacent to both SR 4 and SR 160. <ul style="list-style-type: none"> • Design landscaping along highway corridors to add significant natural elements and visual interest to soften the hard edged, linear travel experience that would otherwise occur. • Include landscaping and a double row of trees. • This landscape buffer may be located within the Caltrans right-of-way if permission, encroachment permits, and maintenance agreements are obtained prior to final approval for a development project. UD-22 Provide a continuous landscape buffer, with a minimum width of approximately 25 feet, around the	Less than Significant

Table E-6 Summary of Impacts and Proposed Specific Plan Policies that Reduce the Impact

Impact #	Impact Statement	Proposed Specific Plan Policies that Reduce the Impact	Significance
		<p>southern and eastern edges of the Hillcrest PG&E Substation.</p> <ul style="list-style-type: none"> • Include landscaping and a continuous double row of trees to screen the facility from new development, SR 4, and the eBART station. • Work with PG&E when the company decides to expand substation operations within their site, to ensure an adequate separation is retained between the substation and development. <p>EH-39 As part of the project entitlement process, appropriate studies shall be conducted for each site with an open remediation case based on proposed land uses by a qualified environmental professional. The studies shall compare maximum soil, soil gas, and groundwater concentrations to relevant environmental screening levels (ESLs) and evaluate all potential exposure pathways from contaminated groundwater and soil. As required by the appropriate responsible agency, studies shall be prepared for the:</p> <ul style="list-style-type: none"> • Former Hickson-Kerley (FKP) Property (APN: 052-051-034); • Chevron Old Valley Pipeline; • TAOC New Love Pump Station Site (APN: 052-051-034); and, • PG&E Oakley Metering Station (APN: 052-051-035) 	
3.2-3	<p>Construction and demolition activities under the proposed Specific Plan could generate fugitive dust and other criteria pollutant emissions which could result health and nuisance impacts in the immediate vicinity of construction sites.</p>	<p>EH-40 At sites with known contamination issues, a Construction Risk Management Plan (RMP) shall be prepared and approved prior to commencement of construction, to protect the health and safety of construction workers and site users adjacent to construction activities.</p> <p>EH-44 On parcels with existing structures, project sponsors shall submit to the City a project Demolition Plan that addresses onsite and offsite chemical and physical hazards. The Demolition Plan shall contain:</p> <ul style="list-style-type: none"> • Information for any existing structures or buildings, regarding the presence of hazardous building materials such as asbestos-containing building materials, PCBs, and lead-based paint in existing buildings proposed for demolition, additions, or alterations; • Protocols for ensuring the safety of workers and the public during demolition or construction activities, as approved by the City. These protocols will include, but are not limited to: <ul style="list-style-type: none"> - Prior to demolition, hazardous building materials shall be removed and appropriately disposed of in accordance with all applicable guidelines, laws, and ordinances. - The demolition of buildings containing asbestos requires that licensed asbestos abatement contractors are retained and the Bay Area Air Quality Management District (BAAQMD) is notified ten days prior to initiating construction and demolition activities. 	Less than Significant

Table E-6 Summary of Impacts and Proposed Specific Plan Policies that Reduce the Impact

<i>Impact #</i>	<i>Impact Statement</i>	<i>Proposed Specific Plan Policies that Reduce the Impact</i>	<i>Significance</i>
		<ul style="list-style-type: none"> - The Cal-OSHA-specified method of compliance for demolition activities involving lead-based paint including required respiratory protection, protective clothing, housekeeping, hygiene facilities, medical surveillance, and training shall be required. - Any electrical transformers and fluorescent light ballasts that do not have labels stating that they do not contain PCBs, shall be treated as hazardous waste and are subject to all hazardous waste regulations. 	

3.3 Biological Resources

3.3-1	Construction and development activities under the proposed Specific Plan could impact non-listed nesting bird species protected under the federal Migratory Bird Treaty Act.	<p>EH-3 Prior to approval of any subdivisions or development projects, project sponsors shall comply with mitigation measures to avoid impacts to nesting bird species protected under the federal Migratory Bird Treaty Act, as follows:</p> <ul style="list-style-type: none"> • Project sponsors will avoid disturbing nesting raptors and other special-status birds by performing construction activities (i.e., ground clearing and grading, including removal of trees or shrubs) outside of the breeding season (February 1 through August 31), to the extent possible. • If construction activities are scheduled to occur during the breeding season (February 1 through August 31), the project sponsor will implement the following measures to avoid potential adverse effects on nesting raptors and other special-status birds: <ul style="list-style-type: none"> - The project sponsor will retain a qualified wildlife biologist to conduct preconstruction surveys of all potential nesting habitat within 500 feet of construction activities, where access is available. Surveys shall be conducted no more than 14 days prior to the first day of construction activities. - If active nests are found during preconstruction surveys, the project sponsor will create a no-disturbance buffer (size to be determined in consultation with CDFG) around active raptor nests and nests of other special-status birds during the breeding season, or until it is determined that all young have fledged. The size of these buffer zones and types of construction activities restricted in these areas will be based in part on existing noise and human disturbance levels in the project site. Nests initiated during construction are presumed to be unaffected, and no buffer would be necessary. However, the “take” (harm) of any individuals will be prohibited. - If preconstruction surveys indicate that nests are inactive or potential habitat is unoccupied during the construction period, no further mitigation is required. Trees and shrubs within the construction footprint that are determined to be unoccupied by special-status birds or that are located outside the no-disturbance buffer for active nests, may be removed. 	Less than Significant
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Table E-6 Summary of Impacts and Proposed Specific Plan Policies that Reduce the Impact

<i>Impact #</i>	<i>Impact Statement</i>	<i>Proposed Specific Plan Policies that Reduce the Impact</i>	<i>Significance</i>
3.3-2	Construction and development activities under the proposed Specific Plan could impact the Swainson's hawk and supporting habitat.	<p>EH-4 Surveys for nesting Swainson's hawks shall be conducted semi-annually by a qualified biologist during the nesting season (March 1-September 15), beginning in the spring of 2009 and continuing until Planning Area development begins.</p> <ul style="list-style-type: none"> • Surveys shall be conducted at the beginning of the breeding season (March/April) and towards the end of the season (August/September) to determine the extent of nesting activity. • Surveys shall be conducted within the Planning Area and extending out 0.25 miles from the Planning Area where possible. • If potentially occupied nests are within 0.25 miles of the Planning Area and public access is not possible, then their occupancy will be determined by observation from public roads or by observations of Swainson's hawk activity (e.g., foraging) near the Planning Area. • Documentation of Swainson's hawk presence shall be submitted to the CDFG California Natural Diversity Database, and annual reports summarizing the results of the surveys shall be submitted to the City. • Project sponsor(s) shall provide funding to the City of Antioch to contract for the biologist's services. <p>EH-5 Prior to the approval of a development permit in the Planning Area, the City shall determine whether Swainson's hawks are present in or within 0.25 miles of the Planning Area. Using the semi-annual survey results required in Policy EH-4 and the most recent CEQA environmental review documents for the Planning Area, it will be determined:</p> <ul style="list-style-type: none"> • Whether nesting sites are active or have been vacant for the five consecutive years (and therefore "inactive") preceding the application date; and • If active, the total acreage of Swainson's hawk habitat, both nesting and foraging, that may be disturbed. <p>EH-6 If active Swainson's hawk nests are identified, a permanent 100-foot buffer shall be created around the dripline of the nest trees.</p> <ul style="list-style-type: none"> • No development shall occur within this buffer. • The buffer shall be fenced to prevent the nests from being disturbed. <p>EH-7 If it is determined through Policy EH-5 that the Swainson Hawk nest is "active", then the project sponsor shall mitigate for lost Swainson's hawk nesting and foraging habitat using mitigation ratios prepared in consultation with CDFG, through mitigation credits or conservation easements.</p> <ul style="list-style-type: none"> • As of 2008 the CDFG recommended the following mitigation ratios, which are subject to change: <ul style="list-style-type: none"> - 1:1 for foraging habitat within one mile of an active nest; - 0.75:1 for foraging habitat within one to five miles of an active nest; and 	Less than Significant

Table E-6 Summary of Impacts and Proposed Specific Plan Policies that Reduce the Impact

Impact #	Impact Statement	Proposed Specific Plan Policies that Reduce the Impact	Significance
		<ul style="list-style-type: none"> - 0.5:1 for foraging habitat within five to ten miles of an active nest. • Mitigated land should be as close as possible to the Planning Area. <p>EH-8 During the nesting season (March 1–September 15), a qualified biologist shall conduct a preconstruction survey no more than 14 days prior to ground disturbance, to establish whether Swainson’s hawk nests within 0.25 mile of the project site are occupied (unless this was already accomplished through Policy EH-4).</p> <ul style="list-style-type: none"> • If potentially occupied nests exist within 0.25 mile of the Planning Area, then their occupancy will be determined by observation from public roads or by observations of Swainson’s hawk activity (e.g., foraging) near the Planning Area. • If active Swainson’s hawk nests are identified during these pre-construction surveys, no construction activities shall occur during the nesting season within 0.25 mile of occupied nests or nests under construction, unless CDFG/USFWS agrees to a smaller buffer based on environmental conditions such as steep topography or dense vegetation. If young fledge prior to September 15, construction activities can proceed normally. 	
3.3-3	Construction and development under the proposed Specific Plan could impact the western burrowing owl and its habitat.	<p>EH-9 No more than 14 days before construction, a survey for burrowing owls and their burrows shall be conducted by a qualified biologist within 500 feet of the project (access permitting). The survey will conform to the protocol described by the California Burrowing Owl Consortium (1995), which includes up to four surveys on different dates if there are suitable burrows present.</p> <p>EH-10 If occupied owl burrows are found within the survey area, a determination will be made by a qualified biologist, in consultation with the CDFG, as to whether or not work will affect the occupied burrows or disrupt reproductive behavior.</p> <ul style="list-style-type: none"> • If it is determined that construction will not affect occupied burrows or disrupt breeding behavior, construction will proceed without any restriction or mitigation measures. • If it is determined that construction will affect occupied burrows during the non-breeding season (August through February), the subject owls shall be passively relocated from the occupied burrow(s) according to a plan approved by the CDFG. The plan will include installation of one-way doors in occupied burrows at least 48 hours before the burrows are excavated, and will provide for the owl’s relocation to nearby lands that possess available nesting habitat. • If it is determined that construction will physically affect occupied burrows or disrupt reproductive behavior during the nesting season (March through July), then avoidance is the only mitigation available. Construction will be delayed within 300 feet of occupied burrows until it is determined that the subject owls are not nesting or until a qualified biologist determines that juvenile owls are self-sufficient or are no longer using the natal burrow as their 	Less than Significant

Table E-6 Summary of Impacts and Proposed Specific Plan Policies that Reduce the Impact

<i>Impact #</i>	<i>Impact Statement</i>	<i>Proposed Specific Plan Policies that Reduce the Impact</i>	<i>Significance</i>
		<p>primary source of shelter.</p> <p>EH-11 If the project requires the mitigation of Swainson's hawk foraging habitat, lost burrowing owl nesting and foraging habitat will be considered effectively mitigated with the acquisition of habitat or habitat credits, which replaces Swainson's hawk foraging habitat (see Plan Policy EH-7).</p> <p>EH-12 If the project does not require the mitigation of Swainson's hawk foraging habitat, lost burrowing owl habitat shall be compensated by the acquisition or conservation of 6.5 acres per breeding pair using the site, at the time of disturbance.</p>	
3.3-4	Construction and development activities under the proposed Specific Plan could result in disturbance to special-status bat species.	<p>EH-13 The project sponsor will avoid disturbance of hibernating or maternity bat roosts, by performing preconstruction surveys and creating no-disturbance buffers.</p> <p>EH-14 Prior to construction activities (i.e., ground clearing and grading, including removal of trees or shrubs) within 200 feet of trees and buildings that potentially support special-status bats, the project proponent will retain a qualified bat biologist to survey for special-status bats. If no evidence of bats (i.e., direct observation, guano, staining, strong odors) is present, no further mitigation is required.</p> <p>EH-15 If evidence of bats is observed, the project sponsor will carry out the following measures to avoid potential adverse effects to bats:</p> <ul style="list-style-type: none"> • A no-disturbance buffer (acceptable in size to the CDFG) will be created around active roosts during the breeding season (April 15 through August 15). Bat roosts initiated during construction are presumed to be unaffected, and no buffer would be necessary. However, the take of individuals will be prohibited. • Removal of trees/buildings showing evidence of bat activity will occur during the period least likely to affect bats, as determined by a qualified bat biologist (generally between February 15 and October 15 for winter hibernacula, and between August 15 and April 15 for maternity roosts). If exclusion is necessary to prevent indirect impacts to bats due to construction noise and human activity adjacent to trees showing evidence of bat activity, these activities will also be conducted during these periods. 	Less than Significant
3.3-5	New development under the proposed Specific Plan could result in disturbance to the valley elderberry longhorn beetle.	<p>EH-16 The project sponsor shall avoid Valley Elderberry Longhorn Beetle (VELB) habitat or prepare a VELB Mitigation Plan:</p> <ul style="list-style-type: none"> • Regardless of whether or not VELB exit holes are present, all elderberry shrubs with stems at least one inch in diameter shall be avoided, and a 100-foot buffer shall be established around the dripline of the shrubs. The 100-foot buffer may be adjusted in consultation with the USFWS. If avoidance is achieved, a letter report confirming avoidance shall be sent to the USFWS and no further mitigation would be required. • If disturbance within 100 feet of the dripline of the elderberry shrubs with stems greater than or equal to one inch in diameter is unavoidable, then the project sponsor will: (1) conduct surveys for the VELB in accordance with the 	Less than Significant

Table E-6 Summary of Impacts and Proposed Specific Plan Policies that Reduce the Impact

Impact #	Impact Statement	Proposed Specific Plan Policies that Reduce the Impact	Significance
3.3-6	New development under the proposed Specific Plan could degrade streams, wetlands, and riparian habitats potentially subject to state and federal protection.	<p>Conservation Guidelines for the Valley Elderberry Longhorn Beetle (USFWS, 1999); and (2) mitigate for impacts in accordance with these guidelines (USFWS, 1999).</p> <p>EH-17 The project sponsor will avoid or minimize effects on streams, ponds, wetlands, and riparian habitat when possible. If underground utility crossings are required underneath East Antioch Creek, contractors shall employ jack-and-bore construction techniques for these crossings.</p> <p>EH-18 For impacted wetlands, the project sponsor shall restore/create wetlands on or off site at a 2:1 ratio. A wetland mitigation and monitoring plan (referred to in General Plan Policies 10.3.2(e) and 10.4.2(d) as a Resource Management Plan) shall be developed and submitted to the Corps and any other applicable agencies, that includes the following:</p> <ul style="list-style-type: none"> • description of wetland types; • performance standards and monitoring protocol to ensure the success of the mitigation wetlands over a period of five to ten years; • engineering plans showing the location, size, and configuration of wetlands to be created or restored, as applicable; • an implementation schedule showing when construction of mitigation areas shall occur, as applicable; and • a description of legal protection measures for preserved wetlands, as applicable (i.e., dedication of fee title, conservation easement, and/or an endowment held by an approved conservation organization, government agency, or mitigation bank). <p>EH-19 As part of the development review process for projects adjacent to or including East Antioch Creek, the project sponsor shall create a Resource Management Plan for the creek corridor, as required by the General Plan Policy 10.4.2(d), in order to retain native vegetation in and along East Antioch Creek and prevent its degradation. Components of this Plan shall include but are not limited to: a vegetation palette consisting of native species for any landscaping that the project sponsor would like to do within the corridor, and methods for plant installation; vegetation monitoring; herbivore and weed control; irrigation; and site protection.</p> <p>EH-20 The project sponsor shall establish a minimum 50-foot buffer from the delineated edge of the wetlands and the freshwater marsh vegetation. No development shall occur within this buffer.</p> <ul style="list-style-type: none"> • In an effort to avoid impacts to wildlife, including nesting birds and sensitive habitats, a fence shall be erected between the outer edge of the buffer area and the development, to keep pets out. The fence shall be at least four feet in height. • A 25-foot additional buffer containing a recreation trail composed of permeable or semi-permeable surface may be located outside of the 50-foot buffer. 	Less than Significant

Table E-6 Summary of Impacts and Proposed Specific Plan Policies that Reduce the Impact

<i>Impact #</i>	<i>Impact Statement</i>	<i>Proposed Specific Plan Policies that Reduce the Impact</i>	<i>Significance</i>
		<p>EH-21 Pedestrian and vehicle bridges proposed to cross over East Antioch Creek shall be designed to span the bed and bank of streams and avoid or minimize bridge piers or footings within the stream, within bridge safety limits.</p> <ul style="list-style-type: none"> If possible, the span of bridges that cross streams should also include some upland habitat beneath their spans to provide dry areas for wildlife species that do not use creeks or for use during storms. Native plantings, natural debris, or rocks should be installed under bridges to provide wildlife cover and encourage the use of crossings. 	
3.3-7	New development under the proposed Specific Plan could interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	EH-22 Provisions shall be made for wildlife under-crossings for new roads near East Antioch Creek. Tunnels or culverts must be the minimum length, height, and width necessary to provide safe passage under the road. Culvert designs will be based on the best available data at the time of the development application.	Less than Significant
3.3-8	The proposed Specific Plan could conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	<p>EH-23 All “established” trees that will be retained shall be adequately protected during grading and construction.</p> <ul style="list-style-type: none"> Trees to be preserved immediately adjacent to the construction area should be protected with a minimum four-foot construction fence placed at least three feet outside the tree’s dripline. Care should be taken not to change the grade of the protected trees either by fill or grading. Any proposed grading within the dripline of protected trees will require further site investigation and recommendations by a certified arborist. <p>EH-24 Trees to be retained at the edge of the construction area should be pruned prior to the start of construction to remove dead wood that might present a safety hazard. Trees to be retained in landscape buffers and open space areas should be pruned of dead wood to minimize human hazards.</p> <p>EH-25 The project sponsor will guarantee the health of all trees to be preserved within and adjacent to the proposed project site for three years. The project sponsor will replace any tree that is to be retained but that dies as a result of project construction activities during the guarantee period, with two 24-inch box, native trees, and the City of Antioch may require the posting of a bond pursuant to the Municipal Code.</p> <p>EH-26 A plan for control of the Tree of Heaven species should be prepared and implemented in order to prevent root and sprout damage to concrete and asphalt pavement and building foundations.</p>	Less than Significant

Table E-6 Summary of Impacts and Proposed Specific Plan Policies that Reduce the Impact

<i>Impact #</i>	<i>Impact Statement</i>	<i>Proposed Specific Plan Policies that Reduce the Impact</i>	<i>Significance</i>
3.4 Circulation and Traffic			
3.4-1	Increased motor vehicle traffic would result in unacceptable level of service (LOS) at study intersections.	<p>C-1 Create a connected street network of arterials and collectors that connects with existing local and regional roadways, and provides circulation throughout the Station Area.</p> <p>C-2 Create a connected network of local streets appropriate for a mixed use, pedestrian-oriented environment that extends throughout the Hillcrest Station Area. The network should establish:</p> <ul style="list-style-type: none"> • Blocks that are two to four acres in size to facilitate direct and easy pedestrian access between different land uses and destinations; and, • Maximum block lengths of approximately 450 feet, or 600 feet where a mid-block pedestrian connection is provided (measured on the longest side of the block). <p>C-4 Require land dedication and street improvements to be built consistent with street designs described in Chapter 4, Urban Design, for all arterials, collectors, and local streets in the Hillcrest Station Area.</p> <p>C-5 Limit potential traffic and parking impacts from new development on existing neighborhoods by:</p> <ul style="list-style-type: none"> • Re-routing existing collector alignments outside existing neighborhoods, where feasible; • Providing direct access to the arterial and regional road network from any new streets; and, • Installing traffic calming measures where necessary. <p>C-6 Minimize cul-de-sacs to the maximum extent possible. Where cul-de-sacs are necessary due to barriers such as freeways and detention basins:</p> <ul style="list-style-type: none"> • Provide at least one pedestrian and bicycle path at the circular end in order to connect to other streets and trails, to allow emergency vehicle access when warranted and to minimize response times for emergency access; and, • Consider designing cul-de-sacs with a planted cul-de-sac island to limit the amount of pavement and increase stormwater management opportunities. <p>C-8 All applications for master plans, subdivisions, and development projects shall indicate how streets are connected to existing local and regional roadways, and how a connected network of streets is created throughout the Hillcrest Station Area.</p> <p>C-9 Arterials and collectors should be located as shown in Figure 3-4 Circulation Plan; however, locations may be modified based on additional engineering or environmental analysis, or a completed master plan that shows how all parcels will be adequately served. Streets shall be located consistent with the following criteria:</p> <ul style="list-style-type: none"> • Arterials are to be generally located along property lines. • Collector alignments may vary to accommodate site conditions and development proposals, provided that the streets align and join directly with existing and/or future 	Significant and Unavoidable

Table E-6 Summary of Impacts and Proposed Specific Plan Policies that Reduce the Impact

Impact #	Impact Statement	Proposed Specific Plan Policies that Reduce the Impact	Significance
		<p>collector streets on adjoining properties.</p> <p>C-10 Construct a four-lane east-west road, Slatten Ranch Road, south of the Union Pacific Railroad from Hillcrest Avenue to SR 160 to serve the eBART Station and development between SR 4 and the Union Pacific right-of-way. Design this road consistent with the following criteria:</p> <ul style="list-style-type: none"> • Connect Sunset Drive west of Hillcrest Avenue with the Station Area; • Accommodate easy and direct access for buses in and out of the eBART station; and • Ensure that BART service can be extended to the east in or adjacent to the Union Pacific railroad right-of-way. Design of this corridor will need to be coordinated with Caltrans, Union Pacific Railroad, and BART. <p>C-11 The City shall address traffic congestion at the Hillcrest Avenue and East 18th Street intersection. Starting in 2015, the City shall monitor the turning movements at this intersection with annual traffic counts.</p> <ul style="list-style-type: none"> • When the average delay per vehicle is exceeds 45 seconds (or the current CCTA level of service standard), the City engineer shall initiate a comprehensive engineering study to define feasible mitigations and the project's fair share of the cost of improvements. • When the average delay per vehicle is 55 seconds (or the Level of Service reaches E), proceed with design and construction of the improvements defined in the engineering study. <p>C-12 Extend and re-align Viera Avenue between East 18th Street and Slatten Ranch Road. Design this road consistent with the following criteria:</p> <ul style="list-style-type: none"> • Realign Viera Avenue so that Station Area traffic does not impact existing neighborhoods, as generally shown in Figure 3-4. • Add a left turn lane from northbound Viera Avenue to westbound East 18th Street. • Work with PG&E to design the alignment so that Viera Avenue minimizes impacts to the PG&E electrical transmission and natural gas rights-of-way. • Construct an overcrossing at East Antioch Creek that minimizes impacts to the creek, detention basins, and recreational areas. • Construct an overcrossing or undercrossing at the railroad tracks that serves vehicles, pedestrians, and bicycles. Design the crossing to maximize developable land. The design of this crossing should also be coordinated with the design of the railroad grade separation at Hillcrest Avenue. <p>C-13 Extend and improve Oakley Road to serve the Hillcrest Station Area. Design this road consistent with the following criteria:</p> <ul style="list-style-type: none"> • Minimize impacts to the Oakley Detention Basin; • Limit traffic and parking from the Station Area within existing neighborhoods; 	

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Impact #	Impact Statement	Proposed Specific Plan Policies that Reduce the Impact	Significance
		<ul style="list-style-type: none"> • Support and encourage pedestrian-oriented land uses between the Oakley Detention Basin and the PG&E substation; and, • Do not preclude a future connection with Hillcrest Avenue featuring a right-in, right-out intersection, if warranted. <p>C-15 Extend and improve Phillips Lane south of East 18th Street to Slatten Ranch Road. Design this road consistent with the following criteria:</p> <ul style="list-style-type: none"> • Serve the development within the Town Center; • Minimize impacts to East Antioch Creek and recreational uses; • Cross over the railroad; • Intersect with Slatten Ranch Road; and • Provide access to the Phillips Lane Interchange. <p>City and Regional Transportation Improvements</p> <p>C-16 Work with CCTA and Caltrans to implement Hillcrest Avenue Interchange improvements. The final design of the improvements should consider the potential railroad grade separation at Hillcrest Avenue.</p> <p>C-17 Work with Union Pacific Railroad to provide a grade separation at the intersection of the Mococo Railway right-of-way and Hillcrest Avenue, if it is determined that the rail operator will resume active rail service. Explore all feasible design solutions with the goal to minimize the impacts on existing development and new development in the Hillcrest Station Area.</p> <p>C-18 Work with Caltrans to approve, design, and construct a full SR 4 interchange at Phillips Lane. Work with federal, state, and local agencies such as the Fee and Finance Authority to secure funding for the Phillips Interchange.</p> <p>C-19 The City and project sponsors shall work with neighboring cities and regional agencies to construct Slatten Ranch Road from west of SR 160 to Laurel Avenue.</p> <p>C-20 The City shall ensure that Wild Horse Road is extended and connected to the SR 4 Bypass Frontage Road, "Slatten Ranch Road," to improve local access to parks, schools, and fire stations.</p> <p>C-21 Work with the City of Oakley to monitor traffic levels and level of service at the Neroly Road and Oakley Road intersection, and support efforts to design and construct needed improvements.</p> <p>C-22 Apply a Transportation Demand Management (TDM) program that reduces single-occupant vehicle trips to development exceeding 25,000 square feet of non-residential space. Components of TDM programs could include:</p> <ul style="list-style-type: none"> • Contributions to urban design projects, such as: <ul style="list-style-type: none"> - Bicycle parking, both short- and long-term, located in appropriate places; and, - Direct routes to transit (station, shuttle, or bus) and other key destinations that are well-lit and designed for 	

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Impact #	Impact Statement	Proposed Specific Plan Policies that Reduce the Impact	Significance
		<p>pedestrian comfort.</p> <ul style="list-style-type: none"> • Employer-based programs, such as: <ul style="list-style-type: none"> - Carpool and vanpool ride-matching services; - Designated employer TDM contact; - Guaranteed ride home for transit users and car/vanpoolers; - Transit subsidies for employees; - Flexible work schedules, shortened work weeks, or options to telecommute; - Information campaigns using brochures, boards/kiosks, or other communication outlets; and, - Employer provided showers and lockers. • Meeting or exceeding project design standards, such as: <ul style="list-style-type: none"> - Free and preferential parking for carpools, vanpools, low-emission vehicles, and car-share vehicles; - Passenger loading zones; and, - Bicycle- and pedestrian- friendly site planning and building design. <p>I-5 Construct the following circulation improvements in conjunction with development of the Freeway Area:</p> <ul style="list-style-type: none"> • Slatten Ranch Road from Hillcrest to SR 160 • At least one emergency access route connecting Slatten Ranch Road to Oakley Road <p>I-7 Construct the following circulation improvements in conjunction with development of the Transit Village Area:</p> <ul style="list-style-type: none"> • Viera Avenue (New) from East 18th Street to Oakley Road • Viera Avenue Connection from Oakley Road to Slatten Ranch Road, with an Overcrossing or Undercrossing of the Railroad Line • Pedestrian/Bicycle Bridge over the Railroad Line to the eBART Station Entrance (required only if the Median Station is selected instead of East Median) • Oakley Road from Viera Avenue (New) to Willow Ave. <p>I-9 Development within the Town Center Area shall not occur until the Phillips Lane Interchange is officially approved by Caltrans and funding sources are identified, or other regional transportation improvements that resolve the projected congestion at the SR 4/Hillcrest Interchange are identified, included in the Contra Costa County Regional Transportation Plan, and funding sources are identified.</p> <p>I-11 Construct the following circulation improvements in conjunction with development of the Town Center Area north of East Antioch Creek.</p> <ul style="list-style-type: none"> • Widen Oakley Road from SR 160 to Willow Avenue • Redesign the Willow Avenue/Oakley Road Connection • Phillips Lane from East 18th Street to Oakley Road <p>I-12 Construct the following circulation improvements in</p>	

Table E-6 Summary of Impacts and Proposed Specific Plan Policies that Reduce the Impact

Impact #	Impact Statement	Proposed Specific Plan Policies that Reduce the Impact	Significance
		conjunction with development of the Town Center Area south of East Antioch Creek. <ul style="list-style-type: none"> • Phillips Lane Connection to Slatten Ranch Road: Overcrossing • Phillips Lane and SR 4 Interchange • Phillips Lane from Slatten Ranch Road to SR 4 and Interchange 	
3.4-2	Increased motor vehicle traffic would result in increased Delay Indices at study freeway segments.	The proposed policies listed under Impact 3.4-1 would also help to reduce the impact on freeway operations.	Significant and Unavoidable
3.4-3	Implementation of the proposed Specific Plan would generate additional Vehicle Miles Traveled.	LU-3 Create a Transit Village in the western portion of the Hillcrest Station Area north of the Union Pacific Railroad right-of-way, with direct pedestrian, bicycle, bus transit, and automobile connections to the eBART station in the median of SR 4. LU-24 Locate eBART parking so that it is accessible to passengers arriving by car, bus, bicycle, or on foot. LU-25 Work with BART to ensure that at least 1,000 parking spaces are provided in close proximity to the eBART Station by 2015, and that 2,600 spaces are provided by 2035. LU-27 Provide public bus facilities near each eBART station. C-10 Construct a four-lane east-west road, Slatten Ranch Road, south of the Union Pacific Railroad from Hillcrest Avenue to SR 160 to serve the eBART Station and development between SR 4 and the Union Pacific right-of-way. Design this road consistent with the following criteria: <ul style="list-style-type: none"> • Connect Sunset Drive west of Hillcrest Avenue with the Station Area; • Accommodate easy and direct access for buses in and out of the eBART station; and • Ensure that BART service can be extended to the east in or adjacent to the Union Pacific railroad right-of-way. Design of this corridor will need to be coordinated with Caltrans, Union Pacific Railroad, and BART. C-35 The City shall continue working with BART, CCTA, Caltrans, and property owners to study design, funding, and construction options for the Hillcrest eBART station, including but not limited to the East Median Station, which is the City's preferred station location. The design and location of the station should be modified from the current Median Station plan to achieve the following goals: <ul style="list-style-type: none"> • Provide a more direct pedestrian and bicycle route from the Transit Village pedestrian center to the eBART station, with a distance of no more than one-quarter mile, and the minimum number of grade changes; • Provide shorter, more direct vehicular access between the Transit Village Area to the eBART station; • Maximize developable land, especially properties with freeway visibility, and properties in the Transit Village 	For Informational Purposes Only

Table E-6 Summary of Impacts and Proposed Specific Plan Policies that Reduce the Impact

Impact #	Impact Statement	Proposed Specific Plan Policies that Reduce the Impact	Significance
		<p>Area; and</p> <ul style="list-style-type: none"> • Provide an attractive view from the eBART station, that includes a direct line of sight to the Transit Village, and screens the view of the PG&E station; and • Maximize opportunities for shared parking between BART patrons and other land uses. <p>C-36 Develop a multi-modal transit center at the median eBART station that provides access to eBART, buses, taxis, and shuttles. Design the transit facilities to include:</p> <ul style="list-style-type: none"> • Bus transit center and approximately 8-12 bus bays (moved from the Hillcrest Park-and-Ride lot to the eBART Station parking area); • Kiss-and-ride limited term parking area; • Disabled parking; • Shuttle pick up and drop off area; and, • Safe and attractive pedestrian and bike crossings to the station. <p>C-37 Work with Tri-Delta Transit to minimize impacts to existing service while serving the Station Area.</p> <p>C-38 Design arterials and arterial intersections, particularly near pedestrian-oriented streets, to accommodate transit services, including bus stops, pull-outs, and shelters.</p>	
3.4-4	Implementation of the proposed Specific Plan could increase transit demand.	<p>LU-3 Create a Transit Village in the western portion of the Hillcrest Station Area north of the Union Pacific Railroad right-of-way, with direct pedestrian, bicycle, bus transit, and automobile connections to the eBART station in the median of SR 4.</p> <p>LU-24 Locate eBART parking so that it is accessible to passengers arriving by car, bus, bicycle, or on foot.</p> <p>LU-25 Work with BART to ensure that at least 1,000 parking spaces are provided in close proximity to the eBART Station by 2015, and that 2,600 spaces are provided by 2035.</p> <p>LU-27 Provide public bus facilities near each eBART station.</p> <p>C-10 Construct a four-lane east-west road, Slatten Ranch Road, south of the Union Pacific Railroad from Hillcrest Avenue to SR 160 to serve the eBART Station and development between SR 4 and the Union Pacific right-of-way. Design this road consistent with the following criteria:</p> <ul style="list-style-type: none"> • Connect Sunset Drive west of Hillcrest Avenue with the Station Area; • Accommodate easy and direct access for buses in and out of the eBART station; and • Ensure that BART service can be extended to the east in or adjacent to the Union Pacific railroad right-of-way. Design of this corridor will need to be coordinated with Caltrans, Union Pacific Railroad, and BART. <p>C-35 The City shall continue working with BART, CCTA, Caltrans, and property owners to study design, funding, and construction options for the Hillcrest eBART station,</p>	Less than Significant

Table E-6 Summary of Impacts and Proposed Specific Plan Policies that Reduce the Impact

Impact #	Impact Statement	Proposed Specific Plan Policies that Reduce the Impact	Significance
		<p>including but not limited to the East Median Station, which is the City's preferred station location. The design and location of the station should be modified from the current Median Station plan to achieve the following goals:</p> <ul style="list-style-type: none"> • Provide a more direct pedestrian and bicycle route from the Transit Village pedestrian center to the eBART station, with a distance of no more than one-quarter mile, and the minimum number of grade changes; • Provide shorter, more direct vehicular access between the Transit Village Area to the eBART station; • Maximize developable land, especially properties with freeway visibility, and properties in the Transit Village Area; and • Provide an attractive view from the eBART station, that includes a direct line of sight to the Transit Village, and screens the view of the PG&E station; and • Maximize opportunities for shared parking between BART patrons and other land uses. <p>C-36 Develop a multi-modal transit center at the median eBART station that provides access to eBART, buses, taxis, and shuttles. Design the transit facilities to include:</p> <ul style="list-style-type: none"> • Bus transit center and approximately 8-12 bus bays (moved from the Hillcrest Park-and-Ride lot to the eBART Station parking area); • Kiss-and-ride limited term parking area; • Disabled parking; • Shuttle pick up and drop off area; and, • Safe and attractive pedestrian and bike crossings to the station. <p>C-37 Work with Tri-Delta Transit to minimize impacts to existing service while serving the Station Area.</p> <p>C-38 Design arterials and arterial intersections, particularly near pedestrian-oriented streets, to accommodate transit services, including bus stops, pull-outs, and shelters.</p>	
3.4-5	Implementation of the proposed Specific Plan would increase demand for parking.	<p>LU-25 Work with BART to ensure that at least 1,000 parking spaces are provided in close proximity to the eBART Station by 2015, and that 2,600 spaces are provided by 2035.</p> <p>C-24 Locate off-street parking behind buildings or in structures, to the maximum extent feasible. Do not locate parking between public streets and building entrances, except on commercial retail sites within the freeway area.</p> <p>C-25 Maintain flexible parking standards that balance the need for parking with the broader Station Area goals of encouraging transit ridership, ridesharing, and nurturing the area's pedestrian appeal.</p> <p>C-26 Distribute parking throughout the Station Area to help balance traffic flow on the street grid network.</p> <p>C-27 Include on-street parking on collector and local streets, following detailed recommendations in Chapter 4, Urban Design.</p>	Less than Significant

Table E-6 Summary of Impacts and Proposed Specific Plan Policies that Reduce the Impact

<i>Impact #</i>	<i>Impact Statement</i>	<i>Proposed Specific Plan Policies that Reduce the Impact</i>	<i>Significance</i>
		<p>C-28 Adopt specific parking standards for the Station Area. Consider some or all of the following strategies to prevent oversupply and encourage the use of alternate modes of transportation:</p> <ul style="list-style-type: none"> • Allow shared parking between uses with different peak periods of parking demand; • Reduce minimum off-street parking requirements for multi-family and commercial developments; • Adopt maximum off-street parking requirements; • Allow credits for adjacent on-street spaces; • Allow exemptions for small retail and dining establishments (e.g. less than 2,500 square feet) in pedestrian centers; and, • Allow tandem parking in residential developments. <p>C-29 Work with property owners to emphasize shared parking arrangements where appropriate to maximize efficient use of parking resources.</p> <p>C-30 Incentivize parking structures, rooftop parking, and underground parking, through flexibility in conditions of approval and in negotiations for any City financial participation in the development.</p> <p>C-31 Require surface parking lots to be designed so that it is feasible to use them for other uses, such as farmers' markets or community events, without reducing the landscaping requirements.</p> <p>C-32 Identify opportunities for parking pricing strategies. Work with property owners to price parking so as to discourage automobile trips that could be made by other modes.</p> <p>C-34 Work with BART to identify funding sources for parking at the eBART stations, consistent with the following criteria:</p> <ul style="list-style-type: none"> • 1,000 spaces at the time eBART service begins; and, • 2,600 spaces by 2030, if the Hillcrest Station continues to be the terminus station for the eBART service. These spaces may be developed in phases. <p>I-2 Prior to final approvals of land subdivisions or development projects in the Transit Village and Freeway Areas, work with BART on a comprehensive eBART parking plan, which defines how eBART parking requirements for 1,000 spaces will be met when the Hillcrest Station opens, and how future eBART parking requirements of 2600 spaces can be met without reducing the available developable land in the Transit Village and Freeway areas.</p>	
3.4-6	Implementation of the proposed Specific Plan will increase bicycling and walking.	<p>C-2 Create a connected network of local streets appropriate for a mixed use, pedestrian-oriented environment that extends throughout the Hillcrest Station Area. The network should establish:</p> <ul style="list-style-type: none"> • Blocks that are two to four acres in size to facilitate direct and easy pedestrian access between different land uses and destinations; and, • Maximum block lengths of approximately 450 feet, 	Less than Significant

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Impact #	Impact Statement	Proposed Specific Plan Policies that Reduce the Impact	Significance
		<p>or 600 feet where a mid-block pedestrian connection is provided (measured on the longest side of the block).</p> <p>C-3 Design streets so that they incorporate medians, landscaping, sidewalks, street trees, travel lanes, bike lanes, and on-street parking, such that they:</p> <ul style="list-style-type: none"> • Are consistent with the desired pedestrian-oriented character and safety; and, • Meet the needs of all users including drivers, pedestrians, persons with disabilities, bicyclists, and transit users. <p>C-39 Prioritize pedestrian and bicyclist safety at intersections and street crossings with measures such as:</p> <ul style="list-style-type: none"> • Contrasting and/or textured paving crosswalks; • In-ground, blinking crosswalk lights; and, • Pedestrian refuges and bulb-outs. <p>C-40 Implement a way-finding signage program for common destinations.</p> <p>C-41 Require development projects to provide walking and biking routes directly to major destinations such as parks, pedestrian centers, and eBART stations.</p> <p>C-42 Adopt minimum bicycle parking requirements for residential and commercial projects. Bicycle parking should be designed with the following criteria:</p> <ul style="list-style-type: none"> • Short-term parking should be visible from the main entrance of buildings. • Long-term parking should be provided in secure, well-lighted areas. <p>C-43 Encourage employers to provide showers and lockers.</p> <p>C-44 Limit the number of curb cuts allowed on each block face.</p> <p>C-45 On pedestrian-oriented streets, design streets and sidewalks consistent with the provisions in Chapter 4, Urban Design, including:</p> <ul style="list-style-type: none"> • Tree wells or planter strips with trees between the sidewalk and parking; • On-street parking between sidewalks and travel lanes; • Pedestrian-scale street lights; • Limited curb cuts that cross the pedestrian path of travel; • Outdoor seating for restaurants and cafes; • Projections into the right of way for awnings, canopies, pedestrian-oriented signs, bay windows, and other elements that enhance the pedestrian realm; and <p>C-46 Sidewalks should have at least a five-foot wide clear path of travel.</p> <p>C-47 Provide bike routes throughout the Station Area, as illustrated in Figure 3-5.</p> <ul style="list-style-type: none"> • Class 1: Continuous multi-purpose trail along East Antioch Creek and the detention basins 	

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Impact #	Impact Statement	Proposed Specific Plan Policies that Reduce the Impact	Significance
		<ul style="list-style-type: none"> • Class 2: Slatten Ranch Road, Phillips Lane, and Viera Avenue C-48 Allow bicycle circulation on all local streets, to the extent feasible. C-49 Design and implement a multi-use trail loop around the wetlands and East Antioch Creek. This loop should include at least two pedestrian crossings across the creek. C-50 Provide multi-use trails that connect from East Antioch Creek to existing neighborhood parks north of the Station Area. C-51 Provide at least two pedestrian and bicycle crossings across the railroad, at least one each in the Transit Village and the Town Center. If the Median Station is the selected eBART station location, provide a third pedestrian and bicycle crossing opposite the eBART station entrance, as shown in Figures 3-4 and 3-5. OS-8 Create a linear public open space at least 25 feet wide around the wetlands and detention basins. Design the open space consistent with the following criteria: <ul style="list-style-type: none"> • A multi-use trail 8-12 feet wide is provided around the perimeter of the 50-foot inner wetland buffer area; • The trail connects to public streets, public parks, and plazas; • At least two pedestrian and bike paths are available to cross the creek; • At least one staging area with parking is provided adjacent to the trail in the Transit Village area and one in the Town Center area; • Recreational facilities, such as seating, picnic tables, tot lots, and exercise areas or par course, are provided adjacent to the trail; • Viewing platforms may be built to observe the natural areas; and • If feasible, informational signage is provided so that the riparian habitat can used as an educational destination for local schools. UD-27 Create pedestrian and bicycle routes from the pedestrian centers of the Transit Village and Town Center to the eBART station(s) that are direct, safe, attractive and well-lit. Minimize the travel time and travel distance, and minimize the number of road crossings and the elevation changes such as tunnels, bridges, and ramps. UD-28 Incorporate bicycle and pedestrian facilities into the design of the railroad crossing at Viera Avenue and the design of Slatten Ranch Road, to create a comfortable and attractive pedestrian and bicycle route to eBART. If the railroad crossing is an undercrossing, minimize the width of the tunnel and maximize the daylight to the pedestrian/bicycle route. UD-29 If the East Median station location is selected for the eBART station, create a good quality pedestrian/bicycle connection from the Transit Village pedestrian center to the eBART station entrance. 	

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		<ul style="list-style-type: none"> • Design the Viera Avenue undercrossing/overcrossing to provide a reasonably straight pedestrian/bicycle connection to the eBART station entrance. • Incorporate a pedestrian path from the eBART station entrance to the Viera Avenue undercrossing (or overcrossing). • Provide a signalized pedestrian/bicycle crossing at Slatten Ranch Road, or a pedestrian/bicycle bridge. • The pedestrian and bicycle routes should be generally be consistent with the diagram shown in Figure 4-26: Pedestrian and Bicycle Route to eBART: East Median Station. • Conduct further studies to optimize the design of the Viera Avenue under-crossing, the Slatten Ranch Road/Viera Avenue intersection, and the pedestrian connections, in order to achieve good quality connections, and at the same time minimize costs and storm drainage pumping facilities. <p>UD-30 If the Median Station location is selected for the eBART station, create a good quality pedestrian/bicycle connection from the Transit Village pedestrian center to the eBART station entrance.</p> <ul style="list-style-type: none"> • Build a pedestrian/bicycle crossing over the railroad line, in a location that is generally in a straight line with the eBART station entrance. • Incorporate a pedestrian path from the eBART station entrance to the railroad crossing. • Provide a signalized pedestrian/bicycle crossing at Slatten Ranch Road. • The pedestrian and bicycle routes should be generally be consistent with the diagram shown in Figure 4-29: Pedestrian and Bicycle Route to eBART: Median Station. 	
3.4-7	Construction of the Specific Plan elements would have temporary impacts on the environment if the project construction would substantially affect traffic flow, circulation, parking, and pedestrian safety.	<p>C-23 Project sponsors shall develop a Construction Traffic Management Plan for City review and approval. The plan shall include at least the following items and requirements to reduce traffic congestion to the maximum extent feasible during construction:</p> <ul style="list-style-type: none"> • A set of comprehensive traffic control measures, including major truck trips and deliveries that avoid peak traffic hours, detour signs if required, lane closure procedures, sidewalk closure procedures, signs, cones for drivers, and designated construction access routes. • Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries, detours, and lane closures will occur. • Location of construction staging areas for materials, equipment, and vehicles (must be located on the project site). • Identification of haul routes for movement of construction vehicles that minimize impacts on vehicular and pedestrian traffic, circulation and safety; • Temporary construction fences to contain debris 	Less than Significant

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		<p>and material and to secure the site.</p> <ul style="list-style-type: none"> • Provisions for removal of trash generated by project construction activity. • A process for responding to, and tracking, complaints pertaining to construction activity, including identification of an onsite complaint manager. • Provisions for monitoring surface streets used for truck routes so that any damage and debris attributable to the trucks can be identified and corrected. 	
3.5 Climate Change and Energy Use			
3.5-1	Implementation of the proposed Specific Plan would contribute to an increase in countywide greenhouse gas emissions.	<p>EH-31 The City shall continue to work with the county, and other local, state, and federal governments, to develop a regional plan to reduce county geographical GHG emissions to 80 percent below current levels by 2050.</p> <p>I-19 The Transit Village Master Plan should ensure that the area north of the UP railroad within 0.5 miles of the eBART station complies with the criteria for transit priority projects, as defined by California Senate Bill 375 (and any subsequent updates.)</p> <p>I-20 The Town Center Master Plan should ensure that the area north of East Antioch Creek within 0.5 miles of either the Phillips Lane eBART station or shuttle stop for the Hillcrest eBART Station complies with the criteria for transit priority projects, as defined by California Senate Bill 375 (and any subsequent updates.)</p> <p>EH-32 Projects that receive financial assistance from the City or the Redevelopment Agency, including but not limited to assistance with public infrastructure, shall demonstrate the incorporation of energy efficiency measures beyond the minimum standards of Title 24 and the use of alternative energy sources such as solar power.</p> <p>EH-33 All electrical appliances installed in development projects in the Hillcrest Station Area shall be Energy Star rated.</p> <p>EH-34 All projects shall demonstrate that recycled materials have been incorporated into new construction.</p> <p>EH-35 Non-residential projects shall meet whichever standard is lower:</p> <ul style="list-style-type: none"> • The current energy efficiency standard at the time that the development application is submitted, or • A 20 percent reduction in energy from the 2003 Title 24 Standards, consistent with Executive Order S-20-2004 issued by Governor Schwarzenegger. <p>EH-36 Locate, orient, and shade the building, where feasible, as follows:</p> <ul style="list-style-type: none"> • Provide exterior shade for south-facing windows during the peak cooling season. • Provide vertical shading against direct solar gain and glare due to low altitude sun angles for east- and west-facing windows. • When site and location permit, orient the building with the long sides facing north and south. • Protect the building from thermal loss, drafts, and 	Less than Significant

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		<p>degradation of the building envelope caused by wind and wind-driven materials such as dust, sand, and leaves with building orientation and landscape features.</p> <ul style="list-style-type: none"> • Wherever possible, use vegetation to shade buildings to limit direct solar gain and glare. <p>C-1 Create a connected street network of arterials and collectors that connects with existing local and regional roadways, and provides circulation throughout the Station Area.</p> <p>C-2 Create a connected network of local streets appropriate for a mixed use, pedestrian-oriented environment that extends throughout the Hillcrest Station Area. The network should establish:</p> <ul style="list-style-type: none"> • Blocks that are two to four acres in size to facilitate direct and easy pedestrian access between different land uses and destinations; and, • Maximum block lengths of approximately 450 feet, or 600 feet where a mid-block pedestrian connection is provided (measured on the longest side of the block). <p>C-6 Minimize cul-de-sacs to the maximum extent possible. Where cul-de-sacs are necessary due to barriers such as freeways and detention basins:</p> <ul style="list-style-type: none"> • Provide at least one pedestrian and bicycle path at the circular end in order to connect to other streets and trails, to allow emergency vehicle access when warranted and to minimize response times for emergency access; and, • Consider designing cul-de-sacs with a planted cul-de-sac island to limit the amount of pavement and increase stormwater management opportunities. <p>C-8 All applications for master plans, subdivisions, and development projects shall indicate how streets are connected to existing local and regional roadways, and how a connected network of streets is created throughout the Hillcrest Station Area.</p> <p>LU-3 Create a Transit Village in the western portion of the Hillcrest Station Area north of the Union Pacific Railroad right-of-way, with direct pedestrian, bicycle, bus transit, and automobile connections to the eBART station in the median of SR 4.</p> <p>LU-8 Develop a Town Center in the eastern portion of the Hillcrest Station Area that incorporates retail, entertainment, hospitality, and residential uses in a “lifestyle center” or other pedestrian-oriented format.</p> <p>LU-14 Allow compatible retail, restaurant, personal service, and other commercial uses within the Office TOD district. These uses must be on the ground floor and publicly accessible.</p> <p>LU-16 Up to 100 square feet of compatible retail, restaurant, personal service, office, and other commercial uses per residential unit is allowed within the Residential TOD district. These uses must be on the ground floor or second floor, and must be publicly accessible.</p> <p>LU-4 Locate high-density residential development within</p>	

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		<p>a half-mile walk from the eBART station.</p> <ul style="list-style-type: none"> A range of housing types may be included in a development project, some of which may be as low as 10 units per acre provided the total project meets the minimum density standard. Residential units should be at least 300 feet away from rail and freeway rights-of-way, or incorporate construction measures that mitigate noise and air emission impacts. <p>LU-24 Locate eBART parking so that it is accessible to passengers arriving by car, bus, bicycle, or on foot.</p> <p>LU-27 Provide public bus facilities near each eBART station.</p> <p>C-3 Design streets so that they incorporate medians, landscaping, sidewalks, street trees, travel lanes, bike lanes, and on-street parking, such that they:</p> <ul style="list-style-type: none"> Are consistent with the desired pedestrian-oriented character and safety; and, Meet the needs of all users including drivers, pedestrians, persons with disabilities, bicyclists, and transit users. <p>C-36 Develop a multi-modal transit center at the median eBART station that provides access to eBART, buses, taxies, and shuttles. Design the transit facilities to include:</p> <ul style="list-style-type: none"> Bus transit center and approximately 8-12 bus bays (moved from the Hillcrest Park-and-Ride lot to the eBART Station parking area); Kiss-and-ride limited term parking area; Disabled parking; Shuttle pick up and drop off area; and, Safe and attractive pedestrian and bike crossings to the station. <p>C-38 Design arterials and arterial intersections, particularly near pedestrian-oriented streets, to accommodate transit services, including bus stops, pull-outs, and shelters.</p> <p>C-39 Prioritize pedestrian and bicyclist safety at intersections and street crossings with measures such as:</p> <ul style="list-style-type: none"> Contrasting and/or textured paving crosswalks; In-ground, blinking crosswalk lights; and, Pedestrian refuges and bulb-outs. <p>C-41 Require development projects to provide walking and biking routes directly to major destinations such as parks, pedestrian centers, and eBART stations.</p> <p>C-42 Adopt minimum bicycle parking requirements for residential and commercial projects. Bicycle parking should be designed with the following criteria:</p> <ul style="list-style-type: none"> Short-term parking should be visible from the main entrance of buildings. Long-term parking should be provided in secure, well-lighted areas. <p>C-46 Sidewalks should have at least a five-foot wide</p>	

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		<p>clear path of travel.</p> <p>C-47 Provide bike routes throughout the Station Area, as illustrated in Figure 3-5.</p> <ul style="list-style-type: none"> • Class 1: Continuous multi-purpose trail along East Antioch Creek and the detention basins • Class 2: Slatten Ranch Road, Phillips Lane, and Viera Avenue <p>C-48 Allow bicycle circulation on all local streets, to the extent feasible.</p> <p>C-49 Design and implement a multi-use trail loop around the wetlands and East Antioch Creek. This loop should include at least two pedestrian crossings across the creek.</p> <p>C-50 Provide multi-use trails that connect from East Antioch Creek to existing neighborhood parks north of the Station Area.</p> <p>C-22 Apply a Transportation Demand Management (TDM) program that reduces single-occupant vehicle trips to development exceeding 25,000 square feet of non-residential space. Components of TDM programs could include:</p> <ul style="list-style-type: none"> • Contributions to urban design projects, such as: <ul style="list-style-type: none"> - Bicycle parking, both short- and long-term, located in appropriate places; and, - Direct routes to transit (station, shuttle, or bus) and other key destinations that are well-lit and designed for pedestrian comfort. • Employer-based programs, such as: <ul style="list-style-type: none"> - Carpool and vanpool ride-matching services; - Designated employer TDM contact; - Guaranteed ride home for transit users and car/vanpoolers; - Transit subsidies for employees; - Flexible work schedules, shortened work weeks, or options to telecommute; - Information campaigns using brochures, boards/kiosks, or other communication outlets; and, - Employer provided showers and lockers. • Meeting or exceeding project design standards, such as: <ul style="list-style-type: none"> - Free and preferential parking for carpools, vanpools, low-emission vehicles, and car-share vehicles; - Passenger loading zones; and, - Bicycle- and pedestrian- friendly site planning and building design. <p>UT-11 All new development shall participate in all solid waste source reduction and diversion programs in effect at the time of the issuance of building permits.</p> <p>UT-12 All projects in the Hillcrest Station Area shall comply with the City's Construction and Demolition Debris recycling regulations by preparing a Waste Management Plan and diverting at least 50 percent of all construction and</p>	

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		demolition debris. UT-13 Restaurants should use on-site composting systems if a food waste recycling program is not available. UT-14 Trees, stumps, vegetation, and soils associated with excavation and land clearing shall be composted, recycled, or reused, except when soils may be contaminated with hazardous materials, or where other conditions make this infeasible as determined by the City.	
3.6 Cultural Resources			
3.6-1	New development under the proposed Plan has the potential to adversely affect historic resources that appear on State historical inventories or may be eligible for inclusion on such lists.	EH-27 Require the project sponsor to complete the California Department of Parks and Recreation site forms for submittal to the California Archaeological Inventory located at Sonoma State University for each of the sites listed below. As part of the effort, require the project sponsor to complete focused historical archival research for the project area to chronicle historic development since the late 19th Century. This will help inform the determination of whether the sites are eligible to be designated as historic resources. <ul style="list-style-type: none"> • The "Foundry" (APN: 052-052-002) • 2500 Willow Lane • Two debris piles south of Oakley Road and east of Willow Road • Abandoned railroad spur EH-28 If any resource is found to be eligible for inclusion on the California Register of Historic Resources, the project sponsor shall consult with the State Historic Preservation Officer (SHPO) to document the existing condition, in order to establish for posterity a record of the historic property prior to its alteration, relocation, or demolition, and to identify any further requirements for environmental review and/or mitigation.	Less than Significant
3.6-2	New development within the Planning Area has the potential to disrupt undiscovered archaeological resources and human remains.		Less than Significant
3.6-3	Implementation of the proposed Specific Plan could adversely affect unidentified paleontological resources.		Less than Significant
3.7 Geologic and Seismic Hazards			
3.7-1	Proposed development in the Planning Area could expose people or structures to surface fault rupture.		Less than Significant

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3.7-2	Proposed development in the Planning Area could expose people or structures to seismic hazards such as ground shaking or liquefaction.		Less than Significant
3.7-3	Implementation of the Hillcrest Station Area Specific Plan could expose proposed structures and infrastructure to geologic hazards, including expansive soils, differential settlement, and subsidence.		Less than Significant
3.7-4	Proposed development along the two southernmost hills adjacent to SR 4 could be susceptible to seismically-induced landslides or other slope failures, potentially resulting in damage to structures and private property.	<p>EH-30 A slope stability analysis of the hillsides along the southernmost portion of the Planning Area shall be conducted prior to the issuance of any grading permits in this area.</p> <ul style="list-style-type: none"> • If slope stability and/or landslides are expected to be an issue, the slope stability analysis shall recommend measures to ensure that future development projects in this area be designed and constructed to avoid seismically-induced landslides or other slope failures. Recommendations can include: <ul style="list-style-type: none"> • Requiring that the slope is cut at a flatter angle, such as 2.5:1 or 3:1 for slopes greater than 30 feet high; or, • Requiring that the slope is excavated and re-built as engineered fill buttress slopes inclined at 2:1 for slopes up to 30 feet high and inclined at 2.5:1 for slopes greater than 30 feet high. • Detailed grading plans and construction drawings incorporating the recommended measures shall be submitted to the City of Antioch Building Department for approval prior to the issuance of building permits. 	Less than Significant
3.7-5	Future development in the Planning Area could result in increased soil erosion.		Less than Significant
3.8 Hazardous Materials, Wildland Fires, and Other Hazards			
3.8-1	Implementation of the Hillcrest Station Area Specific Plan could expose construction workers and/or the public to soil and groundwater impacted with petroleum-products, agriculture chemicals, or other	<p>EH-37 Prior to approval of any discretionary permits for subdivisions or new construction, property owners shall work with the Contra Costa County Fire Protection District (CCCFPD), the Contra Costa County Health Services Department (CCCHSD), the California Department of Toxic Substances Control (DTSC), and/or the California Regional Water Quality Control Board (RWQCB), whichever has jurisdiction, to resolve issues related to contamination that could potentially impact future land uses in the project area.</p> <p>EH-38 For parcels with known contamination, the lateral</p>	Less than Significant

Table E-6 Summary of Impacts and Proposed Specific Plan Policies that Reduce the Impact

Impact #	Impact Statement	Proposed Specific Plan Policies that Reduce the Impact	Significance
	hazardous materials.	<p>and vertical extent of contamination shall be determined; cleanup activities shall be undertaken per state and federal regulations; and appropriate land use restrictions implemented, as necessary, prior to the issuance of development permits on parcels with known contamination.</p> <p>EH-39 As part of the project entitlement process, appropriate studies shall be conducted for each site with an open remediation case based on proposed land uses by a qualified environmental professional. The studies shall compare maximum soil, soil gas, and groundwater concentrations to relevant environmental screening levels (ESLs) and evaluate all potential exposure pathways from contaminated groundwater and soil. As required by the appropriate responsible agency, studies shall be prepared for the:</p> <ul style="list-style-type: none"> • Former Hickson-Kerley (FKP) Property (APN: 052-051-034); • Chevron Old Valley Pipeline; • TAOC New Love Pump Station Site (APN: 052-051-034); and, • PG&E Oakley Metering Station (APN: 052-051-035) <p>EH-40 At sites with known contamination issues, a Construction Risk Management Plan (RMP) shall be prepared and approved prior to commencement of construction, to protect the health and safety of construction workers and site users adjacent to construction activities.</p> <p>EH-41 Soil and water contamination assessments are required to ensure public health for projects on the following properties:</p> <ul style="list-style-type: none"> • PDQ parcel (APN: 052-052-002); • Former orchards; • Parcels adjacent to the PG&E Substation property; • Parcels adjacent to the railroad right-of-way; • Parcels adjacent to active and inactive petroleum pipelines; • Park-n-ride lot (APNs: 052-011-009, 052-011-010, 052-011-011, 052-011-015, 052-011-016); and, • Detention basins (APN: 051-170-004, 051-170-053, 051-333-001, 052-030-022). <p>EH-42 If soil or groundwater contamination is identified on any parcel in the Hillcrest Station Area, the lateral and vertical extent of contamination shall be determined; cleanup activities shall be undertaken per state and federal regulations; and appropriate land use restrictions implemented, as necessary, prior to issuance of development permits.</p> <p>EH-43 The City of Antioch and property owners shall contact and work with Union Pacific to ensure that planned railway improvements that disturb potentially contaminated soils do not impact nearby properties or development, or cause a public health hazard.</p> <p>EH-44 Project applicants shall submit to the City a project</p>	

Table E-6 Summary of Impacts and Proposed Specific Plan Policies that Reduce the Impact

Impact #	Impact Statement	Proposed Specific Plan Policies that Reduce the Impact	Significance
		<p>Demolition Plan that addresses onsite and offsite chemical and physical hazards. The Demolition Plan shall contain:</p> <ul style="list-style-type: none"> • Information, to be verified by the City prior to the issuance of demolition permits for any existing structures or buildings, regarding the presence of hazardous building materials such as asbestos-containing building materials, PCBs, and lead-based paint in existing buildings proposed for demolition, additions, or alterations; • Protocols for ensuring the safety of workers and the public during demolition or construction activities, as approved by the City. These protocols will include, but are not limited to: <ul style="list-style-type: none"> - Prior to demolition, hazardous building materials shall be removed and appropriately disposed of in accordance with all applicable guidelines, laws, and ordinances. - The demolition of buildings containing asbestos requires that licensed asbestos abatement contractors are retained and the Bay Area Air Quality Management District (BAAQMD) is notified ten days prior to initiating construction and demolition activities. - The Cal-OSHA-specified method of compliance for demolition activities involving lead-based paint including required respiratory protection, protective clothing, housekeeping, hygiene facilities, medical surveillance, and training shall be required. - Any electrical transformers and fluorescent light ballasts that do not have labels stating that they do not contain PCBs, shall be treated as hazardous waste and are subject to all hazardous waste regulations. <p>UD-20 Provide a continuous landscape buffer along both sides of the rail line corridor, outside of the Union Pacific and Chevron easements. The minimum width of the landscaped buffer shall be 25 feet if adjacent to a building; and 15 feet if adjacent to a street.</p> <ul style="list-style-type: none"> • Include landscaping, berming (typically 4 to 5 feet high), and at least one continuous row of trees throughout the area. • This landscape buffer may be located within the Chevron easement if permission, encroachment permits, and maintenance agreements are obtained prior to final approval for a development project. <p>UD-22 Provide a continuous landscape buffer, with a minimum width of approximately 25 feet, around the southern and eastern edges of the Hillcrest PG&E Substation.</p> <ul style="list-style-type: none"> • Include landscaping and a continuous double row of trees to screen the facility from new development, SR 4, and the eBART station. • Work with PG&E when the company decides to expand substation operations within their site, to ensure an adequate separation is retained between the substation and development. 	

Table E-6 Summary of Impacts and Proposed Specific Plan Policies that Reduce the Impact

<i>Impact #</i>	<i>Impact Statement</i>	<i>Proposed Specific Plan Policies that Reduce the Impact</i>	<i>Significance</i>
3.8-2	Future land uses proposed by the Hillcrest Station Area Specific Plan could involve the transport, use, and disposal of hazardous materials.		Less than Significant
3.8-3	Implementation of the proposed Specific Plan would expose people or structures to some risk of loss, injury, or death involving high-pressure pipeline incidents.	<p>EH-54 Prior to the approval of development permits, require a disposition plan for all petroleum pipelines so that required mitigations (relocation, abandonment or protection) can be determined.</p> <p>EH-55 The City of Antioch and property owners shall work with Chevron to evaluate the risk factors related to the active high-pressure petroleum product pipelines, including product transported, operating pressure, age of pipeline, and depth of cover, and to provide adequate access to the oil pipelines in the Hillcrest Station Area. If it is determined that there is a significant risk to adjacent residential development, prepare a Risk Management Plan or comparable risk reduction action plan.</p> <p>UT-15 Develop a comprehensive map showing all existing service corridor and utility easements to ensure proper inter-agency coordination prior to issuing any grading permits. Maps should show the location and dimensions of each pipeline within the easement or right-of-way. Coordinate with:</p> <ul style="list-style-type: none"> • Chevron to map all active and abandoned petroleum product pipelines; • PG&E to map all active natural gas pipelines; • City of Antioch Public Works Department to map all stormwater pipelines; • Delta Diablo Sanitation District to map all sewer pipelines; and, • Contra Costa Water District to map all water pipelines. <p>UD-20 Provide a continuous landscape buffer along both sides of the rail line corridor, outside of the Union Pacific and Chevron easements. The minimum width of the landscaped buffer shall be 25 feet if adjacent to a building; and 15 feet if adjacent to a street.</p> <ul style="list-style-type: none"> • Include landscaping, berming (typically 4 to 5 feet high), and at least one continuous row of trees throughout the area. • This landscape buffer may be located within the Chevron easement if permission, encroachment permits, and maintenance agreements are obtained prior to final approval for a development project. <p>LU-23 Locate residential units away from railroads and freeways, to minimize impacts from noise and air emissions. Units should be at least 300 feet away from rail and freeway rights-of-way, or incorporate construction measures that mitigate noise and air emission impacts.</p>	Less than Significant

Table E-6 Summary of Impacts and Proposed Specific Plan Policies that Reduce the Impact

<i>Impact #</i>	<i>Impact Statement</i>	<i>Proposed Specific Plan Policies that Reduce the Impact</i>	<i>Significance</i>
3.8-4	Implementation of the proposed Specific Plan would expose people or structures to some risk of loss, injury or death involving urban or wildland fires.	<p>UT-20 At the time of any development application, subdivision, or master plan submittal, inform the CCC Fire Protection District, and involve them in the development review process. Prior to approval of any discretionary development project in the area, require written verification from the CCC Fire Protection District that a five minute response time (including three minute running time) can be maintained for 80 percent of emergency fire, medical, and hazardous materials calls on a citywide response area basis.</p> <p>UT-21 Project sponsors are required to submit a minimum of three (3) copies of a site plan for each phase of development so that Contra Costa County Fire Protection District is able to determine the placement of fire hydrants, required fire flow, and review of access in order to ensure compliance with minimum requirements as set forth in the California Fire Code.</p> <p>UT-22 The City and project sponsors in the Planning Area shall work with the Contra Costa County Fire Protection District to provide a 1-acre building site at a location subject to approval by the Contra Costa County Fire Protection District.</p> <p>UT-23 Fire access roadways and fire hydrants shall be installed and in service prior to construction.</p> <p>UT-24 Traffic signals, which are installed or modified as part of this Specific Plan, shall have preemption devices (Opticom) installed.</p>	Less than Significant
3.9 Hydrology and Water Resources			
3.9-1	Project construction activities could result in increased erosion and sedimentation, resulting in adverse impacts to water quality along East Antioch Creek and downstream waterbodies.	<p>EH-45 Development projects in the Station Area shall comply with the requirements of Provision C.3 of the NPDES Municipal Stormwater Permit issued to the Contra Costa County Clean Water Program. As required by the C.3 Provisions, building permit applications must be accompanied by a Stormwater Control Plan, for review and approval by the City Engineer, which specifies the treatment measures and appropriate source control and site design features that will be incorporated into project design and construction to reduce the pollutant load in storm water discharges and manage runoff flows.</p> <p>EH-46 Design storm drainage and flood control structures to minimize erosion and creek sedimentation, and to preserve and enhance the wildlife habitat and vegetation of East Antioch Creek.</p>	Less than Significant
3.9-2	New and increased intensity of urban land uses could result in increased levels of non-point source pollutants in storm water runoff, adversely affecting water quality in receiving waterbodies and East Antioch Creek.	Full compliance with NPDES C.3 Provisions and the proposed Plan policies listed under Impact 3.9-1 would ensure that impacts related to NPS pollutants and post-construction storm water quality are less than significant.	Less than Significant

Table E-6 Summary of Impacts and Proposed Specific Plan Policies that Reduce the Impact

<i>Impact #</i>	<i>Impact Statement</i>	<i>Proposed Specific Plan Policies that Reduce the Impact</i>	<i>Significance</i>
3.9-3	Future development within FEMA 100-year flood hazard zones could pose significant risks to structures, human health, and private property.	<p>UT-1 Prior to approval of any land subdivisions or development projects within the Hillcrest Station Area, a Drainage and Flood Management Master Plan shall be prepared in collaboration with Contra Costa County Flood Control and Water Conservation District, the City of Antioch Public Works Department, the City of Antioch Planning Department, and the City of Antioch Parks and Recreation Department. The Plan shall:</p> <ul style="list-style-type: none"> • Document the overall drainage and flood control concept to be employed within the Hillcrest Station Area to ensure adequate and safe storm flows and to minimize flooding; • Address funding and responsibility for long-term maintenance of the flood control improvements; • Demonstrate how the natural hydrologic functions of the site are integrated with the storm drainage system and the overall site design, to the maximum extent feasible; and, • Identify how improvements can be phased for each development area. <p>UT-2 Continue the Contra Costa County Flood Control and Water Conservation District Drainage Area Fee Program to fund flood control improvements in the Hillcrest Station Area.</p> <p>UT-3 Ensure that new development provides needed drainage and flood protection improvements in proportion to a project's impacts, to assure an equitable distribution of costs to construct and maintain drainage infrastructure. Construct new trunk mains along the backbone street alignments and provide connections into East Antioch Creek, as shown conceptually in Figure 6-2, Existing and Future Storm Drains.</p> <p>UT-4 Minimize total impervious areas by allowing narrow road sections and shared driveways, and using pervious materials on driveways, gutters, and off-street parking areas, where appropriate.</p> <p>C-7 Promote the use of permeable paving for parking aisles, off-street bike lanes, and parking lots, where feasible.</p>	Less than Significant
3.9-4	Implementation of the Hillcrest Station Area Specific Plan would alter existing drainage patterns, potentially affecting the volume and/or timing of peak runoff in the municipal storm drain system.	Specific Plan policies listed under Impact 3.9-1 and 3.9-3 would contribute to reducing this impact to less than significant levels.	Less than Significant
3.9-5	Implementation of the Hillcrest Station Area Specific Plan could inhibit the infiltration of storm water runoff to groundwater, thereby reducing groundwater recharge and aquifer	Specific Plan policies listed under Impact 3.9-1 and 3.9-3 would contribute to reducing this impact to less than significant levels.	Less than Significant

Table E-6 Summary of Impacts and Proposed Specific Plan Policies that Reduce the Impact

<i>Impact #</i>	<i>Impact Statement</i>	<i>Proposed Specific Plan Policies that Reduce the Impact</i>	<i>Significance</i>
3.9-6	Construction activities and urban development resulting from implementation of the Hillcrest Station Area Specific Plan, in conjunction with other foreseeable development in the city, would not result in cumulatively considerable impacts on hydrology and water quality conditions.	Specific Plan policies listed under Impact 3.9-1 and 3.9-3 would contribute to reducing this impact to less than significant levels.	Less than Significant
3.10 Land Use			
3.10-1	The Plan proposes new policies and land use designations for areas covered by local and regional land use plans.		Less than Significant
3.10-2	The proposed Plan induces increased population and jobs through the development of new housing and commercial uses.		Less than Significant
3.11 Noise			
3.11-1	Development pursuant to the proposed Specific Plan could expose persons to or generate noise levels in excess of the City standards.	<p>EH-47 Require developers to comply with relevant noise insulation standards contained in Title 24 of the California Code of Regulations (Part 2, Appendix Chapter 12A).</p> <p>EH-48 Require acoustical analysis performed by a licensed acoustical engineer to determine appropriate noise mitigations in order to meet the City's standards for projects as described below. Building permit applications shall demonstrate that noise mitigations are included in construction documents.</p> <ul style="list-style-type: none"> • Residential projects within: <ul style="list-style-type: none"> - 730 feet of the SR 4 centerline; - 310 feet of the SR 160 centerline; - 170 feet from the centerline of the Union Pacific Mococo Rail Line right-of-way; and, - 850 feet from the intersection of Hillcrest Avenue and the Union Pacific Mococo Rail Line (or the location(s) where freight trains sound horn). • Institutional and Office projects within: <ul style="list-style-type: none"> - 340 feet of the SR 4 centerline; - 150 feet of the SR 160 centerline; - 80 feet from the centerline of the Union Pacific Mococo Rail Line right-of-way; 	Significant and Unavoidable

Table E-6 Summary of Impacts and Proposed Specific Plan Policies that Reduce the Impact

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		<ul style="list-style-type: none"> - 400 feet from the intersection of Hillcrest Avenue and the Union Pacific Mococo Rail Line (or the location(s) where freight trains sound horn); - 30 feet of the eBART track centerline; and - 60 feet from the eBART at track crossovers (“frogs”). <p>EH-49 Where projects in the Hillcrest Station Area incorporate noise mitigations and still cannot achieve City standards for exterior noise levels, as determined by acoustical analysis by a licensed acoustical engineer, project sponsors may apply for an exception to City exterior noise standards.</p> <ul style="list-style-type: none"> • Such exception requests will be considered through a discretionary development entitlement process. • Projects requesting exceptions to exterior noise standards should demonstrate that: <ul style="list-style-type: none"> - (1) all feasible noise mitigations have been incorporated to lower exterior noise levels as close as possible to City standards; and - (2) noise mitigations that lower interior noise levels below the City and state standard of 45 dB have been incorporated, to compensate for the high exterior noise levels which make outdoor activities uncomfortable. <p>EH-50 In new residential projects, provide noise buffers other than sound walls, such as vegetation, storage areas, or parking, and site planning and locating bedrooms away from noise sources.</p> <p>EH-51 Work with Union Pacific to minimize noise issues related to freight rail by implementing a grade separation at Hillcrest Avenue, and establishing a quiet zone through the Station Area.</p> <p>LU-23 Locate residential units away from railroads and freeways, to minimize impacts from noise and air emissions. Units should be at least 300 feet away from rail and freeway rights-of-way, or incorporate construction measures that mitigate noise and air emission impacts.</p>	
3.11-2	New development under the Specific Plan may result in exposure of people and noise-sensitive uses to temporary noise and vibration impacts related to construction activities.	EH-52 Require developers to mitigate noise exposure to sensitive receptors from construction activities. Mitigation may include a combination of techniques that reduce noise generated at the source, increase the noise insulation at the receptor, or increase the noise attenuation as noise travels from the source to the receptor (e.g., through the incorporation of barriers).	Less than Significant
3.11-3	Freight rail activity could expose existing and future development to groundborne vibration.	EH-53 Require vibration velocity analysis to determine appropriate mitigations for proposed: <ul style="list-style-type: none"> • Residential projects within 200 feet from the centerline of the Union Pacific Mococo Rail Line right-of-way; • Institutional and Office projects within 120 feet from the centerline of the Union Pacific Mococo Rail Line right-of-way; and, 	Less than Significant

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<i>Impact #</i>	<i>Impact Statement</i>	<i>Proposed Specific Plan Policies that Reduce the Impact</i>	<i>Significance</i>
		<ul style="list-style-type: none"> High-sensitivity use projects (e.g. hospitals and medical labs) within 600 feet from the centerline of the Union Pacific Mococo Rail Line right-of-way. 	
3.12 Public Services			
3.12-1	Development pursuant to the adoption of the Hillcrest Station Area Specific Plan will require fire protection services that exceed current staffing and facilities.	<p>UT-20 At the time of any development application, subdivision, or master plan submittal, inform the CCC Fire Protection District, and involve them in the development review process. Prior to approval of any discretionary development project in the area, require written verification from the CCC Fire Protection District that a five minute response time (including three minute running time) can be maintained for 80 percent of emergency fire, medical, and hazardous materials calls on a citywide response area basis.</p> <p>UT-21 Project sponsors are required to submit a minimum of three (3) copies of a site plan for each phase of development so that Contra Costa County Fire Protection District is able to determine the placement of fire hydrants, required fire flow, and review of access in order to ensure compliance with minimum requirements as set forth in the California Fire Code.</p> <p>UT-22 The City and project sponsors in the Planning Area shall work with the Contra Costa County Fire Protection District to provide a 1-acre building site at a location subject to approval by the Contra Costa County Fire Protection District.</p> <p>UT-23 Fire access roadways and fire hydrants shall be installed and in service prior to construction.</p> <p>UT-24 Traffic signals, which are installed or modified as part of this Specific Plan, shall have preemption devices (Opticom) installed.</p>	Less than Significant
3.12-2	New development in the Hillcrest Station Area will require additional police services that exceed current staffing.	<p>UT-25 Ensure that the Antioch Police Department has adequate police staff and equipment to serve the new development in the Hillcrest Station Area.</p> <p>UT-26 As part of new development applications, require a fiscal impacts analysis related to police services. The analysis must either demonstrate that total estimated tax revenues to the General Fund will pay for the total estimated cost of police services, or propose additional funding sources for ongoing police services to the Hillcrest Station Area.</p> <p>UT-27 Coordinate with the Antioch Police Department on project site design to increase public safety. Consider lighting and minimizing hiding spots in building and street design.</p>	Less than Significant
3.12-3	New development under the proposed Hillcrest Station Area Specific Plan will increase the demand for school facilities.	<p>UT-28 Require new development to pay all legally established fees or participate in land-based financing districts established by local school districts for the acquisition and development of school sites with adequate, permanent classroom space, as required by the local school district.</p> <p>UT-29 Prior to approval of any development projects or subdivisions that include residential units, the City and project applicants shall work with the Antioch Unified School District to identify any additional elementary school facilities</p>	Less than Significant

Table E-6 Summary of Impacts and Proposed Specific Plan Policies that Reduce the Impact

Impact #	Impact Statement	Proposed Specific Plan Policies that Reduce the Impact	Significance
		<p>needed to serve students from the Planning Area. If it is determined that students from the project or subdivision will cause the capacity of the elementary school serving the Hillcrest Station Area to be exceeded, the City and the project sponsor shall work with AUSD to provide the additional required facilities prior to occupancy of the residential units.</p>	
3.12-4	<p>Implementation of the Hillcrest Station Area Specific Plan would result in an increase in the use of existing neighborhood and regional parks and would increase the demand for parkland.</p>	<p>OS-1 Prepare parks plans as part of the required Master Plans for the Transit Village and Town Center areas, in order to meet the recreational needs of the residents and employees of the Station Area. The parks components of the Master Plans should fulfill the following criteria:</p> <ul style="list-style-type: none"> • An integrated network of public open spaces, parks, plazas, and trails should be created to connect the Transit Village, Town Center, and existing neighborhoods. • Open space types and locations should be generally consistent with Figure 3-6. • All new employees and residents should be within a five- to ten-minute walk of a park or plaza. • For all new public parks, the design, program, and facilities must be approved by the City. <p>OS-2 Park and open space land must be provided as part of new development. Park dedication requirements will be based on the number of units and size of residential units proposed in an individual development project, following the provisions of the City's ordinances. With City approval, impact fees may be paid in lieu of park dedication for small properties where no parks are shown on the Open Space Plan.</p> <ul style="list-style-type: none"> • In the Transit Village area, provide a small neighborhood park approximately two acres in size within walking distance of the residential units. This park could be located adjacent to the East Antioch Creek Linear Park trail. • In the Town Center area, provide a neighborhood park approximately three acres in size, with at least one sports field. <p>OS-3 Provide a comprehensive maintenance program for all open spaces, parks, plazas, and landscape buffers. Any parks or open spaces less than five acres in size should be maintained by private property owners, rather than by the City of Antioch, using mechanisms such as Homeowners' Associations (HOAs) or Street Lighting and Landscaping Maintenance Districts (LLMDs).</p> <p>OS-6 Project sponsors may apply for partial credit of park requirements by improving utility easement landscape buffers with trails, benches, and other recreational amenities.</p> <p>OS-7 Connect trails and parks to the City's existing trail network.</p> <p>OS-8 Create a linear public open space at least 25 feet wide around the wetlands and detention basins. Design the open space consistent with the following criteria:</p> <ul style="list-style-type: none"> • A multi-use trail 8-12 feet wide is provided around 	Less than Significant

Table E-6 Summary of Impacts and Proposed Specific Plan Policies that Reduce the Impact

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		<p>the perimeter of the 50-foot inner wetland buffer area;</p> <ul style="list-style-type: none"> • The trail connects to public streets, public parks, and plazas; • At least two pedestrian and bike paths are available to cross the creek; • At least one staging area with parking is provided adjacent to the trail in the Transit Village area and one in the Town Center area; • Recreational facilities, such as seating, picnic tables, tot lots, and exercise areas or par course, are provided adjacent to the trail; • Viewing platforms may be built to observe the natural areas; and • If feasible, informational signage is provided so that the riparian habitat can be used as an educational destination for local schools. <p>OS-9 Improve the creek and wetlands so that they are visually attractive, and at the same time protect wildlife habitat, movement corridors, special status species, and stormwater management functions, consistent with the criteria below.</p> <ul style="list-style-type: none"> • Any creek, wetland, and wetland buffer improvement must be reviewed and approved by a certified biologist. • Appropriate types of fencing must be provided between the wetlands and the park areas to ensure that pets and children do not disturb sensitive habitats. • Plants must be native and appropriate to East Antioch Creek. <p>OS-10 Development sponsors may apply for credit toward a portion of the park land dedication requirements for creek and wetlands restoration and/or improvements.</p> <p>OS-11 Improve areas around the detention basins with trails, trees, landscaping, and other amenities so they become an integral and attractive portion of the open space network within the Station Area.</p> <p>OS-12 Incorporate public plazas in commercial and mixed use development within the pedestrian center areas. Plazas should be designed consistent with the following criteria:</p> <ul style="list-style-type: none"> • The size of the plaza is to be commensurate with the size of the development project and the height and scale of the buildings. • Plazas must be located adjacent to a public street. • Plazas must be open to the public during all daylight hours. • Plazas must be located generally adjacent to retail and restaurant uses, rather than primarily office uses. • Both paved areas and landscaping must be included, and seating and areas for interaction must be provided. • A variety of flexible seating options (ledges, steps, or movable chairs), water features or art, connectivity to the 	

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		street, environmental protection, and access to food (food carts or adjacent cafés) must be provided.	
3.12-5	Implementation of the Hillcrest Station Area Specific Plan would result in an increase in demand for community center space.	<p>UT-31 Provide adequate community center space for new residents, either in development projects or through an in-lieu fee.</p> <ul style="list-style-type: none"> Community center space must serve all the residents of the City, and be programmed with activities that meet the unmet needs of the Antioch community. Exempt ground floor public community center space from floor area ratio (FAR) limits in mixed-use development projects. <p>UT-32 Exempt the floor area devoted to daycare and childcare from floor area ratio (FAR) limits in development projects.</p>	Less than Significant
3.13 Utilities			
3.13-1	Expected buildout of the Hillcrest Station Area will increase demand for potable water in the Planning Area and will require the expansion of the municipal water distribution system.	<p>UT-5 Expand the water distribution system such that it is adequate to serve new development in the Hillcrest Station Area, as conceptually illustrated in Figure 6-3, Existing and Future Water System.</p> <p>UT-6 Work with the Contra Costa County Fire Protection District to determine required fire flow and the need for water pressure boosting systems.</p> <p>UT-7 To reduce water consumption, require the installation of:</p> <ul style="list-style-type: none"> Low-flow showerheads, faucets, and toilets; Low-flow irrigation systems in public rights-of-way, public parks, and recreation areas; and, Drought-tolerant plant palettes in all new streetscape areas. <p>UT-8 To reduce water consumption, recommend the installation of:</p> <ul style="list-style-type: none"> Low-flow irrigation systems in private landscaped areas; and Drought-tolerant plant palettes in private landscaped areas. 	Less than Significant
3.13-2	Implementation of the proposed Specific Plan would increase urban runoff and require the expansion of the municipal stormwater management system.	<p>UT-1 Prior to approval of any land subdivisions or development projects within the Hillcrest Station Area, a Drainage and Flood Management Master Plan shall be prepared in collaboration with Contra Costa County Flood Control and Water Conservation District, the City of Antioch Public Works Department, the City of Antioch Planning Department, and the City of Antioch Parks and Recreation Department. The Plan shall:</p> <ul style="list-style-type: none"> Document the overall drainage and flood control concept to be employed within the Hillcrest Station Area to ensure adequate and safe storm flows and to minimize flooding; Address funding and responsibility for long-term maintenance of the flood control improvements; Demonstrate how the natural hydrologic functions of the site are integrated with the storm drainage system and the overall site design, to the maximum extent feasible; and, 	Less than Significant

Table E-6 Summary of Impacts and Proposed Specific Plan Policies that Reduce the Impact

Impact #	Impact Statement	Proposed Specific Plan Policies that Reduce the Impact	Significance
		<ul style="list-style-type: none"> • Identify how improvements can be phased for each development area. UT-2 Continue the Contra Costa County Flood Control and Water Conservation District Drainage Area Fee Program to fund flood control improvements in the Hillcrest Station Area. UT-3 Ensure that new development provides needed drainage and flood protection improvements in proportion to a project's impacts, to assure an equitable distribution of costs to construct and maintain drainage infrastructure. Construct new trunk mains along the backbone street alignments and provide connections into East Antioch Creek, as shown conceptually in Figure 6-2, Existing and Future Storm Drains. UT-4 Minimize total impervious areas by allowing narrow road sections and shared driveways, and using pervious materials on driveways, gutters, and off-street parking areas, where appropriate. EH-45 Development projects in the Station Area shall comply with the requirements of Provision C.3 of the NPDES Municipal Stormwater Permit issued to the Contra Costa County Clean Water Program. As required by the C.3 Provisions, building permit applications must be accompanied by a Stormwater Control Plan, for review and approval by the City Engineer, which specifies the treatment measures and appropriate source control and site design features that will be incorporated into project design and construction to reduce the pollutant load in storm water discharges and manage runoff flows. EH-46 Design storm drainage and flood control structures to minimize erosion and creek sedimentation, and to preserve and enhance the wildlife habitat and vegetation of East Antioch Creek. 	
3.13-3	Expected buildout of the proposed Specific Plan will require the expansion of the municipal wastewater collection system.	<p>UT-9 Expand the wastewater collection system such that it is adequate to serve new development in the Hillcrest Station Area, as conceptually illustrated in Figure 6-4, Existing and Future Sewer System. The 2003 Wastewater Collection System Master Plan identifies the sewer main on the eastern edge of the Planning Area between the Union Pacific Railroad tracks and East 18th as needing substantial additional capacity.</p> <p>UT-10 Amend sewer fees and/or other financing mechanisms if necessary such that Hillcrest Station Area project sponsors pay their fair share of the costs for sewer main improvements.</p>	Less than Significant