

**DRAFT
ENVIRONMENTAL IMPACT REPORT
HERCULES NEW TOWN CENTER**

State Clearinghouse No. 2007062002

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- A Notice of Preparation and Public Comments
- B Air Quality Modeling Data
- C Special Status Species Table
- D Noise Modeling Data
- E Traffic Modeling Data

1.0 INTRODUCTION

1.1 BACKGROUND

This Draft Environmental Impact Report (EIR) has been prepared to analyze the environmental effects of the proposed Hercules New Town Center (HNTC) project in the City of Hercules, Contra Costa County, California, pursuant to the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000 et seq.), and the *CEQA Guidelines* (California Code of Regulations [CCR] Title 14, Section 15000 et seq.).

CEQA requires California public agencies to consider the environmental consequences of projects for which they have discretionary authority. The public agency with the principal responsibility for carrying out or approving a project is the “lead agency.” CEQA requires the lead agency to prepare an EIR if there is substantial evidence, in light of the whole record, that a project may have a significant effect on the environment. A significant effect is defined in CEQA as a substantial and adverse physical change in the environment. The City of Hercules Redevelopment Agency (City RDA) is the lead agency for the proposed project.

The proposed HNTC project consists of two elements. First, the City RDA proposes amendments to the Hercules General Plan (General Plan) and Zoning Ordinance to create a "New Town Center" (NTC) land use designation and zoning district that would apply to the HNTC planning area. Second, the City RDA and the Hercules New Town Center LLC (project sponsor) propose redevelopment of one parcel, the Park & Ride (PNR) parcel, within the HNTC planning area with a mixed-use project called Market Town.

1.2 HERCULES NEW TOWN CENTER HISTORY

In 1986, the Bay Area Rapid Transit District (BART) acquired the PNR parcel for use as a future transit facility. In 1992, approximately two-thirds of the PNR parcel was improved by the California Department of Transportation (Caltrans) as a park-and-ride lot; in addition, it serves as a major bus transfer terminal for Western Contra Costa County Transit Authority (WestCAT). The bus facility is referred to as the “Hercules Transit Center.”

Beginning in 1998, City staff and policy makers began considering the benefits of possible additional or new uses for the PNR parcel and the central portion of Hercules. In 1999, the City approached BART with a request for the relocation of the transit facilities currently on the PNR parcel to comparable undeveloped property located approximately one-half mile east along State Route 4 (SR 4). The City RDA authorized its staff to work with BART to cooperatively pursue an exchange of properties to further both the goals and objectives of the City RDA, and to ensure that BART’s transit function and development opportunities be retained.

On May 11, 2000, the City and BART staff agreed to a Memorandum of Understanding (MOU) listing the conditions that, if fulfilled, BART staff would propose to the BART Board of Directors that the exchange of property be accomplished. In the MOU, the City RDA and BART agreed to cooperatively negotiate the proposed exchange of the BART District’s PNR parcel for comparable land on Willow Avenue. In mid-2001, the City RDA purchased from a private owner the 8.7-acre C1 parcel, which it intends to exchange for the PNR parcel. Refer

to Figure 3-2 (Planning Area Map) in Chapter 3 (Project Description) of this EIR for a depiction of the parcels comprising the HNTC planning area.

In April 2006, following several years of negotiations, the City RDA and BART executed an Exchange Option Agreement (EOA) that provides the official framework within which the details of a possible future transaction between BART and the City RDA can be finally determined, assessed and offered for acceptance or rejection.

Concurrent with the BART negotiations, the City undertook and completed an initiative that produced a vision plan (called the Central Hercules Plan) and a form-based urban design code for the central portion of the City. The design code – the “Central Hercules Plan Regulating Code” – was adopted in mid-2001 as an amendment to the Zoning Ordinance. One chapter of the Central Hercules Plan describes the intended development of a new downtown, or town center, in the Hospitality Corridor and Civic Center planning areas located easterly from the intersections of Willow, San Pablo and Sycamore Avenues – the location of the project under consideration in this EIR. The vision for this area in the Central Hercules Plan is for a pedestrian- and transit-friendly mix of uses, including retail, office and residential, to be designed in a more urban pattern of development with buildings set close to defined streets. One of the most important parcels in the development of the new downtown was the PNR parcel, which was envisioned as one of the first parcels to be developed as part of the New Town Center.

From 2001 to 2003, City RDA staff and policymakers investigated and assessed the actual development potential of a New Town Center area. For a variety of reasons, including the complexity of infill projects, the amount of capital required and a need for development expertise, the City RDA concluded that a real estate development company with specialized expertise would be needed to serve as a master development partner with the City RDA. In 2003, the City RDA prepared a detailed solicitation package and received nine responses. After negotiations with one other development team, the City RDA in 2004 agreed to an Exclusive Right to Negotiate (ERN) with The Red Barn Co. (Red Barn). Red Barn created a company, Hercules New Town Center LLC (project sponsor), to meet the City RDA’s development objectives and achieve the City’s vision for a new downtown. The project sponsor is responsible for improving parcels to fulfill the City’s vision for a new town center in exchange for the right to develop on the parcels and other financial incentives provided by the City RDA.

In 2005, the City RDA approved a Development and Disposition Agreement (DDA) for the sale and development of the PNR parcel with a mixed-use project and the C1 parcel as a replacement parking facility for BART. The sale and development would occur following the exchange of parcels between BART and the City RDA. One of the agreements in the DDA is that the project sponsor develop a Planned Development Plan for the PNR parcel to ensure that the project meets the City’s land use and design vision for the area. Initial and Final Planned Development Plan applications have been submitted for the PNR parcel, which identify the site design, architecture and development standards for the proposed Market Town project. Once approved, the Planned Development Plan would be the controlling regulatory document for the PNR parcel. Concurrent with this, the City RDA proposes a new General Plan land use designation and zoning district for the 35-acre HNTC planning area to allow the development of a mixed-use town center.

1.3 RELATED PROJECTS

Referenced in this EIR are two projects related to the HNTC project, the BART Replacement Parking Facility and Ramp Relocation projects. A summary of each project is provided below.

1.3.1 BART REPLACEMENT PARKING FACILITY PROJECT

The BART Replacement Parking Facility project would involve the exchange of the BART-owned PNR parcel for a parcel currently owned by the City RDA known as the C1 parcel, the subsequent construction of a replacement parking facility on the C1 parcel and the closure of the existing Hercules Transit Center on the PNR parcel after the Replacement Parking Facility is constructed and operational. The Replacement Parking Facility would occupy 6.7 acres of the 8.7-acre C1 parcel and would include 422 parking spaces, 13 bus bays, three covered passenger shelters, six bicycle lockers, one bicycle storage rack, two “pay to park” machines, appurtenant signs and fencing, and landscaping. In addition, a pedestrian and bicycle pathway is proposed on the south side of Willow Avenue from the Sycamore Avenue intersection to the C1 parcel. The Planning Commission adopted a Mitigated Negative Declaration for the project and approved Use Permit and Design Review applications in December 2007. Implementation of this project would facilitate development of the PNR parcel with the proposed Market Town project.

1.3.2 RAMP RELOCATION PROJECT

The City and City RDA are proposing to relocate the existing connector ramps between SR 4 and Willow Avenue. The Ramp Relocation project includes removal of the existing ramps and construction of new eastbound on- and off-ramps.

SR 4 is a four-lane roadway (two eastbound and two westbound lanes) running in an east-west direction in the vicinity of Interstate 80 (I-80). SR 4 terminates at I-80 in central Hercules adjacent to the HNTC planning area. I-80 runs north-south and is a six-lane roadway (three southbound and three northbound lanes) north of the SR 4 interchange and a nine-lane roadway (four southbound and five northbound lanes) south of the SR 4 interchange.

The northbound I-80 to eastbound SR 4 connector ramp is a two-lane roadway; the Willow Avenue off-ramp is located along this connector ramp. The exit ramp combines paths of travel both for vehicles traveling from I-80 north to SR 4 east, with a continuous-speed transition to SR 4, and for local road access heading east on Willow Avenue, which requires deceleration prior to reaching Willow Avenue.

The northbound I-80 to eastbound SR 4 connector ramp, which includes the Willow Avenue off-ramp, is congested during peak hours. The deceleration of vehicles exiting onto Willow Avenue conflicts with the overall flow of the interchange as vehicles accelerate to merge onto SR 4. The safety hazard created by this situation is demonstrated by frequent accidents and incidents of vehicle departures from the roadway.

In addition to the safety hazard and traffic-inducing problems posed by the existing Willow Avenue on- and off-ramps, the ramps do not meet Caltrans geometric standards. Caltrans

design standards state that combining freeway-to-freeway traffic movements with access to the local road system, as occurs with the current I-80/SR 4 interchange, should be avoided where possible. The local access ramps are also positioned less than 1,000 linear feet away from the I-80 interchange along SR 4. This weaving distance does not provide the minimum recommended time and space for sign recognition and lane change movements.¹

The proposed Ramp Relocation project would relocate the eastbound SR 4/Willow Avenue ramps further east along SR 4 to provide a geometrically modern and compliant transition from SR 4 to Willow Avenue. Such a relocation would reduce the safety hazards associated with the present configuration. It would also allow the Willow Avenue off-ramp to be lengthened, which would add vehicle capacity to the ramp and avoid vehicle queuing on the off-ramp that could back up into the SR 4 traffic lanes.

Replacement of the existing SR 4/Willow Avenue ramps would also allow the City and other local agencies to develop integrated corridor management facilities, combining freeway, local arterial, and transit improvements, to help reduce congestion in the I-80 corridor. Effective congestion management requires expanded transit facilities to encourage transit use, as well as integrated operation of the arterial and freeway networks. The City has identified the undeveloped land area surrounding the I-80/SR 4 interchange as an area that provides opportunities for expansion of transit-supporting facilities such as new bus service, carpool/rideshare pick-up areas, and eventually transit-oriented development. As part of its adopted Capital Improvement Plan, the City is planning and funding the relocation and expansion of bus transit and high occupancy vehicle (HOV) access facilities for BART and WestCAT at the I-80/SR 4 interchange. The City is also funding a nearby rail/ferry/bus intermodal transit terminal that would be integrated with I-80 corridor operations to provide congestion relief. The current ramp alignments would not serve the needs of modern transit facilities; the proposed relocation is needed to allow such facilities to be built. Relocation of the ramps would also allow local roads and nearby transit facilities to be reengineered, enabling integrated corridor management as envisioned in the I-80 Integrated Corridor Mobility Project. Thus, the Ramp Relocation project would cost-effectively increase operational capacity on these freeway facilities, which generally do not have sufficient right-of-way to for additional lanes.

In addition, the current ramp alignments constrain capacities on the arterials and prevent efficient transit-oriented redevelopment of adjacent lands. Relocation of the ramps would create the larger development parcels required for modern transit-oriented development and, thus, provide capacity for planned future growth in the surrounding area. Residential and commercial development around transit in Hercules will continue to create travel demand. Realignment of the ramps would ensure adequate capacity for future volumes of auto and bus traffic on/off the freeway system and on the connecting local arterials, and enable transit-oriented redevelopment on currently underutilized parcels adjacent to the freeway.

1.4 PURPOSE OF THE EIR

An EIR is an informational document that is written to inform public agency decision-makers and the public of the significant environmental effects of a proposed project. The purpose of an EIR is to:

¹ Caltrans *Highway Design Manual* 2006. See Sections 501.3, 502.3(2)(d), and 504.7.

- Analyze the environmental effects of a proposed project
- Identify mitigation measures to avoid or minimize the potentially significant environmental effects of a proposed project
- Evaluate alternatives to the project that would avoid or substantially lessen the significant effects of the project

Environmental effects that are addressed in an EIR consist of significant, adverse effects of the project across a full spectrum of environmental topics; growth-inducing effects of the project; and significant cumulative effects of past, present and reasonably anticipated future projects.

It is not the purpose of an EIR to recommend either approval or denial of a project. Rather, EIRs provide relevant information that will assist decision-makers in their decision to approve or deny a project. The lead agency may choose to approve a project that would result in significant environmental effects that cannot be mitigated. If this occurs, the lead agency is required to adopt a “Statement of Overriding Considerations.”

1.5 SCOPE OF THE EIR

Pursuant to *CEQA Guidelines* Section 15060(d), the City RDA determined that an EIR would clearly be required for the proposed project and, thus, an Initial Study was not prepared. In the absence of an Initial Study, the EIR must focus on the potentially significant effects of the proposed project and indicate briefly its reasons for determining that other effects would not be significant or potentially significant. This EIR has been prepared for the proposed amendments to the General Plan and Zoning Ordinance, and the proposed Market Town project.

1.5.1 NOTICE OF PREPARATION

To determine the scope of the EIR, the City RDA prepared and distributed a Notice of Preparation (NOP), dated May 30, 2007, for the proposed project. An NOP is a document that is sent by the lead agency to notify public agencies and interested parties that the lead agency plans to prepare an EIR for a proposed project. The purpose of an NOP is to solicit comments from public agencies and interested parties, and to identify specific environmental issues that should be considered in the EIR.

The NOP identified the following issues to be addressed in this EIR:

- Land Use and Planning
- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials

- Hydrology and Water Quality
- Noise
- Population and Housing
- Recreation
- Public Services, Utilities and Service Systems
- Transportation/Traffic

The NOP was sent to trustee and responsible agencies, and the State Clearinghouse for a 30-day public review period, extending from May 31 to July 2, 2007. The NOP and comments received from public agencies are contained in Appendix A (Notice of Preparation and Public Comments) of this EIR.

1.5.2 PUBLIC REVIEW AND SCOPING MEETING

On June 19, 2007, two public scoping meetings were held, one in the afternoon for public agencies and one in the evening for members of the public. A public notice of the meetings was sent to members of the public and interested parties. At the meetings, members of the public had the opportunity to identify issues of special concern and to suggest additional issues to be considered in the EIR. Representatives of WestCAT attended the first meeting and no members of the public or interested parties attended the second meeting.

1.5.3 CONTENTS OF DRAFT EIR

All of the environmental issues determined to have potentially significant impacts and the issues identified during the NOP public review period have been incorporated into this EIR. For each environmental issue, the EIR describes the environmental setting (current conditions), then discusses and analyzes the potential related impacts that could be caused by project implementation.

For each potentially significant impact, the EIR specifies ways to minimize or avoid the impact, including implementation of one or more of the following mitigation measures:

- Existing goals, objectives, policies and programs of the City of Hercules *General Plan (General Plan)*
- Applicable mitigation measures of the *Draft and Final EIR for the General Plan*
- Project-specific mitigation measures designed to mitigate one or more project impacts, as described in this EIR

The project sponsor must implement all mitigation measures identified in the EIR or their environmental equivalent. “Environmental equivalent” means any mitigation measure and/or timing thereof, subject to the approval of the City, that, when compared to the mitigation measure identified in the EIR, would have the same or superior result and would have the same or superior effect on the environment. The Community Development Department, in conjunction with appropriate agencies or other City departments, would determine the adequacy of any proposed environmental equivalent. Any costs associated with information or environmental documentation required to determine environmental

equivalency would be borne by the project sponsor. As with other mitigation measures, the City would ensure compliance with an environmental equivalent through the mitigation monitoring process.

1.6 ORGANIZATION OF THE EIR

The EIR has been organized into the following sections:

Chapter 1, Introduction: Provides an introduction and overview that describes the purpose of the EIR, summarizes the EIR review and certification process, identifies key areas of environmental concern, and outlines the EIR process.

Chapter 2, Executive Summary: Summarizes the proposed project, required actions by the City and other agencies, environmental setting, potential impacts of the project, mitigation measures identified to reduce or eliminate significant impacts, and alternatives to the proposed project.

Chapter 3, Project Description: Presents project objectives, describes the site location and characteristics, provides a detailed description of the proposed project and specifies the intended use of the EIR, including the actions required to implement the project.

Chapter 4, Environmental Impacts: Describes the existing conditions, analyzes the proposed project's potential environmental impacts and specifies measures to mitigate the identified impacts.

Chapter 5, Cumulative Impacts and Growth-Inducing Impacts: Describes cumulative and growth-inducing impacts resulting from implementation of the project, including reasonably anticipated future projects that may have related or cumulative impacts.

Chapter 6, Alternatives: Evaluates a reasonable range of project options (alternative ways of meeting the project objectives) that would reduce or avoid environmental impacts, including the No Project Alternative.

Chapter 7, Other CEQA Considerations: Discusses irreversible or irretrievable commitments of resources and significant unavoidable impacts.

Chapter 8, Report Preparation Personnel: Lists personnel who prepared the EIR, including City Staff and consultants.

Chapter 9, References: Lists sources of information used in the preparation of the EIR.

Appendices: Includes the NOP for the EIR, comments received in response to the NOP and the City's scoping activities, and background technical material.

1.7 TERMINOLOGY USED IN THE EIR

This EIR uses the following terminology to denote the significance of environmental impacts of the proposed project:

- A “beneficial impact” is an environmental impact that would be a positive contribution or improvement to the physical conditions that exist in the area affected by the project.
- An “environmental impact” is a direct or indirect effect that would be caused by the project that constitutes a physical change to the existing natural or man-made conditions within the area affected by the project.
- “No impact” is the lack of any environmental impact, and no mitigation is required.
- A “less than significant” impact or an impact that is “not significant” is an environmental impact that would cause no substantial adverse change in the environment and, as such, requires no mitigation.
- A “potentially significant” or “significant” impact is an environmental impact that could or would cause a substantial adverse change in the environment. In such a case, an impact has been identified that, although potentially significant, can be avoided or reduced to less than significant levels through mitigation. Such mitigation may include project design features that have been incorporated into the project or existing requirements, such as municipal code or ordinance, engineering and design requirements (e.g., Uniform Building Code), and standard regulations set by regional, state and federal agencies. A further description of mitigation measures is provided below.
- A “significant and unavoidable” impact is an environmental impact that could or would cause a substantial adverse change in the environment and cannot be avoided if the project is implemented; mitigation may be recommended, but would not reduce the impact to a less than significant level.
- “Mitigation measures” are defined in *CEQA Guidelines* Section 15370 as:
 - Avoiding the impact altogether by not taking a certain action or parts of an action
 - Minimizing the impact by limiting the degree or magnitude of the action and its implementation
 - Rectifying the impact by repairing, rehabilitating or restoring the affected environment
 - Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action
 - Compensating for the impact by replacing or providing substitute resources or environments

1.8 EFFECTS NOT FOUND TO BE SIGNIFICANT

Through the NOP scoping process, the City determined that the project would have no significant impact on two environmental issues, agricultural resources and mineral resources, and has excluded these issues from further analysis in this EIR. The following describes the reasons for excluding these environmental issues.

1.8.1 AGRICULTURAL RESOURCES

The project area is located in an urban area and is not classified as agriculture land by maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resource Agency. The General Plan and Zoning Ordinance do not designate the area as agriculture land and it is not under a Williamson Act contract. Therefore, no further analysis is required.

1.8.2 MINERAL RESOURCES

The State of California has classified many areas within the state into Mineral Resource Zones (MRZs), based on the relationship between knowledge of mineral deposits and their economic characteristics. There are no areas in the City that have been identified by the State Geologist as being within one of the MRZs indicating that the area is underlain by mineral deposits where geologic data show that significant measured or indicated mineral resources are present. Some areas within City limits are identified as being in another MRZ indicating that these areas contain mineral deposits that may qualify as mineral resources, but that further exploration work would be needed to make this determination. However, no areas within the boundaries of the planning area fall within this category. The Contra Costa County General Plan does not show any mineral resources in the vicinity. The project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state, or result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. Therefore, no further analysis is necessary.

1.9 FINAL EIR AND PROJECT APPROVAL

1.9.1 PUBLIC REVIEW OF DRAFT EIR

In accordance with CEQA, a good-faith effort has been made during the preparation of this EIR to contact all affected agencies, organizations and persons who may have an interest in this project.

This Draft EIR, with an accompanying Notice of Completion (NOC), is being circulated to the California State Clearinghouse, trustee agencies, responsible agencies, other government agencies and interested members of the public for a 45-day public review period as required by CEQA. The review period for this Draft EIR is between October 14 and December 1, 2008. During this period, public agencies and members of the public may provide written comments on the analysis and content of the EIR. In reviewing a Draft EIR, readers should focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and on ways in which the significant effects of the project might be avoided or mitigated.

All written comments on this Draft EIR must be mailed, delivered, faxed or emailed by 5:00 p.m. on December 1, 2008, and addressed as follows:

Mail or Delivery: City of Hercules
Community Development Department

111 Civic Drive
Hercules, CA 94547
Attention: Steve Lawton, Community Development Director

Fax: Steve Lawton, Community Development Director
City of Hercules
(510) 799-8233

Email: SLawton@ci.hercules.ca.us

All comments received on the Draft EIR during the 45-day public review period will be responded to by the City in the Final EIR.

1.9.2 CONTENTS OF FINAL EIR

The following requirements will collectively compose the Final EIR:

- The Draft EIR
- A list of all persons, organizations and public agencies that commented on the Draft EIR within the public review period
- Copies of all comments received
- Written responses to those comments
- Revisions to the Draft EIR resulting from comments

1.9.3 CERTIFICATION OF FINAL EIR AND APPROVAL PROCESS

For a period of at least ten days prior to any public hearing during which the City will take action to certify the EIR, the Final EIR will be made available to, at a minimum, the trustee and responsible agencies that provided written comments on the Draft EIR. The Final EIR must be certified before the City can take action on the proposed amendments to the General Plan and Zoning Ordinance, and the Market Town project.

After the EIR is certified, the City will begin evaluating the merits of the project and conduct public hearings to decide whether to approve the proposed project or not. Before approving (or conditionally approving) the project, the City must prepare a Mitigation Monitoring and Reporting Program (MMRP). The City must also prepare CEQA findings that briefly explain the rationale behind the finding for each significant impact identified for the project, and, if an impact cannot be mitigated to a less than significant level but the City as lead agency still decides to approve the project, a Statement of Overriding Considerations.

Certification of the Final EIR and approval of the CEQA findings, MMRP and Statement of Overriding Considerations may be considered during the final public hearing. The certification of the Final EIR must be first in the sequence of approvals.

2.0 EXECUTIVE SUMMARY

2.1 PROJECT UNDER REVIEW

The proposed Hercules New Town Center (HNTC) project consists of two elements. First, the City of Hercules Redevelopment Agency (City RDA) proposes amendments to the Hercules General Plan (General Plan) and Zoning Ordinance to create a "New Town Center" (NTC) land use designation and zoning district that would apply to the HNTC planning area. The HNTC planning area comprises seven parcels totaling approximately 35 acres. Second, the City RDA and the Hercules New Town Center LLC (project sponsor) propose redevelopment of one parcel within the HNTC planning area. This project would be located on the PNR parcel and is also referred to as the Market Town project. The two project elements are described in detail below.

2.1.1 AMENDMENTS TO GENERAL PLAN AND ZONING ORDINANCE

The proposed amendments to the General Plan and Zoning Ordinance would create an NTC land use designation and zoning district and establish allowable uses and development intensities for the seven parcels that comprise the HNTC planning area. The approximately 35-acre area is located along Sycamore and Willow Avenues, from San Pablo Avenue to Palm Avenue. One of the primary objectives of the proposed amendments is to create a transit-oriented town center consisting of a mix of residential, commercial, office, and public and quasi-public uses commensurate with the planning area's central, crossroads location. The allowed land uses are intended to support development of a central gathering, shopping, living and working district for Hercules residents and regional visitors.

Each parcel in the HNTC planning area would be allowed a mix of residential and non-residential uses. Given the planning area's relationship to existing and potentially expanded transit service, transit uses, such as rail stations, bus transfer facilities and parking lots for transit users, are envisioned for and would be allowed in the NTC land use designation and zoning district. Furthermore, due to its high level of visibility from the regional roadway system (Interstate 80, State Route 4 and San Pablo Avenue), the General Plan and Zoning Ordinance Amendments specify that the planning area should be visually attractive, contain architectural variety, and be constructed of high quality building materials.

2.1.2 MARKET TOWN PROJECT

The Market Town project is proposed on the PNR parcel located west of Interstate 80 (I-80) near the intersection of San Pablo and Sycamore Avenues. The PNR parcel is currently occupied by the existing Hercules Transit Center and would be redeveloped with a mix of residential, retail and office uses, comprising up to a maximum of 400 townhouses, flats, live work units and lofts, 60,000 square feet of retail space and 80,000 square feet of office space, as is identified in the proposed Initial Planned Development Plan (IPDP). Proposed buildings would range in height from 55 to 85 feet. The minimum amount of parking required for residential uses would be 1.5 parking spaces per unit plus 0.5 spaces per unit for guest parking, retail uses would have a minimum parking requirement of four spaces per 1,000 square feet and office uses would have a minimum parking requirement of three parking spaces per 1,000 square feet.

The proposed Final Planned Development Plan (FPDP) would implement the IPDP and provides more detailed information on the proposed project. The FPDP identifies a mix of residential and commercial uses centered around a series of small public spaces. Parking would be provided primarily within two parking structures that would be located along the east property line adjacent to I-80 and in surface parking areas near retail uses. Some on-street parking would also occur along a frontage road on San Pablo Avenue. Structured parking would be screened from public view and accessed by a driving lane that traverses the parcel. The development program for the Market Town project proposed in the FPDP includes 320 residential units, 56,000 square feet of retail space (including outdoor retail) and 80,000 square feet of office space.

Public space is a key feature of the Market Town project. Two public plazas, one at the center of the site, which would be the "Town Plaza" and one to the south at the intersection of San Pablo and Sycamore Avenues, would provide opportunities for outdoor activities, such as seating to support retail uses, and would serve as public gathering spaces.

Refer to Chapter 3 (Project Description) for a further description and illustrations of the proposed Market Town project.

2.1.3 PROJECT SPONSOR OBJECTIVES

The following are the combined objectives of the City RDA, BART and project sponsor:

- Create a "Transit-Oriented Town Center," consisting of a relatively dense pattern of building in the center of town and a mix of residential, commercial, office, and public and quasi public uses
- Develop or construct affordable housing in compliance with state law
- Establish commercial and retail development in the area around Sycamore and San Pablo Avenues and along SR 4
- Create a vibrant, urbanized place for shopping, working, and living at the core of Hercules
- Emphasize a compact, diverse mix of uses around a new "Town Square"
- Develop or redevelop land by private enterprise or public agencies for purposes and uses consistent with the objectives of the Redevelopment Plan for the Dynamite Project Area
- Closely coordinate with BART and WestCAT to increase the capacity and service levels for WestCAT express service to the El Cerrito del Norte BART station
- Improve the utilization of the Hercules Transit Center automobile parking lot to focus on supporting regional transit
- Develop according to principles of transit-oriented development and urban design identified in the Central Hercules Plan

2.2 SUMMARY OF POTENTIAL IMPACTS: GENERAL PLAN AND ZONING ORDINANCE AMENDMENTS

2.2.1 LAND USE AND PLANNING

The proposed project would not divide an established community, as implementation of the project would not result in the construction of any physical barriers. The project would be consistent with the established goals, policies and standards set forth in the City of Hercules General Plan (General Plan), the Central Hercules Plan and the Dynamite Redevelopment Project Area. In addition, the proposed project would not conflict with any applicable Habitat Conservation Plan or Natural Community Plan because there are no such plans that would apply to the HNTC planning area. As such, the proposed General Plan and Zoning Ordinance Amendments would not result in any significant land use and planning impacts.

2.2.2 AESTHETICS

The proposed project would not have a substantial adverse effect on a scenic vista because the HNTC planning area is not located in an area designated by the General Plan as a scenic vista. In addition, there are no state scenic highways in the planning area nor are there any visually prominent trees, rock outcroppings or historic buildings. However, State Route 4 (SR 4) between I-80 and State Route 84 (SR 84) and San Pablo Avenue from Pinole Valley Road to I-80 in Crockett are City-designated scenic routes. Future development of the HTNC planning area facilitated by the NTC land use designation and zoning district would be subject to all applicable City ordinances and regulations regarding the design, character, appropriateness and aesthetic attractiveness of new development, which would ensure that the design of the development reflect the goals of the City and would be visually appealing to those viewing the area from surrounding roadways and publicly accessible properties within the City. Scenic vista and scenic resources related impacts would be less than significant.

Construction activities associated with future development under the NTC land use designation and zoning district would involve the removal of vegetation, the demolition and clearing of the HNTC planning area, grading, construction of foundations and buildings, landscaping and other related activities. These activities would create views of construction debris, dumpsters, construction staging and material storage areas, soil stockpiles, construction vehicles and equipment and framed and unfinished buildings and facilities, substantially altering the visual character and quality of the HNTC planning area during construction. These temporary visual impacts would be less than significant with the implementation of a mitigation measure that would require that construction contractors and their crews maintain a clean and orderly site, locate staging areas away from public view, and erect a fence around active construction areas to screen aesthetically unappealing views. Future development allowed under the NTC land use designation and zoning district would change the visual character of the planning area; however, it would not substantially degrade the existing visual character or quality of the area and its surroundings because development of the district would result in a cohesive, compatible development that would be required to comply with a number of City ordinances and regulations requiring new development to be aesthetically attractive and unobtrusive.

Future development associated with the NTC land use designation and zoning district would introduce new sources of light and glare into the planning area. However, given the developed

and urban nature of the planning area, which currently generates considerable sources of light and glare, the addition of light and glare to the area would not be substantial. Furthermore, the project would be required to comply with existing zoning standards and regulations as well as new standards established by the NTC zoning district that are designed to prevent light and glare impacts from new development. Light and glare impacts would be less than significant.

2.2.3 AIR QUALITY

Construction-related emissions are generally short-term in duration, but may still cause adverse air quality impacts. Particulate matter is the pollutant of greatest concern with respect to construction activities. PM_{10} emissions can result from a variety of construction activities. Particulate emissions from construction activities can lead to adverse health effects as well as nuisance concerns such as reduced visibility and soiling of exposed surfaces. In addition to PM_{10} emissions, construction activities would emit pollutants from worker vehicle exhaust, reactive organic gases, volatile organic compound emissions, and odors (e.g., the use of architectural coatings and solvents). The Bay Area Air Quality Management District's (BAAQMD) approach to CEQA analysis of construction impacts is to emphasize implementation of effective and comprehensive control measures rather than detailed quantification of emissions. The proposed project would be required to implement both Basic and Enhanced Control Measures recommended by the BAAQMD, as well as requiring future development within the planning area to adhere to BAAQMD Regulation 8. With the implementation of the BAAQMD measures, short-term air quality impacts would be less than significant.

Long-term air quality impacts would consist of mobile source emissions generated from project-related traffic and from stationary source emissions. Project-generated vehicle emissions were estimated using the URBEMIS 2007 computer model. Except for PM_{10} emissions, mobile source emissions alone would not exceed the established BAAQMD thresholds. In addition, future buildout of the HNTC planning area would generate electrical demand and heating demand resulting in combustion of natural gas. Area source emissions were estimated using a variety of sources including the URBEMIS 2007 model, along with generally accepted emission factors for certain stationary sources. Except for ROG emissions, area source emissions alone would not exceed established BAAQMD thresholds. Operational emissions would exceed the BAAQMD thresholds for PM_{10} and ROGs due to the net increase in daily trips resulting in a potentially significant impact. Mitigation requiring the use of energy efficient building materials and appliances would help reduce ROG emissions, but would not reduce PM_{10} and ROGs emissions to a less than significant level. Thus, the project would result in significant and unavoidable impacts for long-term operations.

The BAAQMD requires that proposed projects are analyzed for the potential to cause localized CO hotspots. Based on the traffic impact analysis, certain intersections in the planning area required CO hotspot analysis. The analysis concluded that CO concentrations would be well below the State and Federal standards. Impacts in regards to CO hot spots would be less than significant. A health risk assessment was prepared for the proposed project, which examined the potential health effects (acute, carcinogenic and chronic project-related emissions) on future residents from the long-term exposure to vehicular traffic on the Interstate 80 (I-80) and State Route 4 (SR 4). The assessment concluded that acute, carcinogenic and chronic project-related emissions would not be a significant health risk to

future residents of the proposed project and, therefore, would result in a less than significant impact.

2.2.4 BIOLOGICAL RESOURCES

The HNTC planning area is located in a mostly urbanized area and is surrounded by various residential and industrial land uses. The planning area does not link two or more large regional open space areas, is not part of a regional wildlife movement corridor, and is not located near a river, stream or lake that contains fish. Therefore, the proposed HNTC planning area would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. In addition, there are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans that would be applicable to the project site. Furthermore, projects within the HNTC planning area would be required to demonstrate compliance with all applicable local policies or ordinances associated with biological resources.

Future construction and operation of projects within the HNTC planning area could adversely affect special-status species such as the California red-legged frog (CRLF) and white-tailed kite through various means, including construction activities, vegetation removal, hydrologic alterations or sedimentation. Nesting birds or bats protected by the Migratory Bird Treaty Act and other regulations, may be impacted during construction. Implementation of the mitigation measures, including preconstruction surveys, habitat creation and construction limitations, would reduce potential impacts to CRLF, white-tailed kite and non-special-status bird and bat species to a less than significant level.

Most of the HNTC planning area is comprised of non-native annual grassland, which is not a sensitive biological community. However, two sensitive biological communities, wetland and riparian woodland, are found within the HNTC planning area. A freshwater wetland area is located on the Loop parcel, and seasonal wetlands and riparian woodland are located on the C1 and Caltrans parcels. A small stream is also located in Parcel 2. Full development of the HNTC planning area could result in placement of fill into approximately 1.4 acres of wetlands and approximately 481 linear feet of streams, and approximately 0.3 acre of riparian forest would be impacted. Mitigation measures to address potential impacts to wetlands and riparian habitat include the development of a wetland mitigation plan as well as the planting of riparian vegetation next to existing creeks and streams within the planning area. These measures would reduce impacts to a less than significant level.

2.2.5 CULTURAL RESOURCES

The HNTC planning area has a moderate potential for containing unknown buried prehistoric resources, including human remains. There is a low probability of the HNTC planning area containing historic-period resources. The probability of encountering paleontological resources in the area cannot be ruled out. Because the former north fork of the Refugio Creek historically ran through the majority of the northern portion of the HNTC planning area, just south of SR 4, and a segment of the creek is still located in the eastern portion of the C1 parcel, there is a moderate potential for unknown Native American prehistoric sites and burials to be present in the area. Future development allowed under the

NTC land use designation and zoning district would intrude into the soil, which could uncover previously unknown historic-period resources, paleontological resources and prehistoric resources, including human remains. Uncovering historic-period resources, paleontological resources or prehistoric resources during excavation and/or grading activities could result in their damage or destruction, which is considered a potentially significant impact. Mitigation Measure CULT1, which implements General Plan Policy 12a and Program 12a.2, would reduce potential impacts to less than significant.

2.2.6 GEOLOGY AND SOILS

Future development within the HNTC planning area would involve construction of structures in a seismically active region. Surface rupture from a known fault is unlikely to occur at the subject parcels given that no active faults cross the planning area. However, ground shaking would occur at all of the parcels when future seismic events of high, and possibly, moderate magnitude take place, posing potential threats to structures. Liquefaction was found not to be a risk on the C1 parcel but the potential for liquefaction at other parcels is unknown. Landslides are possible in portions of the Loop and Ramp parcels. Although some structural damage typically is not avoidable, building codes and local construction requirements have been established to protect against building collapse and to minimize injury during seismic events. Compliance with applicable regulations, such as California Building Code requirements and conformance with the Hercules General Plan Safety Element policies, are part of the project, and would require future structures to be designed and built to withstand geologic hazards. Furthermore, a mitigation measure requiring project-specific geotechnical studies at the time development is proposed would reduce potential seismic impacts to less than significant.

The planning area is served by the municipal sewer system. As such there would be no impact associated with soils incapable of supporting septic tanks or alternative wastewater disposal systems. Soils within the planning area may have a moderate to high expansion potential. Expansion and contraction of soils could create severe structural damage and endanger occupants and visitors to future structures within the planning area. Implementation of a mitigation measure requiring soil conditioning would reduce impacts associated with expansive soils to less than significant. Specific soil conditions on all the parcels within the planning area are currently unknown. However, the C1 parcel has heterogeneous fills comprised of both stiff and soft materials, creating a risk of settlement. This may be true of other parcels as well. Settlement could damage structures and endanger persons in the vicinity. Future development within the planning area would require preparation of site-specific geotechnical investigations. Implementation of recommendations contained in these investigations would ensure that impacts associated with unstable soil would be less than significant.

Future development in the planning area could result in soil erosion during construction. However, compliance with the National Pollutant Discharge Elimination System (NPDES) General Construction Activities Storm Water Permit Requirements (General Permit) and implementation of a Stormwater Pollution Prevention Plan (SWPPP), discussed in the Hydrology and Water Quality section of this EIR, would reduce this impact to less than significant.

2.2.7 HAZARDS AND HAZARDOUS MATERIALS

The planning area is not within a ¼ mile of a school, within two miles of a public airport or public use airport or within an area covered by an airport land use plan, nor in the vicinity of a private airstrip. The proposed project would not interfere with an adopted emergency response or emergency evacuation plan, because it would not substantially alter the physical environment or emergency access routes. In addition, the proposed project would not include land uses that would permit the use of hazardous materials (with the exception of small quantities of household cleaning products), and the planning area is not located in an area subject to wildland fires. Therefore, the proposed project would have no potential for adverse effects with respect to these areas.

A Phase I Environmental Site Assessment (ESA) conducted for the C1, Loop, Ramp, Caltrans, Carone, and WC Drilling parcels established the varying presence of potentially hazardous materials throughout the HNTC planning area. The Carone and Caltrans parcels are listed on various local, regional and national databases as properties with potential hazardous materials on-site. In general, the Phase I ESA identified the potential for asbestos containing materials (ACMs) and lead based paints (LBPs) to be present on or in structures on the Caltrans and WC Drilling parcels. In addition the presence of contaminated groundwater at the Caltrans parcel was also identified. There is also a potential for aerially deposited lead (ADL) to be present throughout the planning area due to its proximity to SR 4. Excavation, grading, and other construction activities on the C1, Loop, Ramp, Carone, and WC Drilling parcels could expose workers to a variety of hazardous materials as a result of their varying presence throughout the HNTC planning area. Upon occupancy of buildings and structures associated with future development within the planning area, residents and workers could also be exposed to hazardous materials that could pose health risks. Mitigation Measures HM1 through HM14 would reduce potential impacts associated with hazardous materials to a less than significant level.

2.2.8 HYDROLOGY AND WATER QUALITY

The proposed project would not expose people or structures to a significant risk of loss, injury or death involving flooding as a result of the failure of a levee or dam because the project site is not located in an area subject to flooding in the event of a dam and/or levee failure. According to the City's General Plan/Redevelopment Plan EIR, the City is highly unlikely to be impacted by sieche, tsunami or mudflow. Therefore, the proposed project would have no potential for adverse effects with respect to these areas.

Construction-related erosion could result from alterations in drainage patterns and grading activities, and increase sedimentation in receiving waters. Future development in the planning area would be required to comply with the NPDES General Permit and implement a SWPPP. Compliance with the General Permit and implementation of the SWPPP's best management practices (BMPs) would reduce potential construction related water quality or waste discharge impacts to less than significant. Build out of the planning area would result in new or increased amounts of non-point source pollutants, which would be the primary contributors to potential water quality degradation. Impacts from future development within the planning area would be reduced to a less than significant level with implementation of a Stormwater Management Plan, which would incorporate all aspects of the San Francisco Regional Water Quality Control Board's C.3. Guidelines.

Land uses described in the proposed NTC land use designation and zoning district would not include projects that would involve the extraction of groundwater. In addition, the soils underlying the HNTC planning area are designated as Hydrologic Soil Group (HSG) Class D, indicating very low infiltration potential and, therefore, have a very low potential for groundwater recharge. Potential impacts would be less than significant.

Flood insurance rate maps prepared by the Federal Emergency Management Agency (FEMA) (Community-Panel Numbers 0604340008B and 0604340009B) indicate that portions of the HTNC planning area (C1 parcel, Loop parcel and Ramp parcel) are located within a 100-year flood hazard area. However, since the development of FEMA mapping (September 30, 1982) for the planning area, modifications have been made to the east branch of Refugio Creek, which included the undergrounding of the creek within C1 parcel and Ramp parcel. The modifications made to the creek have removed the parcels from the 100-year flood hazard area and, therefore, no impacts are anticipated. The Caltrans parcel, Carone parcel and WC Drilling parcel are not located in a 100-year flood hazard area. The Loop parcel contains portions of the east branch of Refugio Creek that is mapped as a 100-year flood hazard area. The creek is exposed on the Loop parcel and, therefore, impacts associated with the eventual development of the parcel could be significant. Mitigation Measures WQ2 and WQ3 requiring the delineation of the current boundaries of the 100-year flood hazard area on the parcel and ensuring that the finished floor elevation of the development would be one foot above the 100-year flood elevation would reduce potential impacts to a less than significant level.

Implementation of the proposed project would increase the existing surface flow rate and/or amount of surface flow, above the flow and rate that is already produced in the area. However, potential on- or off-site impacts would be less than significant given implementation of WQ1 that would require the preparation of project specific hydrology reports (utilizing Contra Costa County's Hydro-6 model), demonstrating that new flow would not adversely impact the City's system.

2.2.9 NOISE

Although, there are no specific development proposals at this time, future development within the HNTC planning area would result in a significant increase in noise levels during project construction. This increase would only occur during periods of construction and would end once construction is complete. In general, most construction noise would exceed the speech interference criterion when heavy equipment is operated within approximately 500 feet of a sensitive receptor. Implementation of Mitigation Measure NOI1 would reduce impacts to a less than significant level for construction activities. Project construction would cause some groundborne vibration, primarily during site clearing and grading activities on-site and by off-site haul-truck travel. The peak particle velocity (PPV) from bulldozer and heavy truck operations is 0.089 inch-per-second PPV and 0.076 inch-per-second PPV, respectively, at a distance of 25 feet. As each of these values is below the 0.2 inch-per-second PPV significance threshold, vibration impacts associated with construction would be less than significant and no mitigation measures are required.

Future development of projects consistent with the NTC land use designation and zoning district would result in additional traffic on adjacent roadways, thereby increasing vehicular noise in the vicinity of existing and proposed land uses. Build-out of the project within the HNTC planning area would increase noise levels on the surrounding roadways. However, the

projected noise increase is considered less than significant. Therefore, noise levels resulting from development within the planning area would be less than significant.

The 65 dBA noise contour lines under with project and no project scenarios studied in the EIR would extend beyond the planning area. Thus, future residential uses introduced planning area could be exposed to mobile source noise levels that exceed the City's established maximum acceptable exterior noise level of 60 dBA for residential uses. Mitigation has been recommended requiring subsequent noise studies to demonstrate that noise levels have been properly accounted for and attenuated in accordance with established City standards. The analysis would verify that residences are adequately shielded and/or located at an adequate distance from mobile noise sources. In addition, proper noise attenuation such as Title 24 (Noise Insulation Standards), sound walls, and proper building orientation would help meet the interior and exterior noise standards. As such, operational noise impacts would be considered less than significant. Railroad noise levels along the Union Pacific Railroad are approximately 70 dBA to 77 dBA at 100 feet from the railway centerline. Prior to approval of building permits for developments located near the Union Pacific Railroad, preparation of an acoustical analysis would be required to fully analyze and develop standards to ensure that the exterior and interior noise levels would be attenuated. With implementation of Mitigation Measure NOI13, railroad noise impacts would be considered less than significant.

Implementation of future development could result in an increase in ambient noise levels due to the generation of on-site noise associated with mixed-use projects. The NTC land use designation and zoning district would allow development of mixed-use projects in areas where noise levels may be appropriate for commercial uses but either "conditionally acceptable" or "normally unacceptable" for residential uses. However, compliance with City's noise standards set forth in the General Plan would reduce the potential for noise compatibility conflicts in the mixed-use developments to a less than significant level. Noise resonating from parking areas, mechanical equipment (e.g., heating, ventilation and air conditioning units) and slow-moving trucks would also be reduced given compliance with the noise standards set forth in the General Plan. Nevertheless, mitigation measures are required to further reduce impacts to a less than significant level.

2.2.10 POPULATION AND HOUSING

The HNTC planning area currently consists of undeveloped parcels, the existing Hercules Transit Center, equipment storage lots, an on- and off-ramp, and industrial uses. There are no current residential uses in the planning area and no housing would be displaced with project implementation. As such, implementation of the proposed project would not displace a substantial amount of existing housing or people, necessitating the construction of replacement housing of replacement housing elsewhere. There would be no impact.

The proposed amendments to the General Plan and Zoning Ordinance would result in an incremental increase in population but would be within the growth estimates identified in the General Plan. Therefore, the impact would be less than significant. Future development within the HNTC planning area would be consistent with Policies 2C and 4A of the General Plan Land Use Element, which encourage employment-generating development. Therefore, the project's impacts on local and regional employment would be considered beneficial to the City. Last, future development within the HNTC planning area would provide a significant

amount of new jobs. The net increase of jobs over housing would increase the City's jobs/housing ratio and, therefore, a beneficial impact would result.

2.2.11 PUBLIC SERVICES, UTILITIES AND SERVICE SYSTEMS

The proposed project would result in an increase in the demand for public services, including fire and police protection, wastewater, water, solid waste, natural gas and electricity. Based on build out of the entire planning area and availability of existing services, public service providers would be able to accommodate the increase in services and no mitigation would be required.

2.2.12 RECREATION

The increase in use of City parks would be incremental and would not result in physical deterioration of the facilities, nor require the construction or expansion of recreational facilities. Furthermore, future development within the HNTC planning area would be required to pay park and recreation facilities impact fees to provide adequate park and recreation facilities to serve new development within the City. Therefore, the proposed amendments to the General Plan and Zoning Ordinance would not result in the deterioration of recreational facilities and impacts would be less than significant.

2.2.13 TRANSPORTATION/TRAFFIC

Future development of projects consistent with the HNTC land use designation and zoning district would result in additional traffic using the local and regional transportation system compared to the No Project scenario (i.e., development in accord with the existing General Plan). However, significant unavoidable impacts would occur to local and regional roadways with or without HNTC program under 2035 conditions (a reasonable time horizon for completion of the entire HNTC program).

The analysis indicates that demand throughout the study area exceeds the capacity of the system under No Project Conditions. The simulation model estimates that only 65 to 70 percent of the forecast traffic demand could be served through the San Pablo Avenue, Sycamore Avenue, and Willow Avenue corridor. This is evident in the very high calculated delay estimates at intersections along these roadways under both the No Project and Plus HNTC Program scenarios.

Driver behavior would change as travel delays begin to approach three minutes at intersections, and the level of delay forecast in the San Pablo Avenue, Sycamore Avenue, and Willow Avenue corridor exceeds three minutes. This level of congestion suggests that drivers would shift modes (walk, bike, transit), shift their trip to an off-peak time (peak hour spreading), choose a different destination, or not make the trip at all. The capacity constrained nature of the local vehicular roadway system heightens the importance of providing adequate pedestrian connectivity through the HNTC planning area. The capacity constraint on local roadways also underscores the relevance of the HNTC program of higher density and complementary mixed land uses.

Seven intersections are projected to experience significant impacts under 2035 cumulative conditions both with and without the HNTC program. Mitigation measures are proposed for

each of these locations (Mitigation Measures TR9 through TR15). Three of these intersections can be mitigated to less than significant levels. The traffic operations results for the mitigation measures for four intersections along San Pablo Avenue, Sycamore Avenue, and Willow Avenue do not show clear level of service (LOS) and delay benefits. This is because the system, even with these improvements, would still lack sufficient capacity to meet the forecasted demand.

However, the simulation model estimates that these mitigation measures would increase the forecast traffic demand served to 75 or 80 percent. This is an improvement over the 65 to 70 percent for the network with no mitigation. While the mitigation measures along San Pablo Avenue, Sycamore Avenue, and Willow Avenues fail to reduce the program's impacts to a less than significant level, they do increase the capacity of the local roadway network.

The analysis indicates that the addition of traffic from the HNTC program would exacerbate congestion through the local street system, which would cause bus run times to increase on many routes. This could affect the reliability of scheduled bus arrivals and departures, reduce utilization, and negatively impact the travel experience of transit riders. This is considered a significant unavoidable impact although implementing Mitigation Measures TR9 through TR13, and TR15 would improve traffic for transit vehicles as well as other vehicles.

The analysis indicates that the addition of traffic from the HNTC program would result in significant impacts to two segments of the freeway system. (the I-80 WB weave section from the SR 4 on-ramp to the Pinole Valley Road off-ramp, and the I-80 EB mainline freeway segment from Pinole Valley Road to the SR 4 EB connector ramp). As there are no feasible mitigation measures that can be recommended at this time, these represent significant and unavoidable impacts.

2.3 SUMMARY OF POTENTIAL IMPACTS: MARKET TOWN PROJECT

2.3.1 LAND USE AND PLANNING

The proposed Market Town project would not divide an established community, as implementation of the project would not result in the construction of any physical barriers. The project would be consistent with the established goals, policies and standards set forth in the City's General Plan, the Central Hercules Plan and the Dynamite Redevelopment Project Area. In addition, the proposed project would not conflict with any applicable Habitat Conservation Plan or natural community plan because there are no such plans that would apply to the project area. As such, the proposed Market Town project would not result in any significant land use and planning impacts.

2.3.2 AESTHETICS

The Market Town project site (PNR parcel) is not designated a scenic vista by the General Plan. In addition, there are no state scenic highways near the project site. However, SR 4 between I-80 and SR 84 and San Pablo Avenue from Pinole Valley Road to I-80 in Crockett are City designated scenic routes. The Market Town project would be visible from SR 4 and San Pablo Avenue. Approximately one-third of the PNR parcel is undeveloped while the

remaining two-thirds is developed with the Hercules Transit Center. Although the undeveloped portion of the site contains grass and weeds, there are no visually prominent trees, rock outcroppings, or historic buildings within the PNR parcel.

Overall, the Market Town project would not be expected to conflict with the scenic corridor policies identified in the General Plan nor the provisions of the Scenic Road and Highway Overlay District. However, the Market Town project would create a more densely developed area comprised of five to seven story buildings with greater mass, which may potentially be considered in conflict with the reduced building mass encouraged by the General Plan's scenic corridor policies and the Scenic Road and Highway Overlay District. Nonetheless, the Market Town project would be consistent with the project objective of creating a mixed-use transit-oriented town center consisting of a relatively dense pattern of building in the center of town and a mix of residential, commercial, office, and public and quasi-public uses. Therefore, the proposed Market Town project would not substantially damage scenic resources and impacts would be less than significant.

Construction activities associated with the Market Town project would involve the removal of vegetation, the demolition and clearing of the site, grading, construction of foundations and buildings, landscaping and other related activities. These activities would create views of construction debris, dumpsters, construction staging and material storage areas, soil stockpiles, construction vehicles and equipment and framed and unfinished buildings and facilities, substantially altering the visual character and quality of PNR parcel during construction. These temporary visual impacts would be less than significant with the implementation of a mitigation measure that would require that construction contractors and their crews maintain a clean and orderly site, locate staging areas away from public view, and erect a fence around active construction areas to screen aesthetically unappealing views. The development proposed by the Market Town project would dramatically change the visual character of the PNR parcel. However, the conversion of the site from a park and ride lot to urban development would improve the visual quality of the project site and its surroundings compared to existing conditions. The Market Town project would result in a cohesive, compatible development that would be required to comply with a number of City ordinances and regulations.

The Market Town project would introduce new sources of light and glare at the project site. However, given the developed and urban nature of the site, which currently generates considerable sources of light and glare, the addition of light and glare to the area would not be substantial. Furthermore, the project would be required to comply with several existing zoning standards and regulations as well as new standards established by the NTC zoning district that are designed to prevent light and glare impacts from new development. Light and glare impacts would be less than significant.

2.3.3 AIR QUALITY

The Market Town project would develop the PNR parcel located within the HNTC planning area. Development of the proposed project would result in the same potentially significant short-term construction impacts as those for future development associated with the General Plan and Zoning Ordinance Amendments (as discussed in Section 2.2.2). Corresponding mitigation measures for potentially significant impacts associated with construction of the Market Town project would be the same as those identified for future development facilitated by the General Plan and Zoning Ordinance Amendments. With implementation of

recommended mitigation measures (AQ1, AQ2 and AQ3), a reduction in Market Town construction related criteria pollutants would occur and impacts would be less than significant.

The Market Town project operational emissions are described in terms of area source and mobile source (vehicle) emissions. Operational emissions would exceed the BAAQMD thresholds for PM₁₀ due to the net increase in daily trips under the Initial Planned Development Plan (IPDP). Under the Final Plan Development Plan (FPDP), operational emissions would not exceed BAAQMD thresholds. However, since the proposed project is being analyzed under IPDP assumptions, the Market Town project would result in significant and unavoidable impacts for long-term operations.

Long-term air quality impacts would consist of mobile source emissions generated from project-related traffic and from stationary source emissions. For purposes of this air quality emissions analysis, operation-related air quality impacts were analyzed for the cumulative (2035) project buildout conditions since the Market Town project would be included in the project buildout. CO concentrations would be well below the State and Federal standards. Impacts in regards to CO hot spots would be less than significant.

2.3.4 BIOLOGICAL RESOURCES

The Market Town project site (PNR Parcel) is composed entirely of developed land, ruderal grassland, and ornamental vegetation, and contains no sensitive biological communities (e.g., wetlands or riparian habitat). WRA's biological assessment of the PNR parcel indicated that there are no special-status species present on-site. Therefore, implementation of the proposed Market Town project on the PNR parcel would not result in any impacts associated with biological resources.

2.3.6 CULTURAL RESOURCES

The PNR parcel has a moderate potential for containing unknown buried prehistoric resources, including human remains. There is a low probability of the project site containing historic-period resources. In addition, the probability of encountering paleontological resources in the area cannot be ruled out. Because the former north fork of the Refugio Creek historically ran through the northern portion of the parcel, there is a moderate potential for unknown Native American prehistoric sites and burials to be present on-site. Implementation of the proposed project would intrude into the soil, which could uncover previously unknown historic-period resources, paleontological resources and prehistoric resources, including human remains. Uncovering historic-period resources, paleontological resources or prehistoric resources during excavation and/or grading activities could result in their damage or destruction, which is considered a potentially significant impact. Mitigation Measure CULT1, which implements General Plan Policy 12a and Program 12a.2, would reduce potential impacts to less than significant.

2.3.7 GEOLOGY AND SOILS

The proposed Market Town project would involve construction in a seismically active region. The preliminary geotechnical study for the PNR parcel found that ground shaking at the site was likely to be strong depending on the characteristics of the generating fault, distance of

the project to the earthquake epicenter, and magnitude and duration of the earthquake. Geotechnical testing at the project site revealed a silty sand layer at a depth of 12-16 feet deep. This silty sand layer has the potential to liquefy during a seismic event potentially inducing settlement of about $\frac{3}{4}$ of an inch. However, because this layer is not continuous, the potential for lateral spreading is considered low. Implementation of Mitigation Measure GS3 (final geotechnical investigation) would reduce potential seismic impacts to less than significant. Site soils at the PNR parcel consist of erodible soil types and, thus, erosion could result from project construction. However, the project's compliance with the NDPEs General Permit and implementation of a SWPPP would ensure that impacts associated with construction-related soil erosion would be less than significant.

The project site is served by the municipal sewer system. As such there would be no impact associated with soils incapable of supporting septic tanks or alternative wastewater disposal systems. The PNR parcel was found to have a low risk of settlement during the preliminary geotechnical investigation. Therefore, potential impacts associated with unstable soil would be less than significant. Soils at the PNR parcel consist of moderately to highly expansive silt and clay and, therefore, have a moderate to high expansion potential. These expansive soils near the ground surface are subject to high volume changes during seasonal fluctuations in moisture content. Such fluctuations could potentially cause cracking to the foundation and floor slabs as well as weaken the integrity of the structure over time. This expansion and contraction of soils could create severe structural damage and endanger occupants and visitors to site structures. Mitigation Measure GS4, requiring soil conditioning, would reduce potential impacts to a less than significant level.

2.3.8 HAZARDS AND HAZARDOUS MATERIALS

The project site is not within a $\frac{1}{4}$ mile of a school, within two miles of a public airport or public use airport or within an area covered by an airport land use plan, nor in the vicinity of a private airstrip. The proposed project would not interfere with an adopted emergency response or emergency evacuation plan, because it would not substantially alter the physical environment or emergency access routes. In addition, the proposed project would not include land uses that would permit the use of hazardous materials (with the exception of small quantities of household cleaning products), and the project site is not located in an area subject to wildland fires. Last, the PNR parcel is not included on a list of hazardous materials sites compiled pursuant to government code section 65962.5 and, therefore, development of the parcel would not result in a significant hazard to the public or the environment. Therefore, the proposed project would have no potential for adverse effects with respect to these areas.

While the majority of the PNR parcel would not present the potential for exposure to hazardous materials, one boring taken at the site, did reveal an elevated concentration of lead. Although the majority of the PNR parcel is unlikely to expose workers and the public to potentially hazardous materials during excavation, grading, and other construction activities, mitigation measures have been developed as precautionary measures to further ensure that impacts associated with exposure to hazardous materials are less than significant. Mitigation measures include a soil management plan, soil sampling and a plan to address the accidental discovery of hazardous materials.

2.3.9 HYDROLOGY AND WATER QUALITY

The proposed project would not expose people or structures to a significant risk of loss, injury or death involving flooding as a result of the failure of a levee or dam because the project site is not located in an area subject to flooding in the event of a dam and/or levee failure. According to the City's General Plan/Redevelopment Plan EIR, the City is highly unlikely to be impacted by sieche, tsunami or mudflow. Additionally, flood insurance rate maps prepared by FEMA (Community-Panel Number 0604340008B) indicate that the Market Town project site is not located within either a 100-year or 500-year flood hazard area. Therefore, the development of the mixed-use project would not impede or redirect flood flows. Therefore, the proposed project would have no potential for adverse effects with respect to these areas.

Construction-related erosion could result from alterations in drainage patterns and grading activities, and increase sedimentation in receiving waters. The proposed project would be required to comply with the NPDES General Permit and implement a SWPPP. Compliance with the General Permit and implementation of the SWPPP's BMPs would reduce potential construction related water quality or waste discharge impacts to less than significant. The Market Town project would result in new or increased amounts of non-point source pollutants, which would be the primary contributors to potential water quality degradation. Impacts from potential projects would be reduced to a less than significant level with the implementation of a Stormwater Management Plan (Mitigation Measure WQ4), which would incorporate all aspects of the San Francisco Regional Water Quality Control Board's C.3. Guidelines.

The proposed project would not involve any extraction of groundwater. Implementation of the project would result in a net minor increase of impermeable surface area as the majority of the site is already developed with impermeable surface. The soils underlying the project site are designated as Hydrologic Soil Group (HSG) Class D, indicating very low infiltration potential and, therefore, have a very low potential for groundwater recharge. The proposed project's impact on groundwater would be less than significant.

Implementation of the proposed project would incrementally increase the existing surface flow rate and/or amount of surface flow, above the flow and rate that is already produced in the area. However, potential on- or off-site impacts would be less than significant given implementation of WQ1 that would require the preparation of project specific hydrology report (utilizing Contra Costa County's Hydro-6 model), demonstrating that new flow would not adversely impact the City's system.

All potentially significant hydrology and water quality impacts would be reduced to less than significant levels with the implementation of the specified mitigation measures.

2.3.10 NOISE

Construction-related noise impacts for the Market Town project are anticipated to occur over a relatively short period. Adherence to Mitigation Measure NOI1 would reduce construction-related noise impacts to less than significant.

Ground-borne vibration associated with the Market Town project would be generated primarily during site clearing and grading activities on-site and by off-site haul-truck travel. The PPV from bulldozer and heavy truck operations is would be 0.089 inch-per-second PPV

and 0.076 inch-per-second PPV, respectively, at a distance of 25 feet. The closest structures to the PNR parcel are approximately 200 feet from the construction activity areas. As each of the values is below the 0.2 inch-per-second PPV significance threshold, vibration impacts associated with construction would be less than significant and no mitigation measures are required. Development of the Market Town project would result in additional traffic on adjacent roadways, thereby increasing vehicular noise in the vicinity of existing and proposed land uses. However, the increase in noise levels would be less than significant.

Sixty dBA noise contour lines under extend beyond the property line along all of the roadways surrounding the Market Town project site except for Sycamore Avenue. Thus, future residential uses introduced along the aforementioned roadways could be exposed to mobile source noise levels that exceed the City's established maximum acceptable exterior noise level of 60 dBA for residential uses. As a result, residential units adjacent to I-80, SR 4, and San Pablo Avenue would require upgraded windows and mechanical ventilation to reduce interior noise to a less than significant level. Implementation of Mitigation Measures NOI2 and NOI3 would ensure that interior noise levels are reduced to a less than significant level. Noise levels along the Union Pacific Railroad are approximately 70 dBA to 77 dBA at 100 feet from the railway centerline. The Market Town project proposes residential dwelling units approximately 450 feet from the railway centerline. As a result, noise along the would result in noise levels ranging from 57 dBA to 64 dBA at the nearest receivers. Noise levels would exceed the City's standard of 60 dBA for residential uses at approximately 750 feet from the railway centerline. Therefore, all residential units proposed within 750 feet of the railway centerline would be required to have architectural acoustical mitigation to reduce noise levels to a less than significant level. With implementation of Mitigation Measures NOI6 and NO7, railroad noise impacts would be considered less than significant.

Implementation of proposed project could result in an increase in ambient noise levels due to the generation of on-site noise associated with residential and commercial uses. The proposed project would allow development of a mixed-use project in an area where noise levels may be appropriate for commercial uses but either "conditionally acceptable" or "normally unacceptable" for residential uses. However, compliance with City's noise standards set forth in the General Plan would reduce the potential for noise compatibility conflicts in the mixed-use developments to a less than significant level. Noise resonating from parking areas, mechanical equipment (e.g., heating, ventilation and air conditioning units) and slow-moving trucks would also be reduced given compliance with the noise standards set forth in the General Plan. Nevertheless, mitigation measures (NOI14 and NOI15) are required to further reduce impacts to a less than significant level.

2.3.11 POPULATION AND HOUSING

The Market Town project site is currently occupied by the existing Hercules Transit Center and undeveloped area. There are no current residential uses on the project site and no housing would be displaced with project implementation. As such, implementation of the proposed project would not displace a substantial amount of existing housing or people, necessitating the construction of replacement housing of replacement housing elsewhere. There would be no impact.

IPDP which would allow development of up to 400 multi-family residential units, would result in an increase in population of 844 residents. The FPDP proposes 320 residential units, which would result in an increase of 675 residents. The population growth generated

by Market Town would be within the growth estimates identified in the General Plan. Therefore, the impact would be less than significant. Development of the Market Town project would be consistent with Policies 2C and 4A of the General Plan Land Use Element, which encourage employment-generating development. Therefore, the project's impacts on local and regional employment would be considered beneficial to the City. Last, the Market Town project would provide a number of new jobs. The net increase of jobs over housing would increase the City's jobs/housing ratio and, therefore, a beneficial impact would result.

2.3.12 PUBLIC SERVICES, UTILITIES AND SERVICE SYSTEMS

The proposed project would result in an increase in the demand for public services, including fire and police protection, wastewater, water, solid waste, natural gas and electricity. Based on the size of the project and availability of existing services, public service providers would be able to accommodate the increase in services and no mitigation would be required.

2.3.13 RECREATION

The increase in use of the City's parks would be incremental and would not result in physical deterioration of the facilities, nor require the construction or expansion of recreational facilities. Furthermore, development of the Market Town project would be required to pay park and recreation facilities impact fees to provide adequate park and recreation facilities to serve new development within the City. Therefore, the proposed project would not result in the deterioration of recreational facilities and impacts would be less than significant.

2.3.14 TRANSPORTATION/TRAFFIC

Development of the Market Town project would increase traffic on local intersections and nearby regional highways. The impacts of the project on the local and regional transportation system were analyzed under baseline/existing traffic conditions as well as under cumulative near-term (2013) conditions.

The Baseline Plus Project scenario examines very near-term impacts of the project on the local and regional transportation system. No changes to the local roadway or regional freeway system are assumed. Potentially significant project impacts were identified by comparing Baseline Plus Project to Baseline Conditions (existing traffic reallocated to reflect the relocation of the existing Hercules Transit Center and park-and-ride lot from the PNR parcel to the C1 parcel per the BART Replacement Facility MND¹).

All of the study intersections and freeway segments would operate within the acceptable operating thresholds with and without the project. Therefore, the addition of project traffic to baseline traffic would not result in any significant impacts to the study intersections.

Two Cumulative Near-Term (2013) scenarios were developed to identify the future traffic conditions in the City before and after the relocation of the eastbound SR 4 ramps. Two ramp alternatives on Willow Avenue were considered: the existing location, and the "preferred" diamond interchange alternative. Both alternatives were evaluated under Cumulative Near-Term (2013) conditions because the relocation of the ramps is still

¹ RBF Consulting, *Initial Study/Mitigated Negative Declaration, BART Replacement Parking Facility*, October 2007.

uncertain (the project has not yet been approved by Caltrans). The relocation of the ramps is not necessary for the construction of the Market Town project. If approved, 2013 is a reasonable timeframe for the completion of the eastbound SR 4 ramp relocation project.

Under Cumulative Near-Term (2013) with no ramp relocation, four intersections would exceed the thresholds of significance. Impacts at each intersection could be mitigated (Mitigation Measures TR1 through TR4).

The relocation of the ramps would result in some change to travel patterns on Willow Avenue, Palm Avenue, and Sycamore Avenue. This would affect turning movements at some intersections and cause different traffic operation results. No other changes to the local roadway system are assumed. By allowing a share of existing traffic in Hercules to access the freeways that serve the City without using the most heavily trafficked portions of Sycamore Avenue and San Pablo Avenue, impacts to intersections in this corridor would be reduced; however, more traffic would be added along Willow Avenue near the new ramps.

Under Cumulative Near-Term (2013) with ramp relocation, four intersections would exceed the thresholds of significance. Impacts at each intersection could be mitigated (Mitigation Measures TR5 through TR8).

2.4 CUMULATIVE AND GROWTH INDUCING IMPACTS

Cumulative and growth-inducing impacts of the proposed project combined with past, present, and reasonably foreseeable future projects are evaluated in Chapter 5 of this EIR. In general, with implementation of the specified mitigation measures, the project's contribution to cumulative impacts would not be significant. However, the proposed project would result in significant and unavoidable cumulative air quality (conflict with air quality plans and ROG and PM₁₀ emissions), noise (mobile source noise) and traffic (increase traffic on regional roadways and local intersections) related impacts. The project is not expected to induce unplanned growth or development in the vicinity of the project.

2.5 SIGNIFICANT UNAVOIDABLE IMPACTS

Section 15126.2(b) of the *CEQA Guidelines* requires an EIR to “describe any significant impacts, including those that can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described.”

Chapter 4 of this EIR describes the potential environmental impacts of the proposed project and specifies mitigation measures to reduce impacts to less than significant levels. While the specific mitigation measures summarized in Table 2-1 (Summary of Impacts and Mitigation), below, would reduce many significant impacts to less than significant, this analysis identified the following areas where, after the implementation of feasible mitigation measures, the project may nonetheless result in impacts that cannot be fully mitigated: Air Quality, Noise and Traffic/Transportation.

2.6 SUMMARY OF ALTERNATIVES EVALUATED

Chapter 6 of this EIR evaluates alternatives to the proposed project in accordance with the CEQA Guidelines Section 15126.6. These alternatives include:

- Alternative 1 - No Project/No Build (Status Quo) With No Ramp Relocation Project
- Alternative 2 - No Project/Future Development Under Existing General Plan With Ramp Relocation Project
- Alternative 3 - No Project/Future Development Under Existing General Plan With No Ramp Relocation Project
- Alternative 4 - Development of HNTC Program With No Ramp Relocation Project
- Alternative 5 - Development of HNTC Program With No Relocation of BART Park-And-Ride Lot/Market Town Project
- Alternative 6 - Market Town Project Only

2.6.1 ALTERNATIVE 1 - NO PROJECT/NO BUILD (STATUS QUO) WITH NO RAMP PROJECT

The No Project/No Build (Status Quo) With No Ramp Relocation Alternative (Alternative 1) would not result in any physical or operational changes to the planning area. The existing undeveloped parcels, parking lots, storage lots, off-ramp for I-80, on ramp for SR 4, and industrial uses would remain unchanged with implementation of this alternative. Amendments to the General Plan and Zoning Ordinance and the re-designation and rezoning of the project site to the NTC land use designation and zoning district would also not occur under Alternative 1. This alternative would not satisfy the project objectives stated in Chapter 3 (Project Description) which are re-stated above.

2.6.2 ALTERNATIVE 2 – NO PROJECT/FUTURE DEVELOPMENT UNDER EXISTING GENERAL PLAN WITH RAMP RELOCATION PROJECT

Alternative 2 assumes that the proposed General Plan and Zoning Ordinance Amendments are not adopted and future development of the planning area occurs under the direction of the existing General Plan and Zoning Ordinance. Accordingly, the Market Town project would not be developed under Alternative 2. The purpose of this alternative is to provide a comparison between the project's impacts with those that may occur from future development of the planning area anticipated by the General Plan. This alternative assumes that the Ramp Relocation project would take place; therefore, the existing I-80 off ramp and SR 4 on-ramp would be relocated further east along SR 4 from their current location.

The PNR parcel has a General Plan land use designation and zoning district of Commercial Public (CP). Under this alternative, the types of uses that could potentially be developed on the PNR parcel consist of transit-related uses (park and ride lots, etc.) that could combine with commercial development comprised of retail, wholesale (open to the public), offices

(business, professional and service), automobile service stations, restaurants and automobile repair services. The Ramp parcel is currently California Department of Transportation (Caltrans) right-of-way and has no General Plan land use designation. It is assumed that the City would designate it with the same land use designation and zoning as the surrounding parcels, General Commercial (GC), and it would redevelop according to the GC designation and zoning. All other parcels in the planning area have a General Plan land use designation and zoning district of General Commercial (GC). Retail, wholesale (open to the public), offices (business, professional and service uses), and other highway-oriented businesses (automobile service stations, restaurants and automobile repair services) could develop on parcels with the GC land use designation and zoning.

This alternative would not result in any residential development. It would also eliminate potential public and quasi-public uses (daycare facilities, government offices, libraries, museums, galleries, park and recreational facilities, public safety facilities, utility facilities), bed and breakfast inn/hotel uses, and recreation and entertainment uses. However, it would potentially result in the development of substantially more retail/office building space (approximately 1,006,172 square feet more) than the proposed project.

2.6.3 ALTERNATIVE 3 – NO PROJECT/FUTURE DEVELOPMENT UNDER EXISTING GENERAL PLAN WITH NO RAMP RELOCATION PROJECT

Alternative 3 is the same as Alternative 2 with the exception that under Alternative 3 the Ramp Relocation project would not occur. Thus, under Alternative 3, no physical or operational changes would occur to the approximately 3.25-acre Ramp parcel; the existing off-ramp for I-80 and on-ramp for SR 4 would continue to function in their current capacity, while the remaining project parcels would develop under the direction of the existing General Plan and Zoning Ordinance.

Alternative 3 would not result in any residential development, nor would any public/quasi-public uses (daycare facilities, government offices, libraries, museums, galleries, park and recreational facilities, public safety facilities, utility facilities), bed and breakfast inn/hotel uses, or recreation and entertainment uses be developed. Alternative 3 would potentially result in the development of substantially more retail/office building space (approximately 865,473 square feet more) than the proposed project; however, the retail/office building space of Alternative 3 would be reduced compared to Alternative 2. The total development potential of the proposed project would be 744,527 square feet more than the total development potential of Alternative 2.

2.6.4 ALTERNATIVE 4 – DEVELOPMENT OF HNTC PROGRAM WITH NO RAMP RELOCATION PROJECT

Alternative 4 assumes that the proposed General Plan and Zoning Ordinance Amendments are adopted and would apply to all the project parcels except the Ramp parcel (the Ramp parcel would remain as Caltrans right-of-way) and the Market Town project is implemented. All the project parcels would redevelop, except the Ramp parcel, into a mixed-use town center consisting of residential, commercial, office, and public and quasi public uses. No physical or operational changes would occur to the Ramp parcel, as the I-80 off-ramp and SR 4 on-ramp would not be relocated further east along SR 4 from their current location within the

planning area. This alternative would result in 75,000 square feet less office/retail uses than the proposed project and 175,000 square feet less residential development (175 residential units less) than the proposed project.

2.6.5 ALTERNATIVE 5 – DEVELOPMENT OF HNTC PROGRAM WITH NO RELOCATION OF BART PARK-AND-RIDE LOT/MARKET TOWN PROJECT

Under Alternative 5, the proposed General Plan and Zoning Ordinance Amendments would be adopted and would apply to the entire project site with the exception of the PNR parcel, which would retain its CP land use designation and zoning, as well as its current transit center use, and the Market Town project would not be implemented. Thus, the existing Hercules Transit Center would remain on the PNR parcel, while all the project parcels east of I-80 would redevelop into a mixed-use town center consisting of residential, commercial, office, and public and quasi public uses. Consequently, the Market Town project could not be implemented, as the PNR parcel would continue to operate as transit center for commuters. This alternative assumes that the I-80 off-ramp and SR 4 on-ramp would be relocated further east along SR 4 from their current location within the planning area. Alternative 5 would have 140,000 square feet less of office/retail uses than the proposed project and 360,000 less residential square footage than the project with 400 less residential units.

2.6.6 ALTERNATIVE 6 – MARKET TOWN PROJECT ONLY

Alternative 6 consists of the adoption of General Plan and Zoning Ordinance Amendments to create a NTC land use designation and zoning district that would apply to the PNR parcel only and the implementation of the Market Town project. All other parcels east of I-80 would develop under the direction of the existing General Plan and Zoning Ordinance except the Ramp parcel, which would remain as Caltrans right-of-way. Under this alternative, the PNR parcel would redevelop with a mixed-use town center consisting of residential, commercial, office, and public and quasi public uses, the C1 parcel would redevelop into a replacement parking facility for the existing Hercules Transit Center, the Ramp parcel would continue to function as the off-ramp for I-80 and on-ramp for SR 4 from Willow Avenue, and the remaining parcels east of I-80 would develop with either retail, wholesale (open to the public), offices (business, professional and service uses), or other highway-oriented businesses (automobile service stations, restaurants and automobile repair services) located in one- or two-story buildings with FARs ranging from 0.20 to 1.00.

2.6.7 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that an Environmentally Superior Alternative be identified; that is, an alternative that would result in the fewest or least significant environmental impacts. If the No Project Alternative is the Environmentally Superior Alternative, CEQA requires that another alternative be chosen as the Environmentally Superior Alternative. None of the Project Alternatives, including any of the No Project Alternatives, is clearly environmentally superior to the proposed project. While the No Project/No Build (Status Quo) With No Ramp Relocation Project would reduce all of the potentially significant and significant and unavoidable impacts associated with the project, it would not meet the project objectives. It would also fundamentally conflict with the vision of the Central Hercules Plan for the HNTC planning area, which specifies a pedestrian- and transit friendly mix of uses, including retail,

office and residential. Furthermore, this alternative is not consistent with the underlying purpose of the Central Hercules Plan, which is to enhance the City's quality of life, increase mobility and to create a true "town center."

2.7 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

CEQA Guidelines Section 15123 requires that EIRs summarize areas of controversy known to the lead agency and issues to be resolved. Issues were identified during both the Notice of Preparation (NOP) review period and the public scoping meeting. No apparent substantial areas of controversy not already being addressed in this EIR were identified. Comment letters received from organizations and agencies in response to the NOP are presented in Appendix A.

2.8 MITIGATION MONITORING

CEQA requires public agencies to set up monitoring and reporting programs to ensure compliance with those mitigation measures adopted or made as a condition of project approval to mitigate or avoid significant environmental effects identified in an EIR. A mitigation monitoring and reporting program incorporating the mitigation measures set forth in this document will be considered and acted upon by the City decision-makers for adoption concurrent with adoption of the findings of this EIR and prior to a determination on whether or not to approve the proposed project.

2.9 SUMMARY TABLE

Table 2-1 (Summary of Impacts and Mitigation) provides a summary of the potentially significant impacts identified in this EIR, the level of significance before mitigation, proposed mitigation measures, and the level of significance after mitigation.

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Aesthetics - General Plan and Zoning Amendments			
Future development consistent with the NTC land use designation and zoning district would alter views of the HTNC planning area from surrounding roadways, intersections, and nearby commercial, civic/public and residential uses.	Less Than Significant Impact	No mitigation required	Not applicable
Future development consistent with the NTC mixed-use land use designation and zoning district would Not damage scenic resources within a state designated scenic highway.	Less Than Significant	No mitigation required	Not applicable
Future development consistent with the NTC land use designation and zoning district would alter the existing visual character of the HTNC planning area and its surroundings.	Potentially Significant Impact	AES1 - During construction activities associated with future development allowed by the NTC mixed-use land use designation, construction sites shall be maintained to be clean and orderly (kept clear of trash, weeds and construction debris, regular emptying of dumpsters, etc.). Construction staging areas shall be sited away from public view where possible. A fence shall be installed around active construction areas to screen views of debris, equipment and work staging areas. Periodic inspections by the City of Hercules staff would ensure compliance with this measure.	Less Than Significant Impact
Future development consistent with the NTC land use designation and zoning district would introduce new sources of light and glare that Would have minor affects on adjacent uses in the planning area.	Less Than Significant Impact	No mitigation required	Not applicable
Aesthetics – Market Town Project			
The proposed Market Town project would	Less Than Significant Impact	No mitigation required	Not applicable

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
alter views of the HTNC planning area from surrounding roadways, intersections, and nearby commercial, civic/public and residential uses.			
The proposed Market Town project would not damage scenic resources within a state designated scenic highway.	Less Than Significant Impact	No mitigation required	Not applicable
The proposed Market Town project would alter the existing visual character of the HTNC planning area and its surroundings.	Potentially Significant Impact	Mitigation Measure AES1	Less Than Significant
The proposed Market Town project would introduce new sources of light and glare that would have minor affects on adjacent uses in the planning area.	Less Than Significant Impact	No mitigation required	Not applicable
Air Quality – General Plan and Zoning Amendments			
Short-term air quality impacts could occur during site preparation and project construction associated with future development in the HNTC planning area consistent with the NTC land use designation and zoning district.	Potentially Significant Impact	AQ1 - The project sponsor shall submit a grading plan to the City's Engineering Services Manager for review and approval. The grading plan shall include measures to reduce emissions from construction equipment and wind blown soils and shall be followed for all construction activities for the project. The following measures shall be incorporated into the grading plan: <ul style="list-style-type: none"> • Water all active construction areas at least twice daily. • Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard. • Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all 	Less Than Significant

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>unpaved access roads, parking areas and staging areas at construction sites.</p> <ul style="list-style-type: none"> • Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets. • Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for 10 days or more). • Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.). • Limit traffic speeds on unpaved roads up to 15 mph. • Install sandbags or other erosion control measures to prevent silt runoff to public roadways. • Replant vegetation in disturbed areas as quickly as possible. 	
		<p>AQ2 - In addition to the dust control measures required in Mitigation Measure AQ1, the following enhanced control measures shall be included on grading plans:</p> <ul style="list-style-type: none"> • Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard. • Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites. 	

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<ul style="list-style-type: none"> • Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites. • Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets. • Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more). • Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.). • Limit traffic speeds on unpaved roads to 15 mph. • Install sandbags or other erosion control measures to prevent silt runoff to public roadways. • Replant vegetation in disturbed areas as quickly as possible. • Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site. • Install wind breaks, or plant trees/vegetative wind breaks at windward side(s) of construction areas. • Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph. • Limit the area subject to excavation, 	

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		grading and other construction activity at any one time.	
		<p>AQ3 - The construction contractor shall adhere to BAAQMD Regulation 8, Rule 3 (Architectural Coatings) which limits the VOC content of architectural coatings used in the BAAQMD. The construction contractor shall not allow the averaging of such coatings to exceed the allowable emissions specified in BAAQMD Regulation 8, Rule 3. Coatings applied to stationary structures and their appurtenances at the site of installation, to portable buildings at the site of installation, to pavements, or to curbs shall adhere to this BAAQMD Rule. Coatings applied in shop applications or to non-stationary structures such as airplanes, ships, boats, railcars, and automobiles, and adhesives are not considered architectural coatings for the purpose of this rule.</p>	
<p>Long-term air quality impacts could occur during project operations associated with future development in the HNTC planning area consistent with the NTC land use designation and zoning district.</p>	<p>Potentially Significant Impact</p>	<p>AQ4 - Prior to the approval of plans submitted for a building permit, the City Building Division, shall confirm that the proposed development within the Hercules New Town Center includes the following measures as a part of the construction and building management contracts:</p> <ul style="list-style-type: none"> • Use solar or low-emission water heaters in the residential buildings; • Each appliance (i.e., washer/dryers, refrigerators, stoves, etc.) provided by the builder must be Energy Star qualified if an Energy Star designation is applicable for 	<p>Significant and Unavoidable Impact</p>

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		that appliance; <ul style="list-style-type: none"> • Low flow appliances (i.e., toilets, dishwashers, shower heads, washing machines) shall be installed if provided by the builder/applicant; and • Require that residential landscapers providing services at the common areas of a project site use electric or battery-powered equipment, or other internal combustion equipment that is either certified by the California Air Resources Board or is three years old or less at the time of use, to the extent that such equipment is reasonably available and competitively priced. 	
Development consistent with the NTC land use designation and zoning district could conflict with the local air quality management plan.	Less Than Significant Impact	No mitigation required	Not applicable
Development consistent with the NTC land use designation and zoning district could result in significant health risk impacts.	Less Than Significant Impact	No mitigation required	Not applicable
Air Quality – Market Town Project			
The proposed Market Town project would result in short- term air quality impacts during site preparation and project construction.	Potentially Significant Impact	Mitigation Measures AQ1, AQ2 and AQ3	Less Than Significant
The proposed Market Town project would result in long-term air quality impacts during project operations.	Potentially Significant Impact	Mitigation Measure AQ4	Less Than Significant

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
The proposed Market Town project could conflict with the local air quality management plan.	Less Than Significant Impact	No mitigation required	Not applicable
Air Quality – Cumulative Impacts			
The proposed project could conflict with the local air quality management plan.	Potentially Significant Impact	No feasible mitigation measures are available	Significant and Unavoidable Impact
Development associated with the proposed project and related cumulative projects could result in significant short-term cumulative air quality impacts.	Potentially Significant Impact	Mitigation Measures AQ1 through AQ3	Less Than Significant Impact
Regional air quality emissions resulting from operation of the proposed project and other related cumulative projects could impact existing regional air quality levels on a cumulative basis.	Potentially Significant Impact	Mitigation Measures AQ4. No other feasible mitigation measures are available	Significant and Unavoidable Impact
Biological Resources – General Plan and Zoning Amendments			
Development consistent with the NTC land use designation and zoning district could Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service.	Potentially Significant Impact	BIO1 - To determine areas of aquatic habitat occupied by CRLF, pre-construction surveys shall be performed in all portions of the HNTC planning area where suitable aquatic habitat exists. Wherever practicable, CRLF aquatic habitat shall be avoided and those areas containing CRLF shall be preserved. To offset impacts to aquatic, upland, or dispersal habitat containing CRLF, the project sponsor shall create wetland with suitable breeding hydrology and vegetation within the planning area or in a suitable alternative location approved by USFWS. If this is not feasible, the project sponsor shall provide off-site habitat conservation through a conservation bank and/or easement, at a 3:1	Less Than Significant Impact

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		ratio of like-habitat for every acre of occupied CRLF habitat filled or removed. For example, CRLF mitigation credits may be purchased for projects in Contra Costa County at the Ohlone Preserve Conservation Bank, located in Livermore, CA.	
		BIO2 - Mass grading shall be limited to the period between April 1 and October 31 to avoid potential impacts to dispersing frogs during the rainy season. A USFWS-approved biologist shall be specifically approved to monitor work in the HNTC planning area. If fill is placed in aquatic habitat occupied by CRLF or surrounding upland habitat within 50 feet of aquatic habitat, or if other construction activity is necessary in occupied aquatic habitat, it shall be conducted between July and November, outside the breeding season. A USFWS-approved biologist shall conduct training of construction crews to identify CRLF and the importance of avoiding harm to CRLF if observed. If CRLF are observed in construction areas, a USFWS-approved biologist shall relocate CRLF to suitable preserved habitat prior to the start of construction, with prior notification of USFWS.	
		BIO3 - Prior to the commencement of construction activities within the HNTC planning area, an exclusion fence plan designed by a USFWS-approved biologist and approved by USFWS shall be placed at the limit of grading, forming an adequate barrier between aquatic habitat and the construction areas. Fences shall be constructed with one-way openings or exit funnels approximately	

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>every 300 feet to allow the movement of terrestrial wildlife species out of, but not into, the construction areas. The fence shall be installed before the first rainy season prior to ground disturbance, or earlier. This will give CRLF, which are adapted to migration in the winter months, a chance to leave the work area via the one-way exit funnels.</p> <p>A permanent exclusion fence/barrier around new residential or commercial developments adjacent to or near aquatic habitat shall be installed to reduce access by humans and pets into habitat areas, or CRLF into developed areas. Signage shall be installed near fenced areas, to provide information to residents in the area and discourage disturbance or entry into wildlife habitat. The fencing/barrier shall be designed by a USFWS-approved biologist and approved by USFWS.</p>	
		<p>BIO4 - Proposed projects within the HNTC planning area shall be required to satisfy the requirements of provision C.3 of the National Pollution Discharge Elimination System (NPDES) permit under Section 401 of the Clean Water Act. The proposed project shall implement Policy 6-29 to control stormwater quality and discharge quantities so that they are not significantly affected by urban development in the planning area.</p>	
		<p>BIO5 - Prior to the commencement of activities in the HNTC planning area, pre-construction surveys for nesting birds and bats shall be conducted if construction will occur during the</p>	

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		potential breeding period, generally between February and August, to determine if any of these species are present. If present, temporary protective breeding season buffers shall be established to avoid direct take of nesting birds and bats. Alternatively, suitable nesting habitat shall be removed prior to construction and outside of the nesting or maternity roosting period (September through January).	
Development consistent with the NTC land use designation and zoning district could Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means, or have a substantial adverse effect on any riparian habitat or other sensitive community or habitat identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service.	Potentially Significant Impact	BIO6 - To mitigate for fill placed in wetlands, creation of wetlands at a minimum of a 1:1 ratio, created to filled acreage or functions and values basis, shall be implemented within the HNTC planning area or in an off-site location. Wetland mitigation may be accomplished in combination with mitigation described for CRLF (Mitigation Measure BIO1). Mitigation wetlands shall be created prior to or concurrent with filling of existing wetlands. If mitigation wetlands are to be created, a Mitigation Plan shall be developed for the site, which shall specify the use of locally native wetland plant species, quantities for planting, irrigation and maintenance requirements, performance criteria, and annual monitoring and reporting methods for a five-year period. In addition, when a specific project is designed that will impact a wetland, a Section 404 Individual or Nationwide Permit must be obtained from the ACOE, and a Section 401 Water Quality Certification must be obtained from the RWQCB, prior to the placement of any fill in wetlands.	Less Than Significant Impact

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>BIO7 - To mitigate for fill placed in streams and impacts to riparian areas, planting of riparian vegetation at a 2:1 ratio of planted riparian vegetation acreage and length to impacted stream acreage and length, shall be implemented as part of the HNTC planning area. Planting of riparian vegetation shall be accomplished along existing creeks or streams within or adjacent to the planning area to increase the riparian corridor and provide added habitat value. If riparian planting cannot be accomplished within or adjacent to the planning area, riparian plantings to compensate for stream and riparian impacts shall be performed at a 3:1 ratio in a suitable off-site location. A Mitigation Plan developed shall be prepared and specify the use of locally native, riparian plant species, quantities for planting, irrigation and maintenance requirements, performance criteria, and annual monitoring methods for a five-year monitoring period. In addition, a Section 404 Individual or Nationwide Permit shall be obtained from the USACOE, a Section 401 Water Quality Certification shall be obtained from the RWQCB, and a Section 1602 Lake and Streambed Alteration Agreement must be obtained from the CDFG prior to impacting existing streams or riparian areas.</p>	
Cultural Resources – General Plan and Zoning Amendments			
<p>Future development consistent with the NTC land use designation and zoning district could disturb or destroy unknown prehistoric</p>	<p>Potentially Significant Impact</p>	<p>CULT1 - Prior to the issuance of grading permits for future development allowed under the NTC mixed use land use designation and zoning district, the project sponsor(s) shall</p>	<p>Less Than Significant Impact</p>

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
resources or human remains.		retain a qualified archaeologist, subject to approval by the City. The qualified archaeologist shall train the construction crew on the mechanisms used to identify cultural resources and to caution them on the legal and/or regulatory implications of knowingly destroying cultural resources or removing artifacts or human remains from the project site(s). In the event that culturally sensitive materials are encountered, work shall be temporarily redirected to another location while the archeologist consults with the City to determine the treatment of those resources. In the event that human remains are discovered, the County Coroner shall be contacted within 24 hours. If the remains are of Native American ancestry, the Coroner shall notify the Native American Heritage Commission, who shall appoint a most likely descendent to determine the proper treatment of the remains. All cultural materials recovered shall be subject to scientific analysis, professional museum curation, and a report prepared according to current professional standards.	
Future development consistent with the NTC land use designation and zoning district could disturb or destroy unknown historic resources.	Potentially Significant Impact	Mitigation Measure CULT1	Less Than Significant Impact
Future development consistent with the NTC designation and zoning district could disturb or destroy unknown paleontological resources.	Potentially Significant Impact	Mitigation Measure CULT1	Less Than Significant Impact

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Cultural Resources – Market Town Project			
The proposed Market Town project could disturb or destroy unknown prehistoric resources or human remains.	Potentially Significant Impact	Mitigation Measure CULT1	Less Than Significant Impact
The proposed Market Town project could disturb or destroy unknown historic resources.	Potentially Significant Impact	Mitigation Measure CULT1	Less Than Significant Impact
The proposed Market Town project could disturb or destroy unknown paleontological resources.	Potentially Significant Impact	Mitigation Measure CULT1	Less Than Significant Impact
Geology and Soils – General Plan and Zoning Amendments			
Development consistent with the NTC land use designation and zoning district could expose people or structures to potentially substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking or seismic-related ground failure (including liquefaction) or landslides.	Potentially Significant Impact	GS1 - Prior to issuance of grading permits for parcels within the HNTC planning area, final geotechnical investigations, including additional subsurface exploration and laboratory testing, shall be performed. The recommendations of these investigations shall include final building footprints, building loads, estimated site grades, and allowable settlement tolerances to be implemented in the final project design.	Less Than Significant Impact

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Development consistent with the NTC land use designation and zoning district could result in substantial soil erosion or the loss of topsoil.	Less Than Significant Impact	No mitigation required	Not applicable
Development consistent with the NTC land use designation and zoning district could be located on a geologic formation unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in subsidence.	Less Than Significant Impact	No mitigation required	Not applicable
Development consistent with the NTC land use designation and zoning district could be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.	Potentially Significant Impact	GS2 - Plans submitted for building permits for future development of parcels within the HNTC planning area shall include requirements for the construction contractor to moisture condition any expansive soil below slabs, placing non-expansive fill below slabs as well as supporting foundations (below the zone of severe moisture change), and/or design foundations to resist the movement associated with the volume changes. Methods of moisture conditioning include mixing and turning (aerating) the soil to naturally dry the soil and lower the moisture content to an acceptable level. Other stabilization alternatives include overexcavating and placing drier material in its place, and/or treating the soil with lime.	Less Than Significant Impact
Geology and Soils – Market Town Project			
The proposed Market Town project could expose people or structures to potentially substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking or seismic-related	Potentially Significant Impact	Mitigation Measure GS1	Less Than Significant Impact

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
ground failure (including liquefaction) or landslides.			
The proposed Market Town project could result in substantial soil erosion or the loss of topsoil.	Less Than Significant Impact	No mitigation required	Not applicable
The proposed Market Town project could be located on a geologic formation unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in subsidence	Less Than Significant Impact	No mitigation required	Not applicable
The proposed Market Town project could be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.	Potentially Significant Impact	Mitigation Measure GS2	Less Than Significant Impact
Hazards and Hazardous Materials – General Plan and Zoning Amendments			
Development consistent with the NTC land use designation and zoning district could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	Potentially Significant Impact	HM1 - The interior of individual on-site structures within the Caltrans and WC Drilling parcels shall be visually inspected prior to demolition or renovation activities. Should hazardous materials be encountered with any on-site structure, the materials shall be tested and properly disposed of in accordance with state and federal regulatory requirements. Any stained soils or surfaces underneath the removed materials shall be sampled. Results of the sampling would indicate the appropriate level of remediation efforts that may be required.	Less Than Significant Impact
		HM2 - The exact age of the temporary structures on the Caltrans parcel shall be confirmed prior to removal. Should the temporary structures on the Caltrans parcel be removed off-site, they shall be properly	

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		disposed of at an approved landfill facility. Once removed, a visual inspection of the areas beneath the removed materials shall be performed. Any stained soils observed underneath the removed materials shall be sampled. Results of the sampling (if necessary) would indicate the level of remediation efforts that may be required.	
		HM3 - Areas of exposed soils on the C1, Loop, Ramp, Caltrans, Carone, and WC Drilling parcels, which would be disturbed during excavation/grading activities, shall be sampled and tested for lead prior to the issuance of Plans, Specifications, and Estimates (PS&E) for the project(s), so that any special handling, treatment, or disposal provisions associated with aerially deposited lead may be included in construction documents (if aerially deposited lead is present).	
		HM4 - Due to the age of on-site structures on the Caltrans and WC Drilling parcels, LBPs may be present and must be disposed of to an appropriate permitted disposal facility should renovation or demolition occur.	
		HM5 - Pursuant to Bay Area Air Quality Management District (BAAQMD) regulations, an asbestos survey shall be conducted by an Asbestos Hazard Emergency Response Act and Cal OSHA certified building inspector to determine the levels of asbestos in structures on the Caltrans and WC Drilling parcels should renovation or demolition occur. Compliance with BAAQMD Regulation 11,	

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		Rule 2 (Asbestos Demolition, Renovation, and Manufacturing) would be required for any demolition or renovation work involving asbestos containing material.	
		HM6 - Any transformers to be relocated during site construction/demolitions shall be conducted under the purview of the local utility purveyor to identify proper handling procedures regarding potential PCBs.	
		HM7 The on-site AST on the Caltrans parcel shall be removed and properly disposed of at an approved landfill facility. Once the AST is removed, a visual inspection of the areas beneath and around the removed AST shall be performed. Any stained soils observed underneath the AST shall be sampled. Results of the sampling (if necessary) would indicate the level of remediation efforts that may be required.	
		HM8 - Due to the unknown origin of the undocumented debris piles, the piles shall be sampled and tested for hazardous materials. Results of the sampling (if necessary) would indicate the level of remediation efforts that may be required.	
		HM9 - All miscellaneous debris on the C1 parcel shall be removed off-site and properly disposed of at an approved landfill facility. Once removed, a visual inspection of the areas beneath the removed materials shall be performed. Any stained soils observed underneath the removed materials shall be sampled. Results of the sampling (if	

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>necessary) would indicate the level of remediation efforts that may be required.</p>	
		<p>HM10 - The interior of the on-site storage unit(s) on the Caltrans, and WC Drilling parcels shall be visually inspected prior to removal. The storage unit(s) shall be removed off-site and properly disposed of at an approved landfill facility. Once removed, a visual inspection of the areas beneath the removed materials shall be performed. Any stained soils observed underneath the removed materials shall be sampled. Results of the sampling (if necessary) would indicate the level of remediation efforts that may be required.</p>	
		<p>HM11 - Prior to ground disturbance on the Caltrans and Carone parcels, soil samples shall be collected and analyzed to determine if the Chevron pipeline has released contamination and compromised the project site. Results of sampling would indicate the level of remediation effort that may be required.</p>	
		<p>HM12 - If unknown wastes or suspect materials are discovered during construction by the contractor which he/she believes may involve hazardous waste/materials, the contractor shall:</p> <p>-Immediately stop work in the vicinity of the suspected contaminant, removing workers and the public from the area</p>	

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<ul style="list-style-type: none"> -Notify the Project Engineer of the implementing agency - Secure the areas as directed by the Project Engineer -Notify the implementing agency's Hazardous Waste/Materials Coordinator 	
Development consistent with the NTC land use designation and zoning district could create a significant hazard to the public or environment because the planning area contains a site which is included on a list of hazardous materials sites compiled pursuant to government code Section 65962.5 and, as a result, could create a significant hazard to the public or the environment.	Potentially Significant Impact	Mitigation Measures HM7, HM11 and HM12	Less Than Significant Impact
Hazards and Hazardous Materials – Market Town Project			
The proposed Market Town project could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	Potentially Significant Impact	HM13 - A soil management plan shall be prepared to properly handle soil that will be excavated in the vicinity of Treadwell & Rollo boring EB-6.	Less Than Significant Impact
		HM14 - Prior to ground disturbance on the PNR parcel, soil samples shall be collected and analyzed to determine if the Chevron pipeline has released contamination and compromised the project site. Results of sampling would indicate the level of remediation effort that may be required.	
		HM15 - The exact location of the historical petroleum pipeline on the PNR parcel shall be defined prior to the commencement of	

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>construction. Any activities occurring within the petroleum pipeline easement shall be conducted pursuant to applicable guidelines and regulations.</p>	
		<p>HM16 - The soil management plan (see HM-14, above) shall be implemented during excavation in the vicinity of Treadwell & Rollo boring EB-6.</p>	
		<p>HM17 - If unknown wastes or suspect materials are discovered during construction by the contractor which he/she believes may involve hazardous waste/materials, the contractor shall:</p> <ul style="list-style-type: none"> - Immediately stop work in the vicinity of the suspected contaminant, removing workers and the public from the area - Notify the Project Engineer of the implementing agency - Secure the areas as directed by the Project Engineer - Notify the implementing agency's Hazardous Waste/Materials Coordinator 	
Hydrology and Water Quality – General Plan and Zoning Amendments			
<p>Development consistent with the NTC land use designation and zoning district would not violate water quality standards or waste discharge requirements.</p>	<p>Less Than Significant Impact</p>	<p>No mitigation required</p>	<p>Not applicable</p>
<p>Development consistent with the NTC land use designation and zoning district would not substantially deplete groundwater supplies or interfere substantially with groundwater</p>	<p>Less Than Significant Impact</p>	<p>No mitigation required</p>	<p>Not applicable</p>

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted).			
Development consistent with the NTC land use designation and zoning district could substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.	Less Than Significant Impact	No mitigation required	Not applicable
Development consistent with the NTC land use designation and zoning district could substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site.	Potentially Significant Impact	WQ1 - Prior to issuance of grading or building permits, whichever occurs first, the project sponsor shall submit a hydrology report (using the Hydro-6 model) that details the performance of pre- and post-project stormwater runoff from the project site to the City's drainage system for review and approval by the City's Engineering Division. In addition, plans for the project's stormwater drainage system shall also be submitted for review and approval by the City's Engineering Division. The stormwater drainage system shall be developed in accordance with the site specific Stormwater Control Plan for the project, and shall not result in a net increase in stormwater flow to the City's stormwater drainage system.	Less Than Significant Impact

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Development consistent with the NTC land use designation and zoning district could exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.	Potentially Significant Impact	Mitigation Measure WQ1	Less Than Significant Impact
Development consistent with the NTC land use designation and zoning district could place housing within a 100-year flood hazard area, or place within a 100-year flood hazard area structures which could impede or redirect flood flows.	Potentially Significant Impact	WQ2 - Prior to issuance of grading or building permits for projects located on Parcel 3, project sponsors shall submit a hydrology report delineating the current 100-year flood hazard area on the site for review and approval by the City's Engineering Division.	Less Than Significant Impact
		WQ3 - Prior to issuance of grading or building permits for projects located on Parcel 3, project sponsors shall submit development plans that have been designed to minimize generation and exposure to flood hazards, as well as showing finished floor elevations 1 foot above the 100-year flood hazard elevation.	
Hydrology and Water Quality – Market Town Project			
The proposed Market Town project could violate water quality standards or waste discharge requirements.	Potentially Significant Impact	WQ4 - Prior to issuance of grading or building permits for the Market Town project, whichever occurs first, the project sponsor shall submit to the Engineering Division Manager a Stormwater Management Plan for the proposed project that meets applicable C.3. Guidelines.	Less Than Significant Impact
The proposed Market Town project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells	Less Than Significant Impact	No mitigation required	Not applicable

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
would drop to a level that would not support existing land uses or planned uses for which permits have been granted).			
The proposed Market Town project could substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.	Potentially Significant Impact	Mitigation Measure WQ4	Less Than Significant Impact
The proposed Market Town project could substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site.	Potentially Significant Impact	Mitigation Measure WQ1	Less Than Significant Impact
The proposed Market Town project could create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.	Potentially Significant Impact	Mitigation Measure WQ1 and WQ4	Less Than Significant Impact
Noise – General Plan and Zoning Amendments			
Development consistent with the NTC land use designation and zoning district could result in temporary noise and/or vibration impacts to nearby noise sensitive receivers.	Potentially Significant Impact	NOI1 - Prior to issuance of grading and/or building permits, whichever occurs first, the project sponsor(s) shall demonstrate, to the satisfaction of the City of Hercules Planning Department, that projects located within 320 feet of any noise-sensitive receptors (e.g., residences, schools, childcare centers, churches, hospitals, and nursing homes) will implement appropriate noise controls to reduce daytime construction noise levels to	Less Than Significant Impact

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>meet the 70-dBA daytime speech interference criterion to the extent feasible. Such controls shall include any of the following, as appropriate:</p> <ul style="list-style-type: none"> • Best available noise control techniques (including mufflers, intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds) shall be used for all equipment and trucks in order to minimize construction noise impacts. • If impact equipment (e.g., jack hammers, pavement breakers, and rock drills) is used during project construction, hydraulically or electric-powered equipment shall be used wherever feasible to avoid the noise associated with compressed-air exhaust from pneumatically powered tools. However, where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed-air exhaust shall be used (a muffler can lower noise levels from the exhaust by up to about 10 dBA). • Stationary noise sources shall be located as far from sensitive receptors as feasible. If they must be located near receptors, adequate muffling (with enclosures where feasible and appropriate) shall be used to ensure local noise ordinance limits are met to the extent feasible. Enclosure opening or venting shall face away from sensitive receptors. If any stationary equipment (e.g., ventilation fans, generators, dewatering pumps) is 	

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>operated beyond the time limits specified by the pertinent noise ordinance, this equipment shall conform to the affected jurisdiction's pertinent day and night noise limits to the extent feasible.</p> <ul style="list-style-type: none"> • Material stockpiles as well as maintenance/equipment staging and parking areas shall be located as far as feasible from residential and school receptors. • A designated project liaison shall be responsible for responding to noise complaints during the construction phases. The name and phone number of the liaison shall be conspicuously posted at construction areas and on all advanced notifications. This person shall take steps to resolve complaints, including periodic noise monitoring, if necessary. Results of noise monitoring shall be presented at regular project meetings with the project contractor, and the liaison shall coordinate with the contractor to modify any construction activities that generated excessive noise levels to the extent feasible. 	

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Development consistent with the NTC land use designation and zoning district could result in temporary vibration impacts to nearby noise sensitive receptors.	Less Than Significant Impact	No mitigation required	Not applicable
Traffic generated by development consistent with the NTC land use designation and zoning district could result in a long-term off-site traffic noise impact.	Less Than Significant Impact	No mitigation required	Not applicable
Development consistent with the NTC land use designation and zoning district Could result in on-site noise levels in excess of the City of Hercules noise standards.	Potentially Significant Impact	<p>NOI2 – Prior to issuance of building permits for on-site residential development within the HNTC planning area along I-80 and John Muir Parkway (SR 4), an acoustical noise analysis shall be prepared to ensure that exterior and interior noise levels meet the City of Hercules Land Use Compatibility Standards at all residential, recreational, and other sensitive land uses. Residential buildings or structures shall prepare an acoustical analysis showing that the building has been designed to limit intruding noise to the level prescribed (interior CNEL of 45 dB). Individual developments shall, to the extent feasible, implement site-planning techniques such as the following:</p> <ul style="list-style-type: none"> • Increasing the distance between the noise source and the receiver. • Using non-noise sensitive structures such as garages to shield noise-sensitive areas. • Orienting buildings to shield outdoor spaces from a noise source. • Incorporating architectural design strategies, which reduce the exposure of noise-sensitive spaces to stationary noise 	Less Than Significant Impact

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>sources (i.e., placing bedrooms or balconies on the side of the house facing away from noise sources). These design strategies shall be implemented based on recommendations of acoustical analysis for individual developments, as required by the City to comply with City noise standards.</p> <ul style="list-style-type: none"> • Incorporating noise barriers, walls, or other sound attenuation techniques, based on recommendations of acoustical analysis for individual developments, as required by the City to comply with City noise standards. Barriers shall only be constructed between the development and the existing highway. • Modifying elements of building construction (i.e., walls, roof, ceiling, windows, and other penetrations), as necessary to provide sound attenuation. This may include sealing windows, installing thicker or double-glazed windows, locating doors on the opposite side of a building from the noise source, or installing solid-core doors equipped with appropriate acoustical gaskets. 	
		<p>NOI3 - Prior to issuance of building permits for development within the HNTC planning area located adjacent to the Union Pacific Railroad, an acoustical analysis shall be prepared to fully analyze and develop standards to ensure that the exterior and interior noise levels would be attenuated to comply with the City of Hercules Land Use Compatibility Standards.</p>	

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Development consistent with the NTC land use could result in an increase in ambient noise levels due to the generation of on-site stationary noise sources.	Potentially Significant Impact	NOI4 - Prior to issuance of building permits, the project sponsor(s) shall demonstrate, to the satisfaction of the City of Hercules Planning Department, that noise impacts from electrical and mechanical equipment (i.e., ventilation and air conditioning units) are located away from receptor areas. Additionally, the following considerations shall be given prior to installation: proper selection and sizing of equipment, installation of equipment with proper acoustical shielding, and incorporating the use of parapets into the building design.	Less Than Significant Impact
		NOI5 - Loading docks constructed within 250 feet of a residential use shall be designed to have either a depressed (i.e., below grade) loading dock area; an internal bay; or a wall to break the line of sight between residential land uses and other noise sensitive uses, and loading operations. Prior to issuance of building permits, an acoustical analysis shall be performed to demonstrate that operation of potential loading docks does not result in noise levels that exceed City standards at exterior on-site residences' living areas or off-site sensitive uses.	
Noise – Market Town Project			
Development of the Market Town project could result in temporary vibration impacts to nearby noise sensitive receptors.	Potentially Significant Impact	Mitigation Measure NOI1	Less Than Significant Impact

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
The proposed Market Town project could result in temporary vibration impacts to nearby noise sensitive receptors.	Less Than Significant Impact	No mitigation required	Not applicable
Traffic generated by development of the Market Town project could result in long-term off-site traffic noise impact.	Less Than Significant Impact	No mitigation required	Not applicable
The proposed Market Town project could result in on-site noise levels in excess of the City of Hercules noise standards.	Potentially Significant Impact	NOI6 - Prior to approval of final construction documents, the project engineer shall develop the sound transmission class specifications for building construction. The sound transmission class shall be adjusted when the final exterior surface area as a percent of room floor area is determined. The specifications shall be submitted to the City of Hercules prior to the issuance of building permits.	Less Than Significant Impact
		NOI7 - Residential units located along I-80, John Muir Parkway (SR 4), and San Pablo Avenue require mechanical ventilation which shall be shown on plans submitted for building permits. The mechanical ventilation shall be installed to ensure noise levels will be below 45 dBA CNEL with the windows and doors closed. As specified in the Uniform Building Code (UBC), 1997 edition, Section 12.03.3, mechanical ventilation units shall be designed to supply two air changes per hour in guest rooms, dormitories, habitable rooms, and public corridors with a minimum of 15 cubic feet per minute (7L/s) of outside air per occupant during such time as the building is occupied.	
The proposed Market Town project could result in an increase in ambient noise levels	Potentially Significant Impact	Mitigation Measures NOI2, NOI4 and NOI5	Less Than Significant Impact

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
due to the generation of on-site stationary noise sources.			
Noise – Cumulative Impacts			
Development associated with the proposed project and other related cumulative projects could result in cumulatively considerable short-term noise impacts.	Potentially Significant Impact	Mitigation Measure NOI1	Less Than Significant Impact
Development associated with the proposed project and other related cumulative projects could result in cumulatively considerable long-term noise impacts.	Potentially Significant Impact	No feasible mitigation is available	Significant and Unavoidable Impact
Population and Housing – General Plan and Zoning Amendments			
Development consistent with the NTC land use designation and zoning district would directly induce population and growth in the City of Hercules by providing 1,650 multi-family residential units.	Less Than Significant Impact	No mitigation required	Not applicable
Development consistent with the NTC land use designation and zoning district would increase employment opportunities in the City of Hercules by providing approximately 1,425 new jobs with the development of approximately 516,250 square feet of retail and office space.	Beneficial Impact	No mitigation required	Not applicable
Development consistent with the NTC land use designation and zoning district would increase the jobs/housing ratio within the City of Hercules.	Beneficial Impact	No mitigation required	Not applicable
Population and Housing – Market Town Project			
The proposed Market Town project would directly induce population growth in the City	Less Than Significant Impact	No mitigation required	Not applicable

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
of Hercules by providing 400 residential units.			
The proposed Market Town project would increase employment opportunities in the City of Hercules by providing approximately 400 new jobs with the development of approximately 140,000 square feet of retail and office space.	Beneficial Impact	No mitigation required	Not applicable
The proposed Market Town project would not significantly alter the jobs/housing ratio within the City of Hercules.	Beneficial Impact	No mitigation required	Not applicable
Public Services, Utilities and Service Systems – General Plan and Zoning Amendments			
The public service needs of future development consistent with the NTC land use designation and zoning district would not result in substantial adverse impacts.	Less Than Significant Impact	No mitigation required	Not applicable
Development consistent with the NTC land use designation and zoning district would not exceed wastewater treatment RWQCB; nor would the project result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to provide the project's projected demand in addition to the provider's existing commitments.	Less Than Significant Impact	No mitigation required	Not applicable
Sufficient water supplies are available to serve future development consistent with the NTC land use designation and zoning district from existing entitlements and resources; no new or expanded entitlements would be required.	Less Than Significant Impact	No mitigation required	Not applicable
The landfill that would future development consistent with the NTC land use designation	Less Than Significant Impact	No mitigation required	Not applicable

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
and zoning district has sufficient permitted capacity to accommodate the project's solid waste disposal needs. The project would comply with federal, state and local statutes and regulations related to solid waste.			
Public Services, Utilities and Service Systems – Market Town Project			
The public service needs of the proposed Market Town project would not result in substantial adverse impacts.	Less Than Significant Impact	No mitigation required	Not applicable
The proposed Market Town project would not exceed wastewater treatment requirements of the applicable RWQCB; nor would the project result in A determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to provide the project's projected demand in addition to the provider's existing commitments.	Less Than Significant Impact	No mitigation required	Not applicable
Sufficient water supplies are available to serve the proposed Market Town project from existing entitlements and resources; no new or expanded entitlements would be required.	Less Than Significant Impact	No mitigation required	Not applicable
The landfill that would serve the proposed Market Town project has sufficient permitted capacity to accommodate the project's solid waste disposal needs. The project would comply with federal, state and local statutes and regulations related to solid waste.	Less Than Significant Impact	No mitigation required	Not applicable
Recreation – General Plan and Zoning Amendments			
Development consistent with the NTC land use designation and zoning district would increase the use of existing neighborhood	Less Than Significant Impact	No mitigation required	Not applicable

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
and regional parks or other recreational facilities.			
Development consistent with the NTC land use designation and zoning district would not include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse effect on the environment.	Less Than Significant Impact	No mitigation required	Not applicable
Recreation – Market Town Project			
The proposed Market Town project would increase the use of existing neighborhood and regional parks or other recreational facilities.	Less Than Significant Impact	No mitigation required	Not applicable
The proposed Market Town project would not include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse effect on the environment.	Less Than Significant Impact	No mitigation required	Not applicable
Transportation/Traffic: Baseline Plus Project – Market Town Project			
Development of the Market Town project would increase traffic through the system of local intersections under baseline plus project conditions.	Less Than Significant Impact	No mitigation required	Not applicable
Development of the Market Town project would increase traffic on regional freeway facilities under baseline plus project conditions.	Less Than Significant Impact	No mitigation required	Not applicable
Transportation/Traffic: Cumulative Near-Term (2013) No Ramp Relocation – Market Town Project			
Traffic would increase through the system of local intersections under cumulative near-term (2013) – no ramp relocation conditions.	Potentially Significant Impact	TR1 - Sycamore Avenue between Willow Avenue and San Pablo Avenue shall be converted from a six-lane to a seven-lane	Less Than Significant

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>cross-section by widening the PNR frontage on Sycamore Avenue by about 12 feet (the width of one travel lane). The resulting Sycamore Avenue cross-section at the Willow Avenue approach would include one full left-turn lane, one through lane, and one shared through/right-turn lane. In addition, the Willow Avenue WB left-turn storage shall be lengthened from 90 to 300 feet, the speed limit shall be reduced from 35 to 25 mph on Willow Avenue east of Sycamore Avenue, and the Willow Avenue/Sycamore Avenue/San Pablo Avenue traffic signal system shall be optimized. The additional Willow Avenue WB left-turn storage can be achieved by reconstructing the median on Willow Avenue.</p> <p>The project sponsor shall be responsible for the fair share contribution toward the construction of the proposed mitigation measure as determined by the Development Impact Fee program in effect at the time building permits are issued. As part of the mitigation, the project sponsor shall dedicate sufficient right of way along the PNR parcel frontage along Sycamore Avenue for the addition of one travel lane (approximately 12 feet). This dedication of right of way shall be taken into consideration when determining fair share Development Impact Fees.</p> <p>If the fee program is not sufficiently funded to construct the mitigation measure at the time the measure is needed to mitigate the selected project's impact, then the project sponsor shall construct the mitigation</p>	

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>measure, and shall be reimbursed for the portion of costs in excess of its fair share contribution.</p>	
		<p>TR2 - Implement Mitigation Measure TR1. The Sycamore Avenue cross-section at the San Pablo Avenue approach shall include two left-turn lanes, one shared through/right-turn lane, and one right-turn lane.</p> <p>The project sponsor is responsible for the fair share contribution toward the construction of the proposed mitigation measure as determined by the Development Impact Fee program in effect at the time building permits are issued. If the fee program is not sufficiently funded to construct the mitigation measure at the time the measure is needed to mitigate the selected project's impact, then the project sponsor shall construct the mitigation measure, and shall be reimbursed for the portion of costs in excess of its fair share contribution</p>	
		<p>TRA3 - The Willow Avenue/SR 4 EB Hook Ramp intersection shall be signalized, a 300-foot WB right-turn pocket from Willow Avenue onto the SR 4 EB On-Ramp shall be installed, and the Willow Avenue EB left-turn lane to the SR 4 EB On-Ramp shall be extended to provide 300 feet of storage. The lane addition and extension would require widening the intersection by 12 to 14 feet.</p> <p>The project sponsor shall be responsible for the fair share contribution toward the construction of the proposed mitigation</p>	

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>measure as determined by the Development Impact Fee program in effect at the time building permits are issued. If the fee program is not sufficiently funded to construct the mitigation measure at the time the measure is needed to mitigate the selected project's impact, then the project sponsor shall construct the mitigation measure, and shall be reimbursed for the portion of costs in excess of its fair share contribution.</p>	
		<p>TR4 - The Willow Avenue/Palm Avenue intersection shall be signalized and left-turn lanes at each intersection approach shall be provided. The Willow Avenue WB approach shall have one 150-foot right-turn pocket, one through lane, and one 300-foot left-turn lane. The lane additions would require widening the intersection by 12 to 14 feet.</p> <p>The project sponsor shall be is responsible for the fair share contribution toward the construction of the proposed mitigation measure as determined by the Development Impact Fee program in effect at the time building permits are issued. If the fee program is not sufficiently funded to construct the mitigation measure at the time the measure is needed to mitigate the selected project's impact, then the project sponsor shall construct the mitigation measure, and shall be reimbursed for the portion of costs in excess of its fair share contribution.</p>	

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Traffic on regional freeway facilities would increase under near-term (2013) – no ramp relocation conditions.	Less Than Significant Impact	No mitigation required	Not applicable
Transportation/Traffic: Cumulative Near-Term (2013) With Ramp Relocation – Market Town Project			
Traffic through the system of local intersections would increase under cumulative near-term (2013) – with ramp relocation conditions.	Potentially Significant Impact.	Mitigation Measures TR1 and TR4	Less Than Significant Impact
		<p>TR7 - The Palm Avenue/Sycamore Avenue intersection shall be signalized and a second lane shall be added at the EB Palm Avenue approach to allow the signal to serve EB Palm Avenue right-turns and NB Sycamore Avenue left-turns concurrently.</p> <p>The project sponsor is responsible for the fair share contribution toward the construction of the proposed mitigation measure as determined by the Development Impact Fee program in effect at the time building permits are issued. If the fee program is not sufficiently funded to construct the mitigation measure at the time the measure is needed to mitigate the selected project's impact, then the project sponsor shall construct the mitigation measure, and shall be reimbursed for the portion of costs in excess of its fair share.</p>	

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>TR8 - The Transit Center East Driveway/Willow Avenue intersection shall be signalized. The proposed design for this intersection (<i>BART Replacement Facility MND</i>) already includes EB left-turn and WB right-turn pockets, as well as two lanes out of the Transit Center. Therefore, no additional turn lanes would be required when the traffic signal is installed.</p> <p>The project sponsor is responsible for the fair share contribution toward the construction of the proposed mitigation measure as determined by the Development Impact Fee program in effect at the time building permits are issued. If the fee program is not sufficiently funded to construct the mitigation measure at the time the measure is needed to mitigate the selected Project's impact, then the Project sponsor shall construct the mitigation measure, and shall be reimbursed for the portion of costs in excess of its fair share contribution.</p>	
<p>Traffic on regional freeway facilities would increase under cumulative near-term (2013) – with ramp relocation conditions.</p>	<p>Less Than Significant Impact</p>	<p>No mitigation required</p>	<p>Not applicable</p>
<p>Transportation/Traffic: Cumulative Near-Term (2035) With Ramp Relocation – General Plan and Zoning Ordinance Amendments</p>			
<p>Development of the HNTC program would increase traffic through the system of local intersections under cumulative (2035) conditions.</p>	<p>Potentially Significant Impact</p>	<p>Mitigation Measures TR1, TR2, TR7 and TR8</p>	<p>Significant and Unavoidable</p>
		<p>TR11 - A second right-turn lane shall be provided from NB San Pablo Avenue to EB John Muir Parkway. The second right-turn</p>	

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>lane shall be extended along the PNR frontage to the San Pablo Avenue/PNR Driveway intersection. The project sponsor should dedicate the needed right of way for this additional lane. EB John Muir Parkway shall be widened to four lanes from San Pablo Avenue to the SR 4 and I-80 ramps. This widened segment of John Muir Parkway would allow the two NB San Pablo Avenue right-turn lanes to have exclusive receiving lanes that serve the I-80 WB On-Ramp. This would also require widening the I-80 WB On-Ramp from one to two lanes.</p> <p>The project sponsor shall be responsible for the fair share contribution toward the construction of the proposed mitigation measure as determined by the Development Impact Fee program in effect at the time building permits are issued. As part of the mitigation, the project sponsor(s) shall dedicate sufficient right of way along the PNR site frontage along San Pablo Avenue for the addition of one right-turn lane (approximately 12 feet). This dedication of right of way shall be taken into consideration when determining fair share Development Impact Fees.</p> <p>If the fee program is not sufficiently funded to construct the mitigation measure at the time the measure is needed to mitigate the selected project's impact, then the project sponsor shall construct the mitigation measure, and shall be reimbursed for the portion of costs in excess of its fair share contribution.</p>	

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>TR12 - At least one left-turn and one right-turn lane shall be provided at the PNR Driveway (WB) approach. Additional mitigation at this intersection is not possible given the closely spaced intersections along San Pablo Avenue (at John Muir Parkway and Sycamore Avenue), right-of-way constraints, and the PNR frontage on San Pablo Avenue.</p> <p>The project sponsor shall be responsible for constructing this mitigation.</p>	
		<p>TR13 - Willow Avenue shall be widened to a four lane cross section, the Willow Avenue/Palm Avenue intersection shall be signalized, and provide left-turn lanes shall be provided at each intersection approach. The Willow Avenue WB left-turn lane shall be continued to the EB SR 4 Off-Ramp intersection.</p> <p>The project sponsor shall be responsible for the fair share contribution toward the construction of the proposed mitigation measure as determined by the Development Impact Fee program in effect at the time building permits are issued. If the fee program is not sufficiently funded to construct the mitigation measure at the time the measure is needed to mitigate the selected project's impact, then the project sponsor shall construct the mitigation measure, and shall be reimbursed for the portion of costs in excess of its fair share contribution.</p>	
Development of the HNTC program would	Potentially Significant Impact	There are no feasible mitigation measures	Significant and Unavoidable Impact

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
increase traffic on regional freeway facilities under cumulative (2035) conditions.			
Transportation/Traffic: Multi-Modal Transportation Systems - Market Town Project			
Development of the Market Town project would increase transit activity in the vicinity of the planning area.	Potentially Significant Impact	<p>Implement Mitigation Measures TR1, TR2, TR3, TR4, TR7 and TR8. All of these mitigation measures would benefit bus travel times through the affected study area.</p> <p>Additional actions to help lessen the transit travel time effects could include some of the following:</p> <ul style="list-style-type: none"> • Provide bus transponders and traffic signal equipment that allow for signal preemption at major intersections along San Pablo Avenue and Sycamore Avenue, in order to allow transit vehicles to progress through the intersections with less delay, provided overall traffic flows are not worsened. • Re-route buses and update schedules to reflect the changes in travel time and retain opportunities for timed transfers at the HTC. This may include reducing dwell times or layover times at the new HTC or other stops. • Increase the number of buses on certain routes. • Provide real-time information systems at the HTC and other major stops that rely on accurate bus location information. Such information could be provided to all web users via services such as NextBus 	Less Than Significant Impact

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		(currently used by AC Transit and Muni). <ul style="list-style-type: none"> • Provide enhanced scheduling software. 	
Development of the Market Town project would increase pedestrian and bicycle activities adjacent to and within the site.	Less Than Significant Impact	No mitigation required	Not applicable
Transportation/Traffic: Multi-Modal Transportation Systems – General Plan and Zoning Ordinance Amendments			
Development of the HNTC program would increase transit activity in the vicinity of the planning area.	Potentially Significant Impact	Mitigations Measures TR1, TR2, TR8, TR11, TR12 and TR13. Additional actions to help lessen the transit travel time effects could include some of the following: <ul style="list-style-type: none"> • Provide bus transponders and traffic signal equipment that allow for signal preemption at major intersections along San Pablo Avenue and Sycamore Avenue, in order to allow transit vehicles to progress through the intersections with less delay, provided overall traffic flows are not worsened. • Re-route buses and update schedules to reflect the changes in travel time and retain opportunities for timed transfers at the HTC. This may include reducing dwell times or layover times at the new HTC or other stops. • Increase the number of buses on certain routes. • Provide real-time information systems at the HTC and other major stops that rely on 	Significant and Unavoidable Impact

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>accurate bus location information. Such information could be provided to all web users via services such as NextBus (currently used by AC Transit and Muni).</p> <ul style="list-style-type: none"> • Provide enhanced scheduling software. 	
Development of the HNTC program would increase pedestrian and bicycle activities adjacent to and within the site.	Less Than Significant Impact	No mitigation required	Not applicable
Transportation/Traffic: Parking Analysis – Market Town Project			
Development of the Market Town project would increase demand for parking.	Potentially Significant Impact	<p>TR20 - Prior to issuance of building permits for the Market Town project, one of the following actions shall be taken:</p> <ul style="list-style-type: none"> • Plans submitted for building permits shall provide an additional 87 parking spaces on-site. • A shared parking agreement between users in the Market Town project shall be prepared for review and approval of the Planning Division. The NTC zoning district allows projects in the NTC district to create shared parking arrangements between users in order to reduce the total number of parking spaces required. This could be combined with the first option above. • The City is currently in the process of developing a revised parking ordinance for the Central Hercules Area and this parking ordinance would apply to the Market Town project. In its current form, the Draft Ordinance is proposing reductions in the 	Less Than Significant Impact

**Table 2-1
Summary of Impacts and Mitigation**

Environmental Impacts	Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		minimum parking ratios. If the Parking Ordinance is approved prior to the approval of building permits, then the Market Town project could provide the amount of parking in the new ordinance. This amount may be lower than the overall parking required in the Zoning Ordinance.	
Transportation/Traffic: Parking Analysis – General Plan and Zoning Ordinance Amendments			
Development of the HNTC program would increase demand for parking.	Less Than Significant Impact	No mitigation required	Not applicable

3.0 PROJECT DESCRIPTION

3.1 PROJECT SUMMARY

The proposed Hercules New Town Center (HNTC) project consists of two elements. First, the City of Hercules Redevelopment Agency (City RDA) proposes amendments to the Hercules General Plan (General Plan) and Zoning Ordinance to create a "New Town Center" (NTC) land use designation and zoning district that would apply to the HNTC planning area. The HNTC planning area comprises seven parcels totaling approximately 35 acres. Second, the City RDA and the Hercules New Town Center LLC (project sponsor) propose redevelopment of one parcel within the HNTC planning area. This project would be located on the PNR parcel and is also referred to as the Market Town project. The two project elements are described in detail below.

3.2 PROJECT LOCATION

The HNTC planning area is located within the City of Hercules (City), in Contra Costa County, California. The City is located along the eastern edge of the San Pablo Bay, approximately 25 miles northeast of San Francisco (refer to Figure 3-1, Regional Location Map). Six of the seven parcels that comprise the planning area are located southeast of the Interstate 80 (I-80) and State Route 4 (SR 4) interchange and one parcel is located immediately southwest of the interchange. Together the parcels total approximately 35 acres that are generally bounded by SR 4 to the north, Sycamore Avenue, Willow Avenue and railroad tracks to the south, Palm Avenue to the east, and San Pablo Avenue to the west. The entire planning area is subject to the proposed General Plan designation and zoning district modifications. Refer to Figure 3-2 (Planning Area Map).

The parcel within the planning area currently proposed for redevelopment is the PNR parcel. The approximately 6.6-acre PNR parcel is located immediately southwest of the I-80 and SR 4 interchange and is bounded by SR 4 to the north, Sycamore Avenue to the south, I-80 to the east, and San Pablo Avenue to the west.

3.3 SURROUNDING LAND USES

The PNR parcel is part of the larger HNTC planning area that contains a total of seven parcels. The following describes land uses surrounding the entire HNTC planning area, as well as the land uses surrounding the PNR parcel.

3.3.1 HNTC PLANNING AREA

A variety of land uses surround the HNTC planning area. SR 4 borders the area to the north, while further north of SR 4 consists of undeveloped land west of I-80 and residential neighborhoods east of I-80. Land uses south of the area generally consist of a mix of commercial, civic and residential uses. A small shopping center with a gas station and several restaurants is located across Sycamore Avenue and west of I-80. East of I-80 and immediately south of Willow Avenue, the area consists of railroad tracks and undeveloped land. South of the railroad tracks and undeveloped land, the area is developed with a large shopping center

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Source: maps.live.com; accessed on May 30, 2007

Map Key	Parcel Common Name	Parcel Owner	Acres	APN
1.	"PNR"	BARTD	6.62	404-040-040
2.	"C-1"	Hercules Redevelopment Agency	8.69	406-070-043
3.	"Loop"	Hercules Hotel Development Group	6.25	406-070-042
4.	"Ramp"	CalTrans Right-of-Way	3.23	<none>
5.	"CalTrans"	CalTrans Maintenance	6.35	406-070-025
6.	"Carone"	JR & BL Carone	2.04	406-160-002
7.	"WC Drilling"	WC Drilling Inc.	1.77	406-160-006

containing a number of stores and restaurants. The Hercules City Hall is located east of the large shopping center and a residential neighborhood is located east of City Hall. The Valley Bible Church and undeveloped land are also located east of the HNTC planning area, while a wetland area is located to the west across San Pablo Avenue.

3.3.2 PNR PARCEL

The PNR parcel is the westernmost parcel in the HNTC planning area and is separated from the rest of the planning area by I-80. Roads and highways surround the PNR parcel on all four sides. SR 4 is adjacent to the northern site boundary with undeveloped land located further to the north. Sycamore Avenue forms the southern site boundary, while a small shopping center with a gas station and several restaurants is located further to the south, across Sycamore Avenue. I-80 is immediately east of the site. East of I-80 is the remainder of the HNTC planning area. San Pablo Avenue abuts the site to the west and a wetland area is located west of San Pablo Avenue.

3.4 PROJECT SETTING

The approximately 35-acre HNTC planning area is comprised of seven parcels: PNR parcel, C1 parcel, Loop parcel, Ramp parcel, Caltrans parcel, Carone parcel and WC Drilling parcel. The area is predominantly flat. However, the Loop and Ramp parcels are sloped to provide access to and from the elevated I-80 and SR 4, while the PNR parcel contains a small mound north of the existing Hercules Transit Center. In general, the area is underutilized and fragmented from the rest of the City by I-80, SR 4 and railroad tracks. It is primarily characterized by vacant land covered with grasses, shrubs, and some trees with other areas used for equipment storage, a maintenance yard, and a park-and-ride lot for commuters. The area is located at a visible, regionally prominent, heavily traveled crossroads (I-80 and SR 4 interchange).

3.4.1 SITE CHARACTERISTICS

The southern two-thirds of the approximately 6.6-acre PNR parcel is developed with the existing Hercules Transit Center, which provides 248 park-and-ride parking spaces, a bus terminal area with 13 bus bays, driveways, sidewalks, and ornamental landscaping. The primary function of the Hercules Transit Center is as a terminal for express bus service to the El Cerrito del Norte Bay Area Rapid Transit (BART) station. The secondary function of the Transit Center is as the hub for local Western Contra Costa County Transit Authority (WestCAT) routes, which serve the City and nearby communities. The northern third of the PNR parcel is essentially undeveloped, characterized by a variety of grasses and weeds.

The C1 parcel consists of approximately 8.7 acres of land that are essentially undeveloped with the exception of several utility poles that are present on the site. The defining feature of the majority of the C1 parcel is an open field containing grasses and shrubs. The eastern portion of the C1 parcel contains a wetland area and a portion of an intermittent stream, which has been undergrounded in places.

The approximately 6.25-acre Loop parcel is also undeveloped, containing open grassy land interspersed with several shrubs and trees. The approximately 3.25-acre Ramp parcel contains the I-80 off-ramp and SR 4 on-ramp and ornamental landscaping.

The Caltrans parcel is approximately 6.35 acres and is developed with the Caltrans Hercules Maintenance Station. The maintenance station consists of several small buildings used for garage space, office space, storage, and a mechanics shop. The Caltrans parcel is almost entirely covered with impervious surface with some trees and shrubs planted along the western and southern portions of the site. A small intermittent stream lined with a number of trees and riparian vegetation occurs along the northern and eastern borders of the Caltrans parcel, in between the parcel and SR 4 and Palm Avenue.

The approximately 2.04-acre Carone parcel and 1.77-acre WC Drilling parcel are unpaved and used for the storage of construction materials and equipment. Several scrap metal piles (consisting mainly of large pipes), storage bins, and stockpiled soil are on the site, as are several small, single-story buildings.

3.4.2 CIRCULATION AND TRAFFIC

San Pablo Avenue, Sycamore Avenue and Willow Avenue, all of which are classified as arterial roadways, provide local vehicular circulation in the HNTC planning area. Much of the current traffic to and from locations within the City must traverse the intersection of Willow and Sycamore Avenues, resulting in excessive "stacking" or long lines of stopped cars at the intersection. Peak traffic occurs during the morning and evening commute hours, while during other times of the day traffic is generally light. Demand for parking and drop-off at the Hercules Transit Center frequently exceeds supply during weekdays. Sidewalks and bicycle facilities within the planning area are poor or nonexistent. Road surfaces and drainage are good even though curb and gutters only exist around the portion of the PNR parcel used for the Hercules Transit Center. The segment of I-80 from the City to the Bay Bridge is one of the most congested segments on the national Interstate Highway System and is consistently ranked as the most congested freeway in the Bay Area.

3.4.3 INFRASTRUCTURE

Water, sewer, storm water, electric power, and telephone services are available on San Pablo and Sycamore Avenues to serve the PNR parcel, but are not currently available to support development along Willow Avenue, where the remainder of the parcels in the planning area are located.

3.4.4 CITY OF HERCULES LAND USE REGULATIONS

Currently, the PNR parcel has a General Plan land use designation and zoning district of Commercial Public (CP). All other parcels in the HNTC planning area currently have a General Plan land use designation and zoning district of General Commercial (CG). The CP land use designation and zoning district allows transit-related uses with the potential to combine transit uses with commercial development. The purpose of the CG land use designation and zoning district is to permit a wide variety of commercial uses. Uses allowed within this designation include retail, wholesale (open to the public), offices (business,

professional and service uses), and other highway-oriented businesses (automobile service stations, restaurants, and automobile repair services). Buildings in this land use category would be typical of those found in suburban areas, one or two stories in height with a typical floor area ratio (FAR) of 0.30.

Additionally, the HNTC planning area is located within the Hercules Dynamite Redevelopment Project Area. The purpose of the Dynamite Redevelopment Project Area is to facilitate revitalization through projects and programs designed to address specific physical, social, and economic conditions in the Redevelopment Project Area.

The HNTC planning area is also included in the area covered by the Central Hercules Plan Regulating Code (CHP Code) and falls within the Hospitality Corridor and Civic Center planning areas. The CHP Code identifies allowable building frontages, heights and land uses. With exception of the Loop parcel, all parcels within the HNTC planning area have the option of either following the CHP Code or existing General Plan and Zoning regulations.

3.5 PROJECT CHARACTERISTICS

As previously noted, the HNTC project consists of two elements. First, the City RDA proposes amendments to the General Plan and Zoning Ordinance to create an NTC land use designation and zoning district that would apply to the HNTC planning area. The overall intent of the NTC land use designation and zoning district is to create a "Transit-Oriented Town Center" that has a pedestrian- and transit-friendly mix of residential, commercial, office, and public and quasi public uses, designed in a more urban pattern of development with buildings set close to defined streets in the center of town. Second, the Market Town project would redevelop the PNR parcel with a mixed-use, transit-oriented development. Two documents are being analyzed in this EIR for the Market Town project – the Initial Planned Development Plan (IPDP), which sets the parameters of development on the site, and the Final Planned Development Plan (FPDP), which defines the specific characteristics of the project. The FPDP must be consistent with and not exceed the maximum amount of development in the IPDP. The following describes the proposed project features in greater detail.

3.5.1 AMENDMENTS TO GENERAL PLAN AND ZONING ORDINANCE

The proposed amendments to the General Plan and Zoning Ordinance would create an NTC land use designation and zoning district and establish allowable uses and development intensities for the parcels that compose the HNTC planning area.

GENERAL PLAN AMENDMENT

The area proposed for the NTC land use designation is comprised of seven parcels and approximately 35 acres along Sycamore and Willow Avenues, from San Pablo Avenue to Palm Avenue. Located between the elevated freeway and railroad rights-of-way, these parcels logically comprise a separate area distinguished by adjacency to Hercules' main arterial roads. The City intends that the proposed NTC land use designation allow development that supports more intensive land uses, commensurate with its central, crossroads location. The allowed land uses are intended to support development of the

central gathering, shopping, living and working district for Hercules residents and regional visitors.

Each parcel in the NTC land use designation would be allowed a mix of residential and non-residential uses. The residential density for each parcel would not exceed 75 dwelling units per acre and would not be lower than 30 dwelling units per acre. The intensity for non-residential uses for each parcel would not exceed a floor area ratio (FAR) of 2.0 and would not have an FAR lower than 0.10. The average density and intensity for all parcels in the NTC land use designation is expected to be 60 units per acre for residential uses and an FAR of 1.0 for non-residential uses. Specific building dimensions, such as height, setbacks, and parking would be identified by the NTC zoning district within the Zoning Ordinance or through the Planned Development Plan process.

A central component of the NTC land use designation is its relationship to existing and potentially expanded transit service. Transit uses, such as rail stations, bus transfer facilities and parking lots for transit users, are envisioned for and allowed in the district. Additionally, the uses and design of the area should promote transit use, reduce the need for vehicle trips and encourage the use of non-motorized transportation. Furthermore, the General Plan Amendment specifies that the district should be visually attractive, contain architectural variety, and be constructed of high quality building materials.

Table 3-1 (Hercules New Town Center Maximum Development Program) provides a summary of the maximum of residential, retail and office square footage, number of residential units, and parking spaces that could develop on each parcel in the NTC land use designation. This EIR analyses these maximums.

**Table 3-1
Hercules New Town Center Maximum Development Program**

Parcel	Size (Acres)	Residential		Office	Retail
		Square Feet	Number of Units	Square Feet	Square Feet
PNR (1)	6.62	360,000	400	80,000	60,000
C1 (2)	8.69	250,000	250	31,250	62,500
Loop (3)	6.25	375,000	375	31,250	156,250
Ramp (4)	3.23	175,000	175	43,750	31,250
Caltrans (5)	6.35	300,000	300	6,250	6,250
Carone/WC Drilling (6 & 7)	3.81	150,000	150	3,750	3,750
Total	34.95	1,610,000	1,650	196,250	320,000

ZONING ORDINANCE AMENDMENT

NTC District Specific Purposes

The specific purposes of the proposed NTC District are to:

- Create a transit-oriented town center consisting of a relatively dense pattern of building in the center of town and a mix of residential, commercial, office, and public and quasi-public uses
- Create an interconnected network of pedestrian-oriented streets, blocks and publicly accessible open spaces
- Establish commercial and retail development in the area around Sycamore and San Pablo Avenues and along SR 4
- Create a vibrant, urbanized place for shopping, working and living at the core of Hercules
- Create a mix of neighborhood-serving retail and commercial uses around one or more new town squares
- Develop according to the principles of transit-oriented development and urban design identified in the Central Hercules Plan Regulating Code (Chapter 28 of the Zoning Ordinance)
- Encourage development that promotes walking, biking and transit use.
- Provide transit users with opportunities to reduce vehicular travel by creating opportunities to purchase goods and services at or near transit stations
- Promote transit by providing attractive and convenient multiple-use transit stations or centers
- Promote regional employment opportunities based on access to regional transit facilities
- Work with transit agencies to develop both short-term and long-term transit facility uses in Hercules
- Create central gathering places where residents of Hercules can meet, shop and socialize

NTC District General Conditions

Several general conditions would apply to all areas designated NTC District. All new and expanded development would be subject to Chapters 42 and 48 (Design Review and Planned Development) of the Hercules Zoning Ordinance. As an alternative to the Planned Development Plan process, the project may prepare a specific plan or other planning document, if approved by the Planning Commission. Additionally, all new and expanded development would be required to be consistent with an adopted Planned Development Plan (or other regulatory planning document) and tenants/users would be required to obtain an administrative or conditional use permit, and must be consistent with the general planning and design intent of Chapter 28 (CHP Code). Furthermore, the general conditions for the NTC District contain requirements for: careful planning to avoid potential negative impacts of one use on another; easy and convenient access by foot and bike to transit facilities; a balance of open space, landscaping, recreation and transit access; adequate parking while also allowing for parking reductions for shared parking arrangements; buffers for noise, light and glare; unified development with an emphasis on pedestrian access to and from transit component(s) of the development; and attractive frontages and public highway and street right-of-ways.

NTC District Performance Standards

In addition to the General Conditions described above, all new and expanded development would be subject to general performance standards specified in Chapter 31 of the Zoning Ordinance. All new and expanded development would also be subject to the following specific performance standards:

- Vehicle and pedestrian connectivity between streets within the district and streets adjacent to the district
- A maximum block length of 500 feet when topographically possible
- Light and glare reduction
- Provision of street trees along all public streets and highway frontages, with safe and pleasant conditions for pedestrians and cyclists
- A minimum of 100 square feet of private or common usable open space for each residential unit
- An integrated open space network that connects usable parks, plazas, paseos, and squares
- Adequate noise insulation to attenuate noise levels to 50 decibels or lower
- Parking that is either below ground or, if above finished grade, located to the rear of building blocks and buffered from high-frequency vehicle and pedestrian areas

NTC District Land Use Regulations

The uses that would be allowed in the NTC District are identified in Table 3-2 (Land Use Regulations: NTC District). These uses may be permitted in the NTC District subject to approval of a conditional or administrative use permit and demonstration of compliance with Chapter 49 of the Zoning Ordinance. Other uses that can be shown to support mass transit, benefit from the availability of mass transit, provide goods and services to transit users, or contribute to creating a full service transit-oriented commercial public facility may be allowed within the NTC District subject to approval of a conditional use permit. The zoning district would allow for multiple combinations of uses (identified in Table 3-2) and building types throughout the site.

**Table 3-2
Land Use Regulations: NTC District**

<i>Use</i>	<i>Permit Requirements</i>
Public and Quasi Public Uses	
Daycare Facilities (for employees, residents, visitors, and passengers)	A
Government Offices	A
Libraries, Museums, and Galleries	C
Park and Recreational Facilities	A
Public Safety Facilities	A
Transit Facilities	
BART Stations	C
Transit Transfer Stations	C
Transit Malls	C
Transit Offices and Support Facilities	C
Utility Facilities	C
Commercial Uses	
Retail Sales	
Convenience stores	C
Dry Cleaners and Laundries	C
Furniture, Furnishings and Hardware Stores	C
Grocery and Liquor	C
Outdoor Retail Sales and Services	
Permanent	C
Temporary	A
Recreation and Entertainment	C
Restaurant, Delicatessen, and Bar With Liquor Service	A C
Retail Stores	
2,000 sq. ft or less	A
More than 2,000 sq. ft.	C
Recreational Facilities	
Athletic Clubs	A
Other Commercial Athletic Facilities	C
Services and Offices	
Business Support Services	A
Hotels, Motels, Inns	C

**Table 3-2
Land Use Regulations: NTC District**

Use	Permit Requirements
Medical Medical and Dental Clinics and Services	A
Offices and Banks 2,000 sq. ft. or less More than 2,000 sq. ft.	A A
Personal Services	A
Video/Media Rentals	C
Residential Uses	
Caretaker, Guest, and Employee Housing	A
Multifamily Dwelling	A
Townhouse/Condominium	A
Planned Unit Development	A
Rooming and Boarding Houses (5 or more people)	C
Senior Housing	C
Accessory Uses and Structures	A (1)
*C: Permitted with a conditional use permit *A: Permitted with an administrative use permit (1) Facility or use is directly related to the primary use of the site or building	

NTC District Land Use Regulations

Table 3.3 (Property Development Regulations: NTC District) below identifies the property development regulations for the NTC District. These regulations establish the basic site and design requirements for the NTC District. All regulation standards are minimum amounts unless otherwise stated.

**Table 3-3
Property Development Regulations: NTC District**

NTC District Property Development Regulations	
Site Area (sf)	-
Residential Density (units/acre)	
Range	30-75
Midrange	60
Commercial Density (FAR)	
Range	0.10 to 2.00
Typical	1.00
Lot Size (sq. ft.)	-
Lot Frontage (ft.)	(PDP)*
Lot Depth (ft.)	(PDP)*
Setbacks	
Front (ft.)	0'
Rear (ft.)	15' adjacent to residential, 10' adjacent to any other use
Side (ft.)	0'
Corner Side (ft.)	0'
Maximum Site Coverage	(PDP)*
Landscaping Minimum	(PDP)*
Building Height	
Minimum	20' or 2 stories, whichever is greater
Maximum	85 feet
Parking	(PDP)*
Signage	(PDP)*
<i>*(PDP) means "as per an approved Planned Development Plan"</i>	

NTC District Relationship to the CHP Code

The NTC District covers parcels that are within the geographical area covered by the CHP Code. With the exception of the Loop parcel, prior to the enactment of the NTC District, the CHP Code is “permissive” as it relates to the parcels that would be included within NTC District. Upon adoption, the CHP Code would not apply within the NTC District. However, the City Council, prior to approving any IPDP or FPDP within the NTC District, would be required to make a finding that the proposed plan is consistent with the general planning and design intent of the CHP Code and complements the character of the planning and design in the balance of the area covered by the CHP Code.

3.5.2 MARKET TOWN PROJECT

The Market Town project is proposed on the PNR parcel. This EIR analyzes two regulatory documents for the Market Town project – the IPDP and the FPDP. The IPDP is the guiding regulatory document and includes the regulatory standards for development, such as the maximum amount of development allowed on the site, the building setbacks, and the allowable architectural styles. The document is designed to allow flexibility and, thus, a number of different actual development projects could be proposed within the parameters of the IPDP. The FPDP identifies the specifics details of the proposed project and must be consistent with the IPDP. Although the FPDP for the Market Town project proposes less development than would be allowed under the IPDP, this EIR takes a conservative approach and evaluates the impacts that would result from the IPDP to ensure that the flexibility intended in the IPDP is maintained should there later be revisions proposed to the FPDP.

SITE PLAN AND LAND USES

Initial Planned Development Plan

The PNR parcel is currently occupied by the existing Hercules Transit Center and would be redeveloped with a mix of residential, retail and office uses, comprising up to a maximum of 400 townhouses, flats, live work units and lofts, 60,000 square feet of retail space and 80,000 square feet of office space, as is identified in the IPDP. Proposed buildings would range in height from 55 to 85 feet. The minimum amount of parking required for residential uses would be 1.5 parking spaces per unit plus 0.5 spaces per unit for guest parking, retail uses would have a minimum parking requirement of 4.0 spaces per 1,000 square feet and office uses would have a minimum parking requirement of 3.0 parking spaces per 1,000 square feet.

Market Town would be divided into two areas - A and B, with Area B further divided into B1 and B2 (refer to Figure 3-3, Market Town Block Divisions). Rather than designating specific uses for each area within the project, the NTC District would allow multiple combinations of uses and building types, which would allow for flexibility of uses within the site. As a result, each area would not be restricted to a specific use and uses could be mixed in varying combinations in buildings or not mixed at all (e.g., a building could contain first floor retail with residential above, or only residential). Therefore, the desired building program could be arranged in a variety of ways. Specific requirements to address site access, parking, building setbacks and height, and other development standards would apply to any building arrangement.

Final Planned Development Plan

The FPDP would implement the IPDP and provides detailed information on the proposed project. The buildings identified in the FPDP (Building A, Building B1 and Building B2) correspond with the block areas identified in the IPDP and, thus, the terminology “Area” and “Building” are used interchangeably in the discussion below. The FPDP identifies a mix of residential and commercial uses centered around a series of small public spaces. Parking would be provided primarily within two parking structures (one associated with Building A and the other associated with Buildings B1 and B2) that would be located along the east property line adjacent to I-80 and in surface parking areas near retail uses. Some on-street



Source: Urban Design Associates

Hercules New Town Center EIR
**Market Town
 Block Divisions**

Figure 3-3

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parking would also occur along a frontage road on San Pablo Avenue. Structured parking would be screened from public view and accessed by a driving lane that traverses the parcel. Refer to Figure 3-4 (Market Town Site Plan) for an illustration of the project.

Building A would contain mainly residential uses. Parking would be accommodated in a multi-level parking structure located adjacent to I-80. Most commercial activities would occur in Buildings B1 and B2. Building B1 would be mixed-use, providing residential uses above ground floor retail. Both uses would park in a multi-level parking garage behind the buildings. Building B1 would be the center for retail activity within the project. A public town square is also proposed adjacent to Building B1. Building B2 would be an office building with a small amount of retail space on the ground floor. Parking for Building B2 would be shared with the uses in Building B1. The FPDP does not propose any residential uses in Building B2.

The development program for the Market Town project proposed in the FPDP includes the following:

- 320 residential units
- 80,000 square feet of office space
- 56,000 square feet of retail space (including outdoor retail)
- 1,002 structured parking spaces and 15 surface parking spaces

Public space is a key feature of this development scenario for Market Town. Two public plazas, one at the center of the site, which would be the "Town Plaza" and one to the south at the intersection of San Pablo and Sycamore Avenues, would provide opportunities for outdoor activities, such as seating to support retail uses, and would serve as public gathering spaces. Private space would be provided at the center of Building A in the form of an interior courtyard. The courtyard would be shared by residents and would be accessible from multiple points.

ACCESS AND CIRCULATION

The IPDP and FPDP propose three access points to the Market Town site and an internal circulation system that allows access between all parking areas on the site. One access point is proposed on San Pablo Avenue in the current location of Transit Center Drive. This access point would provide two travel lanes – one for entering the site and one for exiting the site. As with existing conditions, the intersection would be signalized. This driveway would provide access to a frontage drive with surface parking along it and access to the southerly parking structure in Area B1. The second access point would be a "right in, right out" only driveway along Sycamore Avenue in the location of the current driveway serving the Hercules Transit Center. The driveway would have one lane in each direction. A third access point would be located as a new "right out" exit from the internal drive to San Pablo Avenue. This access point would be located between Sycamore Avenue and the northerly access point on San Pablo Avenue.

Internal access would consist of a two-way access driveway from San Pablo Avenue between Areas A and B1 (called Market House Drive), a frontage driveway with surface parking that parallels San Pablo Avenue and would connect Market House Drive with the parking

structure in Area B1, and a driveway connecting the Sycamore Avenue to Market House Drive. This driveway would pass through the ground level of the parking structure on Area B1. All access points would connect to one another, thus, allowing residents and visitors to park in either parking structure, access all points on the site, and enter or exit on either San Pablo Avenue or Sycamore Avenue. Refer to Figure 3-5 (Market Town Site Access and Circulation).

LANDSCAPING

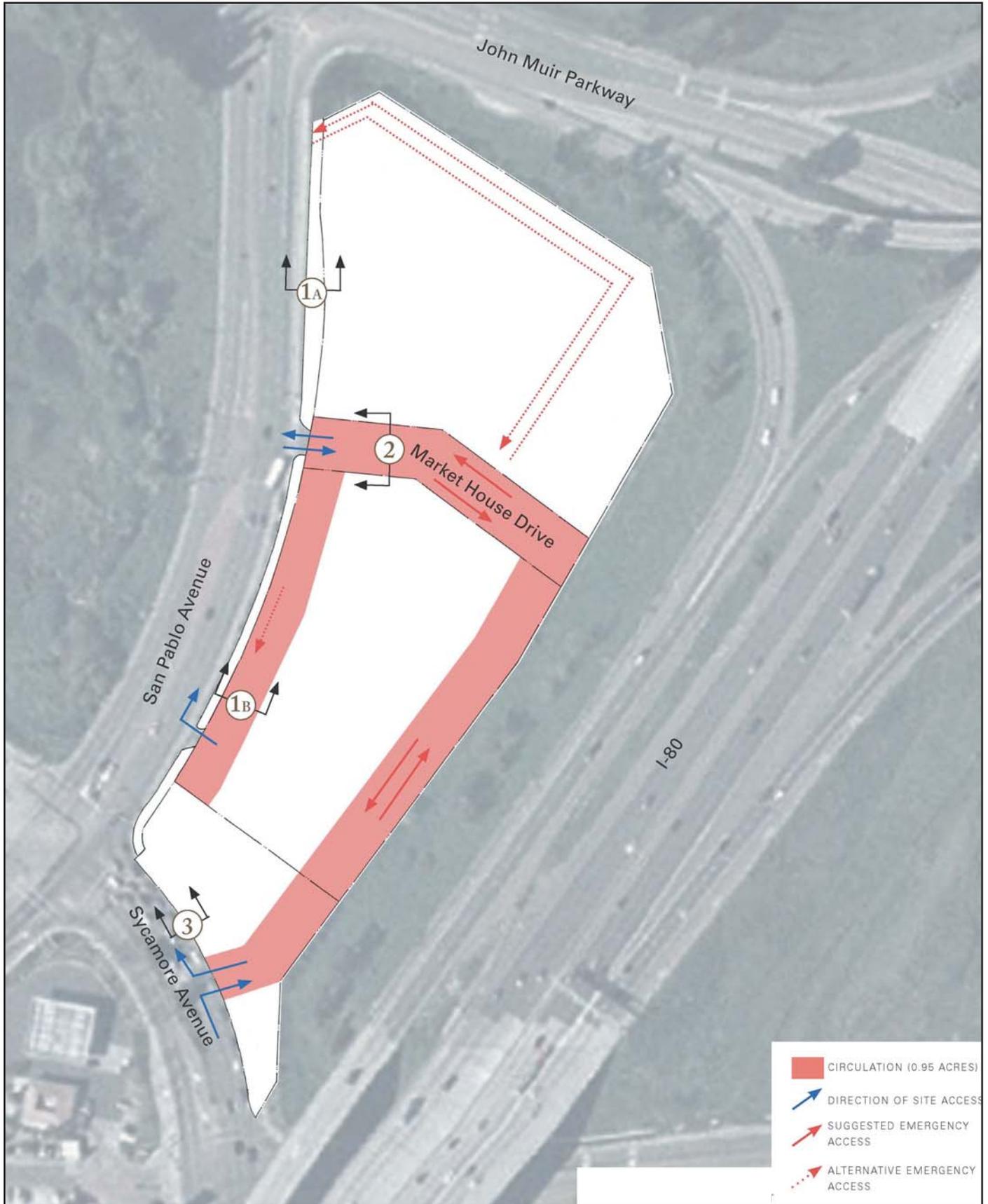
Landscaping would be utilized to create interest, soften transitions, and perform specific tasks such as framing and screening views or providing solar shading. In recognition of the regional landscape as well as acknowledgement of the necessity to conserve limited water resources, the palette of trees, shrubs and groundcovers would be predominantly drought tolerant native and introduced species shown to have proven success in the immediate area. Irrigation systems would likewise be designed to minimize water usage through utilization of drip irrigation, bubblers, and water monitoring via satellite control systems.

ARCHITECTURE AND DESIGN

The IPDP presents five architectural styles and design requirements that would be allowed on the Market Town site. The architecture and design requirements for the buildings on the site would be flexible to allow various "massing" alternatives, or ways in which the buildings are shaped. However, each building would be required to conform to standards pertaining to architectural styles, materials, building dimensions, and signage. The five architectural styles are common to the California coastal communities of the San Francisco Bay

Area with the goal of creating an assembly of buildings and a variety of architectural that reflect the patterns of "Town Center" environments around the Bay Area. The five architectural styles are Bay Area Eclectic, Bay Area Art Deco, California Spanish Revival, Bay Area Traditional Industrial, or Bay Area Modern Industrial. Eclectic style buildings would be very simple, with elaborate ornamentation, flat roofs and design influences from many styles and geographies. Art Deco buildings would have simple, modern, streamlined detailing with flat roofs. California Spanish Revival buildings would be Mediterranean in character with white or light color stucco walls. Bay Area Traditional Industrial style would be patterned after old industrial buildings, which were often constructed of masonry with large repetitive windows. Bay Area Modern Industrial would be similar to Bay Area Traditional Industrial with large windows; however, this architectural style would not have a set system of repetitive, proportionate windows. Common elements would include window shading features, large areas of glass, and operable windows.

The FPDP identifies the specific architecture and massing for the proposed project. Building A would be California Spanish Revival. Building B1 would include a variety of architectural styles. The specific styles would be Bay Area Traditional Industrial, Bay Area Modern Industrial, Bay Area Eclectic and California Spanish Revival. Building B2 would include a single building with the Bay Area Modern Industrial style.



Source: Urban Design Associates

Hercules New Town Center EIR
**Market Town Proposed Site
 Access and Circulation**

Figure 3-5

UTILITIES

Storm Drainage

Storm drainage for the Market Town site would generally consist of collection and conveyance of surface runoff from the areas adjacent to the proposed building structures and within parking areas. The storm drainage collection and conveyance system would consist of vegetated swales and standard drain inlets and gravity flow pipes that would connect to the existing public storm drain system in San Pablo and Sycamore Avenues. The project would meet local agency requirements for stormwater quality. The majority of impurities and other contaminants would be filtered out of the water before it enters the public storm drain system.

Water

Existing domestic water lines are located along Sycamore Avenue and San Pablo Avenue on the west and south sides of the Market Town site. A looped water main for the proposed development would be required to connect to the existing water mains at both San Pablo and Sycamore Avenues. Fire hydrants and domestic water service would be installed and would need to connect to the existing water main. Water service would also be needed for landscape irrigation.

Sanitary Sewer

There is an existing City-owned sanitary sewer main on the west side of the Market Town site on San Pablo Avenue. The main would need to be extended onto the site to provide lateral service connections.

Power

Electric service would need to be extended from the existing facilities on San Pablo Avenue or Sycamore Avenue.

EXCHANGE OPTION AGREEMENT

Currently, the PNR parcel is owned by BART and the C1 parcel is owned by the City RDA. To facilitate redevelopment of the PNR parcel, the existing Hercules Transit Center would be relocated to the C1 parcel. An Exchange Option Agreement (EOA) between BART and the City RDA was executed in April 2006 establishing the framework under which a future exchange of the two parcels could occur provided that all conditions of the agreement are met to the satisfaction of both parties. Some of the conditions include: land use approvals for replacement parking on the C1 parcel; and certification of environmental documentation for the C1 parcel pursuant to the requirements of the California Environmental Quality Act (CEQA).

On December 3, 2007, the City of Hercules Planning Commission adopted a Mitigated Negative Declaration and approved a Use Permit and Design Review for the BART

Replacement Parking Facility. Therefore, the requirements of the EOA pertaining to land use approvals and environmental documentation have been satisfied.

CONSTRUCTION PHASING

Construction activities associated with the redevelopment of the PNR parcel would occur once the improvements associated with the BART Replacement Parking Facility are complete.

3.6 PROJECT OBJECTIVES

The following are the combined objectives of the City RDA, BART and project sponsor:

- Create a “Transit-Oriented Town Center,” consisting of a relatively dense pattern of building in the center of town and a mix of residential, commercial, office, and public and quasi public uses
- Establish commercial and retail development in the area around Sycamore and San Pablo Avenues and along SR 4
- Create a vibrant, urbanized place for shopping, working, and living at the core of Hercules
- Emphasize a compact, diverse mix of uses around a new “Town Square”
- Develop or redevelop land by private enterprise or public agencies for purposes and uses consistent with the objectives of the Redevelopment Plan for the Dynamite Project Area
- Closely coordinate with BART and WestCAT to increase the capacity and service levels for WestCAT express service to the El Cerrito del Norte BART station
- Develop according to principles of transit-oriented development and urban design identified in the Central Hercules Plan

3.7 INTENDED USES OF THIS EIR

The analysis in this EIR has been prepared for the proposed amendments to the General Plan and Zoning Ordinance, and for the IPDP and FPDP for the proposed Market Town project.

The EIR serves as the primary environmental document for the proposed NTC land use designation and zoning district and future development that is undertaken in the HNTC planning area. Development proposals that require discretionary review (i.e., projects subject to the approval of a Planned Development Plan) will be examined in light of this EIR to determine what additional environmental documentation is required pursuant to *CEQA Guidelines* Section 15168(c). Development that does not require discretionary review will not be subject to further environmental documentation. However, the property owner/developer will be required to submit documentation substantiating that said development is allowed and in conformance with the NTC land use designation and zoning district, and that their environmental effects were analyzed in this EIR.

This EIR serves as the primary environmental document for the proposed Market Town project.

This EIR is intended to cover all state and local government discretionary approvals that have been requested, and those that may be required to construct or implement the proposed project, whether or not they are explicitly listed below. The City RDA is the lead agency for the project and has the principal discretionary authority over the review of project applications and consideration of project approvals. As described below, these include:

- General Plan and Zoning Ordinance Amendments. The proposed amendments would change the General Plan land use designation and zoning district for all parcels in the HNTC planning area from CP (PNR parcel) and GC (the remaining parcels) to NTC. In addition, the amendments would establish allowable uses and development standards for the parcels that comprise the HNTC planning area.
- Initial and Final Planned Development Plan for Market Town.

This EIR is also available for use by responsible and trustee agencies or other agencies that may have jurisdiction or approval authority for the project. These agencies may include:

- Bay Area Rapid Transit District
- California Department of Fish and Game
- U.S. Fish and Wildlife Service
- U.S. Army Corps of Engineers
- California Regional Water Quality Control Board
- East Bay Municipal Utility District
- Central Contra Costa Sanitary District
- Bay Area Air Quality Management District
- Department of Toxic Substances Control

4.0 EXISTING CONDITIONS, ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.1 INTRODUCTION

This chapter discusses the potential environmental impacts and presents the findings of the environmental analysis conducted for the proposed project. The following environmental issues are evaluated in Sections 4.2 through 4.14: Land Use and Planning, Aesthetics, Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Population and Housing, Public Services, Utilities and Service Systems, Recreation, and Transportation/Traffic.

4.1.1 ORGANIZATION OF CHAPTER 4

Each of the sections in this chapter are organized as follows:

- **Existing Conditions** are on-site and surrounding environmental conditions in existence at the time of publication of the Notice of Preparation (NOP), as well as relevant regulatory standards and requirements.
- **Environmental Analysis** first specifies the applicable significance thresholds (i.e., criteria by which the level of significance of each potential impact is evaluated), and then describes changes that would result in the existing physical environment should the proposed project be implemented. For the purpose of this EIR, impacts and mitigation measures are first identified for the proposed amendments to the General Plan and Zoning Ordinance followed by impacts and mitigation measures for the proposed Market Town project. The analysis focuses on the changes that might result in significant impacts if the amendments to the General Plan and Zoning Ordinance and/or project are approved and subsequently implemented.

Potential impacts are identified within each section. In some cases, there are no impacts associated with the proposed Market Town project beyond those identified for the proposed General Plan and Zoning Ordinance Amendments. A summary of the potential impact is presented first, its level of significance is specified second, environmental analysis is provided third, and any required mitigation is identified last. If mitigation is required, the section concludes with the residual level of significance after mitigation.

4.1.2 MITIGATION MEASURES

Mitigation measures are required as feasible when significant impacts are identified. Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally-binding instruments. Each mitigation measure is numbered sequentially so that it directly correlates to the impact it addresses.

4.2 LAND USE AND PLANNING

This section of the EIR addresses project consistency with applicable land use laws. Section 15125(d) of the *CEQA Guidelines* requires that an EIR discuss “any inconsistencies between the proposed project and applicable general plans and regional plans.” This section evaluates consistency of the proposed amendments to the City of Hercules General Plan (General Plan) and Zoning Ordinance, and the proposed Market Town project with the General Plan. Direct and indirect physical impacts resulting from project implementation are not addressed in this section, but in the appropriate technical sections of the EIR. For example, temporary impacts associated with dust and noise from project construction are addressed in Section 4.4 (Air Quality) and Section 4.10 (Noise) of Chapter 4, respectively.

4.2.1 ENVIRONMENTAL SETTING

The Hercules New Town Center (HNTC) planning area is located within the City of Hercules, in Contra Costa County, California. Located along the eastern edge of the San Pablo Bay, the City is approximately 25 miles northeast of San Francisco. Six of the seven parcels that compose the planning area are located southeast of the Interstate 80 (I-80) and State Route 4 (SR 4) interchange and one parcel is located immediately southwest of the interchange. Together the parcels total approximately 35 acres that are generally bounded by SR 4 to the north, Sycamore Avenue, Willow Avenue and railroad tracks to the south, Palm Avenue to the east, and San Pablo Avenue to the west. The entire planning area is subject to the proposed General Plan land use designation and zoning district modifications.

4.2.2 REGULATORY SETTING

LOCAL REGULATIONS OVERVIEW

A general plan establishes long-term goals and policies that guide land use decisions. It provides a framework for a community’s vision of its future. A municipal code on the other hand, regulates land use by specifying particular standards that must be met, such as minimum lot size, maximum building height, minimum building setbacks, and allowable uses on a site.

CITY OF HERCULES GENERAL PLAN

The City’s General Plan was adopted in 1998 and contains goals and policies for nine elements: Land Use, Circulation, Housing, Open Space/Conservation, Safety, Noise, Hazardous Waste Management Plan, Economic Development and Growth Management. Each of the elements provides the goals, policies and plans for the future of the City. The nine elements contained in the *General Plan* are briefly described below.

Land Use Regulations

The PNR parcel has a General Plan land use designation and zoning district of Commercial Public (CP). All other parcels in the HNTC planning area have a General Plan land use designation and zoning district of General Commercial (CG). The CP land use designation and zoning district allows transit-related uses with the potential to combine transit uses with commercial development. The purpose of the CG land use designation and zoning district is

to permit a wide variety of commercial uses. Uses allowed within this designation include retail, wholesale (open to the public), offices (business, professional and service uses), and other highway-oriented businesses (automobile service stations, restaurants, and automobile repair services).

CENTRAL HERCULES PLAN

The HNTC planning area is located within the Central Hercules Plan, specifically within the Hospitality Corridor and Civic Center planning areas. The vision for this area is a pedestrian- and transit friendly mix of uses, including retail, office and residential. The underlying purpose of the Central Hercules Plan is to enhance the City's quality of life, increase mobility and to create a true "town center." The implementing instrument for the Central Hercules Plan is the Central Hercules Plan Regulating Code, which outlines permitted land uses, as well streetscape and architectural design codes for the planning area.

HERCULES DYNAMITE REDEVELOPMENT PROJECT AREA

The HNTC planning area is located within the Hercules Dynamite Redevelopment Project Area. The purpose of the Dynamite Redevelopment Project Area is to facilitate revitalization through projects and programs designed to address specific physical, social and economic conditions in the Project Area.

4.2.3 ENVIRONMENTAL ANALYSIS

THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the *CEQA Guidelines*, the proposed project would have a significant impact to land use, planning or agricultural resources if it would:

- Physically divide an established community
- Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect
- Conflict with any applicable habitat conservation plan or natural community plan

Areas of No Impact

The following three impacts are either not applicable to the project or are not reasonably foreseeable:

- Physically divide an established community

The proposed project would not divide an established community. In general, projects that introduce physical barriers that divide an existing community into separate areas or districts have the potential to result in significant impacts. An example of a project that would represent a physical barrier would be the construction of a freeway or highway through an established residential neighborhood. Neither the proposed General Plan and Zoning

Ordinance Amendments nor the Market Town project would result in the construction of any physical barriers through an existing community. The eventual build-out of the approximately 35-acre HNTC planning area would result in a new destination downtown for the City that would serve as the central gathering, shopping, living, and working place for Hercules and for others in proximity to the planning area.

- Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect

City of Hercules General Plan

The General Plan is the primary policy-planning document that guides development in the City. The proposed project includes amendments to the General Plan and Zoning Ordinance to create a New Town Center (NTC) land use designation and zoning district. Upon approval of the proposed General Plan and Zoning Ordinance Amendments, the Market Town project would be consistent with the City’s General Plan land use designation and zoning district. Future development within the HNTC planning area would be required to be consistent with the proposed NTC land use designation and zoning district.

In addition to the land use regulations contained in the General Plan, there are other goals, objectives and policies and objectives that guide development within the City. Table 4.2-1 (Consistency with City of Hercules General Plan) provides a detailed analysis of the program and project consistency with the goals and policies of the General Plan. To simplify the consistency analysis, goals and policies that are addressed in the Environmental Analysis Sections (Sections 4.3 – Section 4.14) are not included.

**Table 4.2-1
Consistency with City of Hercules General Plan**

Objectives and Policies	Consistency of Proposed Project
Land Use Element	
Goals: The goals of the Land Use Element area: <ul style="list-style-type: none"> • Preserve and enhance the community’s quality of life with well-balanced growth and development. • Enhance and create a community with a wide range of choices, services, and amenities. 	Consistent. The proposed NTC land use designation would provide a new destination downtown for the City that would serve as the central gathering, shopping, living, and working place for Hercules residents. The proposed project would enhance/create the identity of the City.
Objective 1: Achieve a level of population and employment that preserves and enhances the desired character of the community.	Consistent. The proposed NTC land use designation would result in an increase in both population and employment opportunities within the City. Furthermore, the proposed Market Town project as a destination downtown would add to the desired character of the community.
Objective 2: Develop a community that balances housing, jobs, and commercial opportunities.	Consistent. The proposed NTC land use designation would allow for the development of mixed-use projects, which would result in a balanced mixture of housing, jobs and commercial opportunities. The Market Town project would be consistent with the NTC designation.
Policy 2b: Develop non-residential Land Use Categories which reduce the need for residents to leave the community by providing a variety of shopping and service opportunities.	Consistent. The proposed NTC land use designation and Market Town project would result in the development of shopping and service opportunities that will serve the City and the region.

Objectives and Policies	Consistency of Proposed Project
Policy 3D: Create a strong and successful focus or center for business and activities that would provide services, shopping opportunities which would attract employees, clients, and patrons from a regional area, while not disturbing existing residential and community oriented areas.	Consistent. The proposed NTC land use designation and Market Town project would provide shopping opportunities and services within a mixed use development creating a new destination downtown for the City that would serve as the central gathering, shopping, living, and working place for Hercules residents.
Objective 4: Develop sufficient employment and commercial tax generating uses to maintain a positive City government fiscal condition.	Consistent. The NTC land use designation and Market Town project would result in tax-generating land uses, which would help maintain the City's positive fiscal condition.
Policy 4A: Encourage local and regional commercial uses that can benefit from substantial regional traffic on I-80, Highway 4 freeway, and San Pablo Avenue.	Consistent. The NTC land use designation and Market Town project would create a mixture of retail, commercial and residential land uses that would benefit from its location adjacent to I-80 and SR 4.
Policy 4B: Encourage uses that bring additional revenues (retail sales, property tax) either directly or indirectly to the City.	Consistent. The NTC land use designation and Market Town project would result in retail, commercial and residential development that would increase retail sales and property taxes.
Objective 5: Develop and maintain a pattern of residential land uses which provide for a variety and balance of densities and opportunities for a mix of dwelling and residential type.	Consistent. The NTC land use designation and Market Town project would provide opportunities for residential development to offer a variety of housing options, including multifamily townhouses, condominiums, and live-work units.
Policy 5B: State law requires the City to allow development of new residential area and units as part of meeting the regional need for housing.	Consistent. The NTC land use designation and Market Town project would provide opportunities for residential development, which would help the City and region meet prescribed housing goals.
Objective 6: Provide residential neighborhoods with a variety of cost ranges disbursed throughout the City.	Consistent. The NTC land use designation and Market Town project would result in high-density, mixed-use housing within the City.
Objective 7: Achieve a pattern of development that is consistent with the City's desired image.	Consistent. The NTC land use designation would create a destination downtown area, which would enhance/create the City's desired image.
Policy 7A: Establish a visual identity for the City that distinguishes it from the surrounding areas.	Consistent. Implementation of the NTC land use designation and Market Town project would create a destination downtown for Hercules, which would allow the City to distinguish itself from adjacent municipalities.
Objective 9: Promote attractively designed and economically feasible development.	Consistent. Development within the NTC land use designation and Market Town project would create a network of walkable streets, with well defined recognizable public spaces. In addition, the Market Town project would be visually attractive, contain architectural variety, and be constructed of high quality building materials.
Objective 12: Attain new development with residential and employment mixed uses.	Consistent. The NTC land use designation and Market Town project would provide the opportunity to accommodate both residential and commercial land uses in a well planned, mixed-use development.
Policy 12A: Encourage mixed use development that provides for an integrated mixture of residential and employment generating uses within the same structure.	Consistent. The NTC land use designation and Market Town project would provide the opportunity to accommodate both residential and commercial employment generating uses within the same structure or site.
Objective 13: Attain compatible land uses within existing and planned development areas.	Consistent. The NTC land use designation would create a new district within the City that would allow mixed-use development. The district would allow for multiple combinations of uses with intensities that would be compatible with each other, including the proposed Market Town project.
Objective 14: Protect and enhance significant and desirable	Consistent. The NTC land use designation would result in the

Objectives and Policies	Consistency of Proposed Project
environmental attributes and features.	conversion of previously undeveloped land to urban development. In addition, a small wetland area on the C-1 parcel may be impacted by future development. However, the environmental attributes of the NTC district are not considered significant and/or desirable given its location adjacent to I-80 and SR 4, and the fact that the planning area is surrounded by existing development.
Objective 15: Provide for public, semi-public and non-profit uses and activities throughout the community.	Consistent. The NTC land use designation and Market Town project would create a destination downtown area that would include publicly-accessible spaces (e.g., squares and plazas). One or more public squares or plazas would provide a public gathering place, which could be used for community activities.
Policy 15A: Public, semi-public and non-profit uses may be allowed in commercial and industrial land use categories, if the type and level of activity is compatible with uses and activities allowed in that land use category.	Consistent. The NTC land use designation and Market Town project would allow for public, semi-public and non-profit uses within the District. Possible uses could include government offices, libraries, park and recreational facilities.
Circulation Element	
Circulation Element goals, objectives and policies related to the proposed project are included in the discussion presented in Section 4.14, Transportation/Traffic.	
Housing Element	
Policy 1.3: Continue to ensure adequate residential development sites at appropriate densities to meet the City's housing needs. When and where necessary, rezone properties to higher residential densities or rezone non-residential land for residential or mixed use to create adequate development opportunities.	Consistent. The NTC land use designation and Market Town project would add residential development sites with higher densities to meet the City's housing needs.
Goal 2: Provide a selection of housing by type, tenure and price.	Consistent. Residential uses allowed in the NTC land use designation would include a selection of housing types multifamily dwellings, townhouses/condominiums, senior housing, and live work units that may include either rental or ownership units.
Policy 2.1: Encourage the development of a variety of housing types, at various densities and price levels, providing a broader range of choice than is currently available, in keeping with community design goals and standards.	Consistent. Residential neighborhoods in the City generally consist of single-family, medium density housing. Residential development in the NTC land use designation and Market Town project would provide a mixture of housing types and densities that would provide a greater choice in housing types within the City.
Policy 2.2: Expand the number of rental units for those who cannot afford to purchase or who choose to rent.	Consistent. Residential development within the NTC land use designation and Market Town project may provide either for sale and rental units or a mixture of the two.
Policy 3.1: Encourage barrier-free design in all new residential developments, and ensure that new multi-family developments comply with the State's accessibility design standards.	Consistent. Residential development within the NTC land use designation and Market Town project would contain walkable streets with no barriers. In addition, multifamily residential units would comply with the Americans with Disabilities Act regulations.
Policy 6.1: Require timely and full compliance by the building industry with the California residential energy conservation standards (Title 24) and with the Solar Rights Act.	Consistent. Development within the HNTC planning area and Market Town project would comply with all applicable laws and regulations regarding energy conservation and solar energy.
Policy 6.3: Promote energy-efficient patterns of development, such as clustering townhouses, duplexes, multifamily construction, and mixed uses.	Consistent. In general, mixed-use development promotes the "live, work, play" philosophy that results in energy efficiency. The NTC land use designation and Market Town project would create a mixture of residential, commercial and retail uses that would result in clustered development.

Objectives and Policies	Consistency of Proposed Project
Goal 7: Promote equal housing opportunities and access for all people regardless of race, religion, sex, marital status, age, ancestry, national origin, color, sexual orientation, family status, source of income, or disability.	Consistent. The NTC land use designation and Market Town project would provide housing opportunities for all people regardless of race, sex or religion.
The Open Space/Conservation Element	
Open Space/Conservation goals, objectives and polices related to the proposed project are included in the discussion presented in Section 4.6, Biological Resources.	
Safety Element	
Objective 3: Ensure that adequate fire protection is provided throughout the City and that all new structures conform to current fire safety standards.	Consistent. Development within the HNTC planning area would meet all applicable Building Code requirements, including Fire Code specifications, to ensure adequate fire protection for the planning area.
Policy 3B: New development shall be designed to minimize exposure to fire hazards.	Consistent. Development within the HNTC planning area would provide sufficient fire protection through fire protection devices, hydrants, sprinklers, and adequate fire flow to minimize urban fire risk.
Noise Element	
Noise Element goals, objectives and polices related to the proposed project are included in the discussion presented in Section 4.10, Noise.	
Hazardous Waste Management Plan Element	
Hazardous Waste Management Plan Element goals, objectives and polices related to the proposed project are included in the discussion presented in Section 4.8, Hazards and Hazardous Materials.	

Central Hercules Plan

The HTNC planning area is also located within the Central Hercules Plan. As previously noted, the vision for the Central Hercules Plan is for a pedestrian- and transit-friendly mix of uses, including retail, office and residential, to be designed in a more urban pattern of development with buildings set close to defined streets. One of the most important parcels in the development of the new downtown is the PNR parcel, which was envisioned as one of the first parcels to be developed as part of the New Town Center, and would be the location of the proposed Market Town project. An Initial and Final Planned Development Plan have been prepared for the Market Town project that identify a detailed design and land use program for the PNR parcel. The Planned Development Plan incorporates the theme and vision of the Central Hercules Plan, and if approved, the Planned Development Plan would be the controlling regulatory document for the PNR parcel. Initial and Final Planned Development Plans or similar regulatory processes would be required for the remaining parcels within the HTNC planning area when future development is proposed.

Additionally, the parcels within the HNTC planning area are “permissive” as they relate to the Central Hercules Plan and Regulating Code. The Central Hercules Plan defines the parcels in the HNTC planning area as “Phase II” parcels. Phase II parcels have the option of either following the regulations and standards in the Central Hercules Plan or the adopted General Plan and Zoning Ordinance. The project sponsor is proposing to follow the proposed NTC land use designation in General Plan and Zoning Ordinance. The proposed Initial and Final Planned Development Plans would be consistent with the NTC land use designation and zoning district.

Dynamite Redevelopment Project Area

In addition to the General Plan and Central Hercules Plan, the HNTC planning area is located within the Dynamite Redevelopment Project Area and Project Area No. 2 (Dynamite Redevelopment Project Area), which facilitates revitalization through projects and programs designed to address specific physical, social and economic conditions in the Project Area. The Dynamite Redevelopment Project Area contains goals to guide development and uses planned within the Project Area. Table 4.2-2 (Consistency with the Dynamite Redevelopment Project Area) provides a detailed analysis of program and project consistency with the goals of the Dynamite Redevelopment Project Area.

**Table 4.2-2
Consistency with the Dynamite Redevelopment Project Area**

Goals	Consistency of Proposed Project
The elimination of blight and environmental deficiencies in the Project Area.	Consistent. The proposed NTC land use designation and Market Town project would result in the development/redevelopment of underutilized parcels of land within the City.
The assembly of land into parcels suitable for modern, integrated development with improved pedestrian and vehicular circulation in the Project Area.	Consistent. Parcels 1 through 7 of the HNTC planning area would be rezoned and given a land use designation that would allow for mixed-use development. Development would incorporate pedestrian friendly design features, such as walkable streets, that would improve pedestrian and vehicular circulation.
The replanning, redesign and development of undeveloped areas which are stagnant or improperly utilized.	Consistent. The proposed NTC land use designation and Market Town project would result in the development/redevelopment of underutilized parcels of land in the City.
The strengthening of retail and other commercial functions in the Project Area.	Consistent. The NTC land use designation and Market Town project would result in retail and commercial uses that would be a local and regional amenity.
The strengthening of the economic base of the Project Area and the community by the installation of needed site improvements to stimulate new commercial/industrial expansion, employment, and growth.	Consistent. The NTC land use designation and Market Town project would facilitate the development of retail, commercial and residential projects that would increase retail sales and property taxes, as well as increase employment opportunities.
The strengthening and diversification of housing opportunities at all economic levels through the development of housing of high aesthetic and environmental quality.	Consistent. Development within the HTNC planning area would provide a variety of housing options, be visually attractive, and be constructed with high quality building products.
The establishment and implementation of performance criteria to assure high site design standards and environmental quality and other design elements which provide unity and integrity to the entire Project.	Consistent. The proposed NTC land use designation contains general conditions and performance standards that would avoid potential negative environmental impacts and ensure development would be of high quality and visually attractive.
The expansion and/or improvement of the community's supply of low- and moderate income housing.	Consistent. The proposed NTC land use designation and Market Town project would provide a mixture of affordable housing options.
The preservation and restoration of historic structures.	Consistent. The HNTC planning area does not contain historic structures. Therefore, preservation and restoration of historic structures is not required.

- Conflict with any applicable habitat conservation plan or natural community plan

There are no habitat conservation plans or natural community plans that apply to the proposed project area, nor could the proposed project directly/indirectly impact the implementation of a habitat conservation or natural community plan. There would be no impact. Project related biological resources impacts and proposed mitigation measures are discussed in section 4.5, Biological Resources.

In conclusion, based on Thresholds of Significance, no land use impacts would result following implementation of the proposed General Plan and Zoning Ordinance Amendments or the Market Town project.

4.3 AESTHETICS

This section of the EIR evaluates the potential aesthetic impacts that could result from future development within the Hercules New Town Center (HNTC) planning area consistent with the proposed amendments to the General Plan and Zoning Ordinance and implementation of the Market Town project. The evaluation is based on: an assessment of the existing visual character of the Hercules New Town Center (HNTC) planning area and its surroundings; an analysis of how the allowable uses and development intensities proposed under the General Plan and Zoning Ordinance Amendments would change the existing site character; an analysis of how the proposed Market Town project would change the character of the PNR parcel; and review of relevant sections of the City of Hercules General Plan (General Plan) and the City of Hercules Zoning Ordinance.

4.3.1 ENVIRONMENTAL SETTING

VISUAL CHARACTER OF THE PLANNING AREA

The approximately 35-acre HNTC planning area is comprised of the following seven parcels: PNR parcel, C1 parcel, Loop parcel, Ramp parcel, Caltrans parcel, Carone parcel and WC Drilling parcel. The general visual character of the entire HNTC planning area is described below, followed by a description of each individual parcel in the planning area.

HNTC Planning Area

In general, the planning area is bounded by State Route (SR) 4 to the north, Sycamore Avenue, Willow Avenue and railroad tracks to the south, Palm Avenue to the east, and San Pablo Avenue to the west. The planning area's location, surrounded by major highways, roadways, and train tracks, fragments it from the rest of City of Hercules (City). Overall, the planning area is underutilized, consisting of vacant land covered with grasses, shrubs, and some trees with other areas used for equipment storage, a California Department of Transportation (Caltrans) maintenance yard, and a transit center for commuters (Hercules Transit Center). Interstate 80 (I-80) intersects the planning area, separating the PNR parcel from the rest of the HNTC planning area. The planning area is located at a visible, regionally prominent, heavily traveled crossroads: the I-80/SR 4 interchange. On the whole, the area is relatively flat with the exception of slopes on the Loop and Ramp parcels to provide access to and from the elevated I-80 and SR 4, a small mound located north of the Hercules Transit Center on the PNR parcel, several debris piles on the C1 parcel, and an approximately 20-foot high slope on the C1 parcel. Photographs of the seven parcels in their existing condition are illustrated in Figures 4.3-1 through 4.3-7.

PNR Parcel (Market Town Project Site)

The PNR parcel is located immediately southwest of the I-80 and SR 4 interchange. It consists of approximately 6.6 acres, surrounded by major highways and roadways (SR 4 to the north, Sycamore Avenue to the south, I-80 to the east, and San Pablo Avenue to the west). The northern third of the PNR parcel is essentially undeveloped, containing a variety of grasses and weeds. The southern two-thirds contains the Hercules Transit Center, which consists of 248 park and ride parking spaces, a bus terminal area with 13 bus bays, driveways, sidewalks and ornamental landscaping. Refer to Figures 4.3-1 and 4.3-2.

Figure 4.3-1
Existing View of PNR Parcel as Seen from North End of Parcel Facing South
Toward Existing Hercules Transit Center



Figure 4.3-2
Existing View of PNR Parcel as Seen from North End of Existing Hercules Transit
Center Facing South



C1 Parcel

The approximately 8.7-acre C1 parcel is undeveloped with the exception of several utility poles and minor paving. The defining feature of the majority of the C1 parcel is a grassy, open, low sloping field that contains a number of debris piles. Approximately two acres of the eastern portion of the C1 parcel contain a segment of the former north fork of the Refugio Creek and a small wetland and riparian area. A variety of wetland plants characterize the wetland area, while the creek segment contains several willow trees. An approximately 20-foot high slope separates the open field portion of the C1 parcel from the approximately two-acre area containing the creek segment and wetland and riparian area. Refer to Figure 4.3-3.

**Figure 4.3-3
Existing View of C1 Parcel as Seen from South Side of Willow Avenue Facing
North Toward SR 4**



Loop Parcel

The Loop parcel is approximately 6.25 acres of undeveloped, open grassy land, interspersed with several shrubs and trees. It contains a small freshwater marsh, which is the end point for water traveling westward through a culvert located under the C1 parcel. (The culvert connects to the former north fork of the Refugio Creek in the eastern portion of the C1 parcel.) Refer to Figure 4.3-4.

**Figure 4.3-4
Existing View of Loop Parcel as Seen from Ramp Parcel Facing West**



Ramp Parcel

The approximately 3.25-acre Ramp parcel contains the I-80 off-ramp, SR 4 on-ramp, and ornamental landscaping. Refer to Figure 4.3-5.

**Figure 4.3-5
Existing View of the Ramp Parcel as Seen from South Side of Willow Avenue
Facing North Toward SR 4**



Caltrans Parcel

The Caltrans parcel is developed with the Caltrans Hercules Maintenance Station, which consists of several small buildings used for garage space, office space, storage, and a mechanics shop. The approximately 6.35-acre Caltrans parcel is almost entirely covered with impervious surface; however, some trees and shrubs are planted along the western and southern portions of the site. The former north fork of the Refugio Creek occurs along the northern and eastern borders of the Caltrans parcel, in between the parcel and SR 4 and Palm Avenue. As described above, the creek segment contains a number of willow trees as well as other riparian vegetation. Refer to Figure 4.3-6.

**Figure 4.3-6
Existing View of Caltrans Parcel as Seen from South Side of SR 4 Facing
Southeast**



Carone and WC Drilling Parcels

The approximately 2.04-acre Carone and 1.77-acre WC Drilling parcels are unpaved and used for the storage of construction materials and equipment. Several scrap metal piles (consisting mainly of large pipes), storage bins, and stockpiled soil, are on the parcels, as are several small, single-story buildings. Refer to Figures 4.3-7 and 4.3-8.

**Figure 4.3-7
Existing View of Carone Parcel As Seen From South Side of Willow Avenue
Facing East**



**Figure 4.3-8
Existing View of WC Drilling Parcel As Seen From Palm Avenue Facing West**



SURROUNDING VISUAL CONTEXT

There are a variety of urban land uses within the immediate vicinity of the HNTC planning area. SR 4 borders the area to the north. North of SR 4 and west of I-80, in between I-80 and San Pablo Avenue is a 44-acre site formerly occupied by a Pacific, Gas and Electric (PG&E) facility that is in the process of being demolished (Santa Clara Valley Housing Group acquired the property from PG&E). North of SR 4 and east of I-80 is developed with residential neighborhoods. Land uses south of the area generally consist of a mix of commercial, civic, and residential uses. A small shopping center with a gas station and several restaurants is located south of Sycamore Avenue and west of I-80. East of I-80 and immediately south of Willow Avenue, the area consists of railroad tracks and undeveloped land. South of the railroad tracks and undeveloped land, the area is developed with a large shopping center containing a home improvement store and a number of other stores and restaurants. The Hercules City Hall is located east of the large shopping center and a residential neighborhood is located east of City Hall. The Valley Bible Church and undeveloped land are located east of the HNTC planning area. There is wetland area to the west of the planning area, across San Pablo Avenue. A PG&E electrical substation is located in the center of the site, north of Willow Avenue, immediately south and east of the C1 parcel, and directly west of the Caltrans parcel.

LIGHT AND GLARE

The HTNC planning area generates nighttime light and glare from parking lot lights, security lighting, vehicle headlights, exterior lighting along walkways, and interior building lights. Daytime glare from the project area is generated by sunlight that reflects off reflective surfaces, such as cars, equipment, and building windows. Daytime glare would be most prominent in the morning and evening hours when the sun is rising and setting. However, the amount of light and glare produced in the planning area is not unusual or substantial, as most of the area consists of undeveloped land. The greatest amount of light and glare in the vicinity emanates from surrounding commercial, residential, industrial and civic/public, development as well as streetlights and vehicle headlights on area roadways, such as I-80, SR 4, Willow Avenue, San Pablo Avenue and Sycamore Avenue.

4.3.2 REGULATORY SETTING

STATE FRAMEWORK

Scenic Highway Program

The California State Legislature created the California Scenic Highway Program in 1963. The purpose of the program is to preserve and protect scenic highway corridors from changes that could diminish the aesthetic value of adjacent lands. Streets and Highways Code, Section 260 et seq. contains the state laws governing the Scenic Highway Program. There are no state designated scenic highways in the vicinity of the HTNC planning area. However, the Circulation Element of the City's General Plan identifies SR 4 between I-80 and SR 84 as a City Scenic Route; refer to the City of Hercules regulatory setting discussion below for a detailed description of the City's Scenic Route designations.

LOCAL FRAMEWORK

The following describes the City's policy documents and mechanisms to address visual impacts that could occur as a result of development within the City.

City of Hercules General Plan

The General Plan includes several goals, objectives, policies and programs that address visual quality. The following lists the relevant visual quality goals, objectives, policies and programs contained within the General Plan.

General Plan

Objective 1.d:

Plan for the preservation and enhancement of visual qualities as viewed from scenic routes.

Land Use Element

Objective 7:

Achieve a pattern of development that is consistent with the City's desired image.

Program 7A.1:

Provide landscaping along major regional streets and highways. This landscaping should soften the appearance of traffic and parking along these routes, while allowing view corridors to retail and other businesses.

Objective 9:

Promote attractively designed and economically feasible development.

Circulation Element

Objective 2:

Plan for the preservation and enhancement of visual qualities as viewed from designated scenic routes.

Policy 2.d:

Proposed elements within view of designated scenic routes in the City should be reviewed in terms of their visual impact.

City Scenic Routes

In addition to the General Plan objectives, policies and programs listed above, the Circulation Element of the General Plan identifies two scenic routes within the City: SR 4 between I-80 and SR 84 (Scenic Freeway) and San Pablo Avenue from Pinole Valley Road to I-80 in Crockett (Scenic Thoroughfare). The General Plan stipulates that development proposals along designated scenic routes in the City be reviewed in terms of their visual impact and aesthetic compatibility with the following scenic corridors objectives:

- Encourage aesthetically attractive architecture and design of new or expanded structures within the Scenic Road and Highway Overlay District through including provisions for clustering, reducing visual impact of building mass and glare, maintaining scenic view corridors through the site and avoiding use of designs and materials that are inconsistent with the visual quality of a scenic corridor.
- Encourage attractive landscaping of development projects that is consistent with the existing terrain and landscaping of the scenic road or highway, softens the visual mass of building frontages and parking areas, provides attractive usable open space areas within the project, and meets the water conservation requirements of the City.
- Encourage attractive and low profile signage fitting into the design theme of the buildings and landscape.

The Scenic Road and Highway Overlay District of the Hercules Zoning Ordinance implements the scenic road and highway designations of the General Plan by requiring specific performance standards for new and expanded development on properties along General Plan designated scenic corridors. The Scenic Road and Highway Overlay District is described in further detail below.

Housing Element

Goal 5: Neighborhood Quality

Maintain the quality of existing neighborhoods and encourage the development of attractive, viable new neighborhoods.

Open Space/Conservation Element

Policy 13e:

New development shall be designed to minimize light and glare impacts.

Zoning Ordinance

Scenic Road and Highway Overlay District (Chapter 25)

The purposes of the Scenic Road and Highway Overlay District are to implement the scenic road and highway designations of the General Plan; review the visual impact of development proposals within view of designated scenic routes; and encourage aesthetically attractive architecture, design, landscaping and signage for new or expanded development proposed within the Scenic Road and Highway Overlay District. The overlay district requires that a number of specific performance standards be met for architecture and design, landscaping, and signage. Performance standards for architecture and design include, among other things, requirements for clustering structures around a common plaza or other open space entry feature and articulated elevations to reduce the visual impact of building mass and bulk. Desirable landscape and hardscape qualities consist of front and side yards landscaped with groundcover and trees that soften building edges; landscaped and screened parking areas; and plazas or other open space entry features. Finally, a sign plan is required for all new or expanded development within the Scenic Road and Highway Overlay District. Signage should be attractive and low profile, fitting into the design theme of the buildings and landscape.

Performance Standards (Chapter 31)

The purpose of this chapter is to establish specific performance standards for development and uses for certain zoning districts and general performance standards that apply to all zoning districts. Relevant to aesthetics is a performance standard, requiring potential light and glare from new development to be attenuated on a parcel specific basis. The following measures are required to keep glare on-site and prevent it from "spilling over" to adjacent uses:

- Screening of parking areas by using vegetation or trees. This will reduce the amount of glare generated from painted and chrome automobile surfaces and prevent expanses of stationary and moving automobiles.
- Hooded lights for nighttime illumination should be used for parking areas, shipping and receiving docks, and industrial development. Hooded lights direct the light beam towards the ground where dark pavement will not reflect light and cause spillage into neighboring uses.

Design Review (Chapter 42)

The Design Review chapter has the following purposes:

- Improve the general standards of orderly development in the City through design review of individual buildings, structures and their environs

- Improve and augment planning and building controls to promote development that is in the best interests of public health, safety and welfare
- Establish standards and policies that promote and enhance good design, site relationships, and other aesthetic considerations in the City
- Preserve and enhance property values and the visual character of the City

The Design Review chapter requires that the Hercules Planning Commission approve the design of a public or private building, fence, structure, or sign prior to the issuance of any construction permit. The Planning Commission's design review approval must be supported by a number of findings, namely: the approval is in the best interests of the public health, safety and general welfare; general site considerations (layout, open space, orientation and location of buildings, setbacks, height, walls, fences, etc.) have been designed to provide a desirable environment; general architectural considerations have been incorporated to ensure the development's compatibility with its design concept and the character of adjacent buildings; and general landscape considerations have been taken to ensure visual relief, compliment buildings and structures, and provide an attractive environment for the enjoyment of the public.

Planned Development Plans (Chapter 48)

Chapter 48 of the Hercules Zoning Ordinance requires that planned development plans be prepared for developments and subdivisions within the City. Two separate Planned Development Plans are required to be prepared, an Initial Planned Development Plan (IPDP) and a Final Planned Development Plan (FPDP). The IPDP and FPDP stages are required for subdivision of an entire tract or parcel into individual lots where it is the intention of the landowner or developer to build all or a portion of the proposed development. The FPDP includes design review as established by Chapter 42 (Design Review) of the Zoning Ordinance. The following information requirements necessary in the FPDP are relevant to aesthetics: detailed building designs, site improvement plans, exterior lighting plans and signage plans. The City Council grants the Planned Development Plan on the basis of several required findings.

4.3.3 ENVIRONMENTAL ANALYSIS

THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the *CEQA Guidelines*, the proposed project would have a significant impact on aesthetic and visual resources if it would:

- Have a substantial adverse effect on a scenic vista
- Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway
- Substantially degrade the existing visual character or quality of the site and its surroundings
- Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area

POTENTIAL IMPACTS AND MITIGATION MEASURES: GENERAL PLAN AND ZONING ORDINANCE AMENDMENTS

Scenic Vista Impacts

- ◆ ***FUTURE DEVELOPMENT CONSISTENT WITH THE NTC LAND USE DESIGNATION AND ZONING DISTRICT WOULD NOT HAVE A SUBSTANTIAL ADVERSE EFFECT ON A SCENIC VISTA.***

Level of Significance Before Mitigation: Less Than Significant Impact.

Impact Analysis: The HNTC planning area is not designated a scenic vista by the General Plan. Given its location at the crossroads of two major highways, I-80 and SR 4, and the developed nature of some of the parcels in the planning area, it does not have visual qualities associated with a scenic vista. Vacant land covered with grasses, shrubs, some trees, equipment storage areas, a maintenance yard, and a park and ride lot for commuters characterize the planning area.

Future development associated with the NTC land use designation and zoning district would be visible from SR 4 and San Pablo Avenue, as well as I-80, Willow Avenue and Sycamore Avenue. Additionally, nearby commercial, civic/public and residential uses would have views of future development within the planning area. While future development allowed under the NTC land use designation and zoning district would permanently alter the visual character and quality of the HNTC planning area by constructing urban uses, buildings and structures intensifying and increasing building scale and mass, it would not result in significant adverse effects to a scenic vista, as none are present in the planning area.

Mitigation Measures: No mitigation required.

Level of Significance After Mitigation: Not applicable.

Scenic Resource Impacts

- ◆ ***FUTURE DEVELOPMENT CONSISTENT WITH THE NTC LAND USE DESIGNATION AND ZONING DISTRICT WOULD NOT SUBSTANTIALLY DAMAGE SCENIC RESOURCES WITHIN A STATE SCENIC HIGHWAY.***

Level of Significance Before Mitigation: Less Than Significant Impact.

Impact Analysis: There are no state scenic highways in the HNTC planning area. However, SR 4 between I-80 and SR 84 and San Pablo Avenue from Pinole Valley Road to I-80 in Crockett are City-designated scenic routes.

The HNTC planning area primarily consists of vacant land covered with grasses, shrubs, and some trees with other areas used for equipment storage, a Caltrans maintenance yard, and a transit center for commuters. There are several willow trees located along the former north fork of the Refugio Creek on the C1 parcel and a number of other trees located on the

Caltrans parcel. However, there are no visually prominent trees, rock outcroppings, or historic buildings within the planning area.

Future development allowed under the NTC land use designation and zoning district would be visible from City-designated scenic routes. As noted above, the General Plan encourages projects along designated scenic routes to achieve aesthetically attractive architecture and design through clustering, reducing building mass and glare, maintaining scenic view corridors, and avoiding designs and materials that are inconsistent with the visual quality of a scenic corridor. The General Plan also encourages attractive landscaping that is consistent with the existing terrain and landscaping of the scenic road or highway, softens the visual mass of building frontages and parking areas, provides attractive usable open space areas, and meets the water conservation requirements of the City. In addition, the General Plan encourages low profile signage fitting into the design theme of the buildings and landscape. The Scenic Road and Highway Overlay District implements the scenic road and highway designations of the General Plan.

Except for the PNR parcel, no other development is currently proposed on the remaining parcels within the HNTC planning area (scenic resource impacts associated with the Market Town project proposed on the PNR parcel are described below). Future development proposals would be subject to the City's scenic corridor policies identified in the General Plan and the provisions of the Scenic Road and Highway Overlay District. In addition, one of the requirements of the proposed NTC District is attractive frontages and public highway and street right-of-ways, while specific performance standards include light and glare reduction, provision of street trees along all public streets and highway frontages, with safe and pleasant conditions for pedestrians and cyclists, and an integrated open space network that connects usable parks, plazas, paseos, and squares. Therefore, the proposed amendments to the General Plan and Zoning Ordinance would not result in substantial damage to a scenic resource and impacts would be less than significant.

Mitigation Measures: No mitigation required.

Level of Significance After Mitigation: Not applicable.

Visual Character or Quality Impacts

- ◆ ***FUTURE DEVELOPMENT CONSISTENT WITH THE NTC LAND USE DESIGNATION AND ZONING DISTRICT WOULD ALTER THE EXISTING VISUAL CHARACTER OF THE HTNC PLANNING AREA AND ITS SURROUNDINGS.***

Level of Significance Before Mitigation: Potentially Significant Impact.

Impact Analysis: Construction activities associated with future development under the NTC land use designation and zoning district would involve removal of vegetation, demolition and clearing of parcels within the HNTC planning area, grading, construction of foundations and buildings, landscaping and other related activities. These activities would create views of construction debris, dumpsters, construction staging and material storage areas, soil stockpiles, construction vehicles and equipment and framed and unfinished buildings and facilities, substantially altering the visual character and quality of the planning

area during construction. While these activities would be temporary, they could result in significant visual impacts if they were to last a year or more at single site. These temporary visual impacts would be less than significant with the implementation of Mitigation Measure AES1, identified below, which would require that construction contractors and their crews maintain a clean and orderly site, locate staging areas away from public view, and erect a fence around active construction areas to screen aesthetically unappealing views.

Future development consistent with the NTC land use designation and zoning district would permanently alter the existing visual qualities of the planning area, which is characterized by vacant land covered with grasses, shrubs, and some trees with other areas used for equipment storage, highway on-and-off ramps, a Caltrans maintenance yard, and a transit center for commuters. As proposed, the planning area would be converted and developed with multi-storied buildings, parking structures, landscaped areas, and public spaces.

The conversion of the HNTC planning area to a transit-oriented town center consisting of a mix of residential, commercial, office, and public and quasi-public uses would not substantially degrade the visual quality or character of the area or its surroundings. Future development within the planning area would improve the visual quality of the area and its surroundings compared to existing conditions by introducing a cohesive, compatible architectural design, landscaping that provides visual relief and complements surrounding buildings, and an attractive environment for the enjoyment of the public.

Therefore, with incorporation of Mitigation Measure AES1, any future development facilitated by the NTC land use designation and zoning district would not substantially degrade the existing visual character of the HNTC planning area or its surroundings, and impacts in this regard would be less than significant.

Mitigation Measure:

- AES1 During construction activities associated with future development, construction sites shall be maintained to be clean and orderly (kept clear of trash, weeds and construction debris, regular emptying of dumpsters, etc.). Construction staging areas shall be sited away from public view where possible. A fence shall be installed around active construction areas to screen views of debris, equipment and work staging areas. Periodic inspections by the City staff would ensure compliance with this measure.

Level of Significance After Mitigation: Less Than Significant Impact.

Light and Glare Impacts

- ◆ ***FUTURE DEVELOPMENT CONSISTENT WITH THE NTC LAND USE DESIGNATION AND ZONING DISTRICT WOULD INTRODUCE NEW SOURCES OF LIGHT AND GLARE THAT WOULD HAVE MINOR AFFECTS ON ADJACENT USES IN THE PLANNING AREA.***

Level of Significance Before Mitigation: Less Than Significant Impact.

Impact Analysis: The HNTC planning area and its surrounding urban setting currently generate light and glare from indoor, outdoor, security and parking lot lighting, building surfaces (windows, aluminum siding, etc.), equipment and vehicles. Vehicles and vehicle headlights on the often highly congested I-80 and SR 4 are substantial sources of light and glare in the planning area.

Future development associated with the NTC land use designation and zoning district would introduce new sources of light and glare in the planning area. New sources of daytime glare would occur from sunlight that is reflected from windows, metal siding and roofing and other reflective surfaces. Glare impacts would be most severe during the early morning and evening hours when the sun is rising and setting. Sunlight that reflects off of building surfaces could negatively affect drivers and adjacent land uses. New sources of nighttime light and glare would come from interior and exterior lights, security lighting, and parking lot lighting, as well as from vehicles on adjacent roadways within the planning area. Such sources of light and glare may negatively affect adjacent land uses, including the residential uses to the south. However, given the developed and urban nature of the project area, which currently generates considerable sources of light and glare, the addition of light and glare to the area would not be substantial. Furthermore, the project would be required to comply with several existing zoning standards and regulations as well as new standards established by the NTC zoning district that are designed to prevent light and glare impacts from new development.

Specifically, Chapter 42, Design Review, of the Zoning Ordinance requires that the Hercules Planning Commission approve the design of a proposed public or private building, fence, structure, or sign prior to the issuance of any permit for construction. Of the required findings necessary to approve the proposal, the Planning Commission must decide that the proposed exterior lighting elements are compatible with adjacent buildings. Chapter 48, Planned Development Plans, of the Zoning Ordinance requires that Planned Development Plans be prepared for developments and subdivisions within the City and that the Final Planned Development Plan include an exterior lighting plan. In addition, existing performance standards found in Chapter 32 of the Zoning Ordinance stipulate that parking areas be screened with vegetation or trees and hooded lights be used to reduce light and glare spillage into neighboring uses. The NTC zoning district incorporates a general condition that parking garages, garages and landscaping be used as buffers for light and glare impacts, while a specific performance standard requires that night light minimize glare on adjacent streets and properties.

Therefore, given the existing developed nature of the planning area, which produces considerable amounts of light and glare, and project compliance with existing zoning standards and regulations and new standards established by the NTC zoning district, light and glare impacts from the project would be less than significant.

Mitigation Measures: No mitigation required.

Level of Significance After Mitigation: Not applicable.

POTENTIAL IMPACTS AND MITIGATION MEASURES: MARKET TOWN PROJECT

Scenic Vista Impacts

- ◆ ***THE PROPOSED MARKET TOWN PROJECT WOULD NOT HAVE A SUBSTANTIAL ADVERSE EFFECT ON A SCENIC VISTA.***

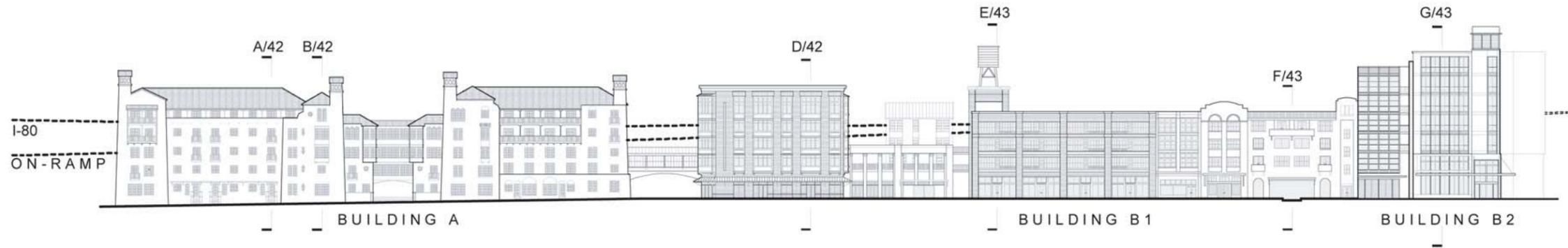
Level of Significance Before Mitigation: Less Than Significant Impact.

Impact Analysis: The Market Town project site (PNR parcel) is not designated a scenic vista by the General Plan. Given its location at the crossroads of two major highways, I-80 and SR 4, and the developed nature of approximately two-thirds of the site with a park and ride lot, it does not have visual qualities associated with a scenic vista.

Approximately one-third of the northern portion of the Market Town project site is undeveloped, containing a variety of grasses and weeds. The southern two-thirds contains the Hercules Transit Center, which consists of 248 park and ride parking spaces, a bus terminal area with 13 bus bays, driveways, sidewalks and ornamental landscaping. As shown in Figure 4.3-9 (Market Town Street Elevations), the Market Town project would alter the visual character of the PNR parcel by constructing new buildings and structures on the site, intensifying the urban character of the parcel and increasing the scale and mass of buildings and structures in the project vicinity. However, it would not result in a substantial adverse effect on a scenic vista because none are present on the project site or in the vicinity. Therefore, the proposed project would have a less than significant impact.

Mitigation Measures: No mitigation required.

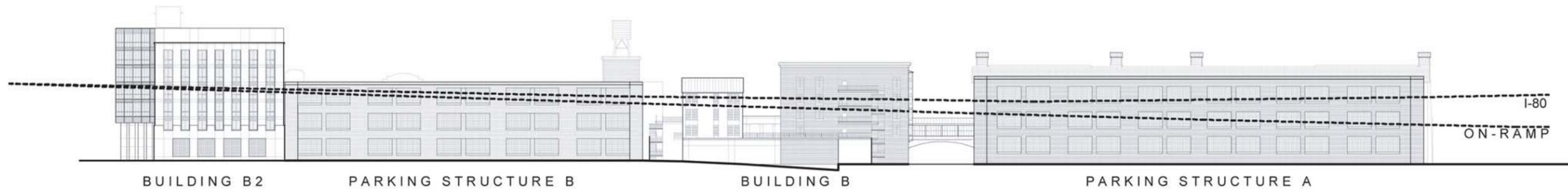
Level of Significance After Mitigation: Not applicable.



B

REFER TO C/42 FOR BUILDING SECTION THROUGH BUILDING A LIVE-WORK.

SAN PABLO ELEVATION



A

FREEWAY 80 ELEVATION

Scenic Resource Impacts

- ◆ ***THE PROPOSED MARKET TOWN PROJECT WOULD NOT DAMAGE SCENIC RESOURCES WITHIN A STATE SCENIC HIGHWAY.***

Level of Significance Before Mitigation: Less Than Significant Impact.

Impact Analysis: There are no state scenic highways near the Market Town project site. However, SR 4 between I-80 and SR 84 and San Pablo Avenue from Pinole Valley Road to I-80 in Crockett are City designated scenic routes. The Market Town project would be highly visible from SR 4 and San Pablo Avenue.

As noted above, approximately one-third of the PNR parcel is undeveloped while the remaining two-thirds is developed with the Hercules Transit Center. Although the undeveloped portion of the site contains grass and weeds, there are no visually prominent trees, rock outcroppings, or historic buildings within the PNR parcel.

The proposed Market Town project would alter the visual character of the PNR parcel, which is visible from City-designated scenic routes. As proposed in the Final Development Plan (FPDP), the Market Town project would cluster development by providing a mix of residential and commercial uses centered around a series of public spaces. Building architectural styles would include Bay Area Traditional Industrial, Bay Area Modern Industrial, Bay Area Eclectic and California Spanish Revival. Building mass would be minimized through the use of articulated building elevations. Landscaping would be attractive, consisting of predominantly drought tolerant native and introduced species shown to have proven success in the immediate area. It would be used to soften transitions and perform specific tasks such as framing and screening views or providing solar shading. Moreover, the Market Town project would be subject to applicable City ordinances and regulations regarding light and glare, and the appropriate design and character of new development, including the aesthetic attractiveness of development. Adherence to applicable City ordinances and regulations would ensure the consistency of the Market Town project with General Plan's scenic corridor policies and the provisions of the Scenic Road and Highway Overlay District.

Overall, the Market Town project would not be expected to conflict with the scenic corridor policies identified in the General Plan nor the provisions of the Scenic Road and Highway Overlay District. However, the Market Town project would create a more densely developed area comprised of five to seven story buildings with greater mass, which may potentially be considered in conflict with the reduced building mass encouraged by the General Plan's scenic corridor policies and the Scenic Road and Highway Overlay District. Nonetheless, the Market Town project would be consistent with the project objective of creating a mixed-use transit-oriented town center consisting of a relatively dense pattern of building in the center of town and a mix of residential, commercial, office, and public and quasi public uses. Therefore, the proposed Market Town project would not substantially damage scenic resources and impacts would be less than significant.

Mitigation Measures: No mitigation required.

Level of Significance After Mitigation: Not applicable.

Visual Character or Quality Impacts

- ◆ ***THE PROPOSED MARKET TOWN PROJECT WOULD ALTER THE EXISTING VISUAL CHARACTER OF THE PNR PARCEL AND ITS SURROUNDINGS.***

Level of Significance Before Mitigation: Potentially Significant Impact.

Impact Analysis: Construction activities associated with the Market Town project would involve removal of vegetation, demolition and clearing of the project site, grading, construction of foundations and buildings, landscaping and other related activities. These activities would create views of construction debris, dumpsters, construction staging and material storage areas, soil stockpiles, construction vehicles and equipment and framed and unfinished buildings and facilities, substantially altering the visual character and quality of the Market Town project site during construction. While these activities would be temporary, they could result in significant visual impacts if they were to last a year or more. These temporary visual impacts would be less than significant with the implementation of Mitigation Measure AES1, which would require that construction contractors and their crews maintain a clean and orderly site, locate staging areas away from public view, and erect a fence around active construction areas to screen aesthetically unappealing views.

The northern third of the Market Town project site is characterized by undeveloped land containing a variety of grasses and weeds. The southern two-thirds contains the Hercules Transit Center, which consists of 248 park and ride parking spaces, a bus terminal area with 13 bus bays, driveways, sidewalks and ornamental landscaping.

As illustrated in Figure 4.3-1, development proposed by the Market Town project would dramatically change the visual character of the PNR parcel, converting it from a park and ride lot and undeveloped land to a developed urban area containing numerous multi-storied buildings, parking structures, and several landscaped areas. The conversion of the PNR parcel to a transit-oriented town center consisting of a mix of residential, commercial, office, and public and quasi-public uses would not substantially degrade the visual quality or character of the area or its surroundings. The Market Town project would improve the visual quality of the PNR parcel and its surroundings compared to existing conditions by introducing a cohesive, compatible architectural design, landscaping that provides visual relief and complements surrounding buildings, and an attractive environment for the enjoyment of the public. Furthermore, the Market Town project would be subject to the design review process, which would further ensure that the development meets the design standards of the City and would not degrade the visual character or quality of the site or its surroundings. With implementation of Mitigation Measure AES1, impacts would be less than significant.

Mitigation Measures: Implement Mitigation Measure AES1.

Level of Significance After Mitigation: Less Than Significant Impact.

◆ ***THE PROPOSED MARKET TOWN PROJECT WOULD INTRODUCE NEW SOURCES OF LIGHT AND GLARE THAT WOULD HAVE MINOR AFFECTS ON ADJACENT USES IN THE PLANNING AREA.***

Level of Significance Before Mitigation: Less Than Significant Impact.

Impact Analysis: The Market Town project site and its surrounding urban setting currently generate light and glare from parking lot lighting and vehicles. Vehicles and vehicle headlights on the often highly congested I-80 and SR 4 are substantial sources of light and glare in the project vicinity.

The Market Town project would introduce new sources of light and glare into the planning area. New sources of daytime glare would occur from sunlight that is reflected from windows, metal siding and roofing and other reflective surfaces. Glare impacts would be most severe during the early morning and evening hours when the sun is rising and setting. Sunlight that reflects off of building surfaces could negatively affect drivers and adjacent land uses. New sources of nighttime light and glare would come from interior and exterior lights, security lighting, and parking lot lighting, as well as from vehicles on adjacent roadways and new roadways within the planning area. Such sources of light and glare may negatively affect adjacent land uses, including the residential uses to the south. However, given the developed and urban nature of the project area, which currently generates considerable sources of light and glare, the addition of light and glare to the area would not be substantial. Furthermore, the project would be required to comply with several existing zoning standards and regulations as well as new standards established by the NTC zoning district that are designed to prevent light and glare impacts from new development.

Specifically, Chapter 42, Design Review, of the Zoning Ordinance requires that the Hercules Planning Commission approve the design of a proposed public or private building, fence, structure, or sign prior to the issuance of any permit for construction. Of the required findings necessary to approve the proposal, the Planning Commission must decide that the proposed exterior lighting elements are compatible with adjacent buildings. Chapter 48, Planned Development Plans, of the Zoning Ordinance requires that Planned Development Plans be prepared for developments and subdivisions within the City and that the Final Planned Development Plan include an exterior lighting plan. In addition, existing performance standards found in Chapter 32 of the Zoning Ordinance stipulate that parking areas be screened with vegetation or trees and hooded lights be used to reduce light and glare spillage into neighboring uses. The NTC zoning district incorporates a general condition that parking garages, garages and landscaping be used as buffers for light and glare impacts, while a specific performance standard requires that night light minimize glare on adjacent streets and properties.

Therefore, given the existing developed nature of the project vicinity, which produces considerable amounts of light and glare, and project compliance with existing zoning standards and regulations and new standards established by the NTC zoning district, light and glare from the project would be less than significant.

Mitigation Measures: No mitigation required.

Level of Significance After Mitigation: Not applicable.

4.4 AIR QUALITY

This section evaluates potential air quality impacts that could result from future development within the Hercules New Town Center (HNTC) planning area consistent with the proposed amendments to the General Plan and Zoning Ordinance and implementation of the Market Town Project. Information in this section is based primarily on the *BAAQMD CEQA Guidelines: Assessing the Air Quality Impacts of Project and Plans*, prepared by the Bay Area Air Quality Management District, Air Quality Data (California Air Resources Board 2002 through 2006), the *2005 Ozone Strategy*, and the Transportation/Traffic section of this EIR, prepared by Fehr & Peers.

4.4.1 ENVIRONMENTAL SETTING

SAN FRANCISCO AIR BASIN

The California Air Resources Board (CARB) divides the state into air basins that share similar meteorological and topographical features. The HNTC planning area is located within the San Francisco Bay Area Air Basin (Basin). This Basin includes San Mateo, Santa Clara, Alameda, Contra Costa, Napa and Marin counties.

Northern Alameda/Western Contra Costa Counties

The HNTC planning area is located in the City of Hercules (City), which is located in the Northern Alameda and Western Contra Costa subregion of the Basin. This climatological subregion stretches from Richmond to San Leandro bounded to the west by San Francisco Bay and to the east by the Oakland-Berkeley Hills. The Oakland-Berkeley Hills have a ridgeline height of approximately 1,500 feet, a significant barrier to air flow. The most densely populated area of the subregion lies in a strip of land between the bay and the lower hills.

In this area, marine air traveling through the Golden Gate, as well as across San Francisco and through the San Bruno Gap, is a dominant weather factor. The Oakland-Berkeley Hills cause the westerly flow of air to split off to the north and south of Oakland, which causes diminished wind speeds. The prevailing winds for most of this subregion are from the west. At the northern end, near Richmond, prevailing winds are from the south-southwest.

Temperatures in this subregion have a narrow range due to the proximity of the moderating marine air. Maximum temperatures in summer average in the mid-70s, with minimums in the mid-50s. Winter highs are in the mid- to high-50s, with lows in the low- to mid-40's.

The air pollution potential is lowest for the parts of the Northern Alameda and Western Contra Costa subregion that are closest to the bay, largely due to good ventilation and less influx of pollutants from upwind sources. The occurrence of light winds in the evenings and early mornings occasionally causes elevated pollutant levels.

LOCAL AMBIENT AIR QUALITY

The CARB monitors ambient air quality at approximately 250 air monitoring stations across the state. Air quality monitoring stations usually measure pollutant concentrations ten feet

above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. The closest air monitoring station is located at the San Pablo–Rumrill Boulevard Monitoring Station. The data collected at this station is considered to be representative of the air quality experienced in the planning area vicinity. Data from the Concord Monitoring Station was provided for criteria pollutants that are not measured at the San Pablo–Rumrill Boulevard Monitoring Station. Local air quality data from 2002 to 2006 for the San Pablo–Rumrill Boulevard Monitoring Station and the Concord Monitoring Station is provided in Table 4.4-1 (Local Air Quality Levels). This table lists the monitored maximum concentrations and number of exceedances of Federal/State air quality standards each year as available.

Ozone

Ozone (O₃) occurs in two layers of the atmosphere. The layer surrounding the earth's surface is the troposphere. The troposphere extends approximately ten miles above ground level, where it meets the second layer, the stratosphere. The stratospheric (the "good" ozone layer) extends upward from about ten to 30 miles and protects life on earth from the sun's harmful ultraviolet rays (UV-B).

“Bad” ozone is a photochemical pollutant, and needs volatile organic compounds (VOCs), nitrogen oxides (NO_x), and sunlight to form; therefore, VOCs and NO_x are ozone precursors. VOCs and NO_x are emitted from various sources throughout the City. To reduce ozone concentrations, it is necessary to control the emissions of these ozone precursors. Significant ozone formation generally requires an adequate amount of precursors in the atmosphere, several hours in a stable atmosphere, and strong sunlight. High ozone concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins.

While ozone in the upper atmosphere (stratosphere) protects the earth from harmful ultraviolet radiation, high concentrations of ground-level ozone (in the troposphere) can adversely affect the human respiratory system and other tissues. Many respiratory ailments, as well as cardiovascular disease, are aggravated by exposure to high ozone levels. Ozone also damages natural ecosystems (such as forests and foothill plant communities) and damages agricultural crops and some man-made materials (such as rubber, paint, and plastics). Societal costs from ozone damage include increased healthcare costs, the loss of human and animal life, accelerated replacement of industrial equipment, and reduced crop yields.

The State ozone standard is 0.09 parts per million (ppm), averaged over one hour. From 2002 through 2006, the O₃ levels at the San Pablo–Rumrill Boulevard Monitoring Station ranged between 0.061 ppm and 0.105 ppm and exceeded the one-hour State standard one time between 2002 and 2006.

Carbon Monoxide

Carbon monoxide (CO) is an odorless, colorless toxic gas that is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. In cities, automobile exhaust can cause as much as 95 percent of all CO emissions. At high concentrations, CO can reduce the oxygen-carrying capacity of the blood

and cause headaches, dizziness, unconsciousness, and death. State and Federal standards were not exceeded between 2002 and 2006 at the San Pablo-Rumrill Boulevard Monitoring Station.

**Table 4.4-1
Local Air Quality Levels**

Pollutant	California Standard	Federal Primary Standard	Year	Maximum Concentration	Days (Samples) State/Federal Std. Exceeded
Ozone (O ₃) ¹ for 1 hour	0.09 ppm	NA	2002	0.069	0/NA
			2003	0.091	0/NA
			2004	0.105	1/NA
			2005	0.066	0/NA
			2006	0.061	0/NA
Ozone (O ₃) ¹ for 8 hour	0.07 ppm	0.08 ppm	2002	0.047	NM/0
			2003	0.068	NM/0
			2004	0.069	NM/0
			2005	0.057	NM/0
			2006	0.050	NM/0
Carbon Monoxide ¹ (CO)	9.0 ppm (8 hour)	9.0 ppm (8 hour)	2002	1.81	0/0
			2003	1.78	0/0
			2004	1.83	0/0
			2005	1.33	0/0
			2006	1.40	0/0
Nitrogen Dioxide ¹ (NO ₂)	0.18 ppm (1 hour)	0.053 ppm annual average	2002	0.054	0/NM
			2003	0.070	0/NM
			2004	0.055	0/NM
			2005	0.054	0/NM
			2006	0.055	0/NM
Particulate Matter ^{2,3} (PM ₁₀)	50 µg/m ³ (24 hours)	150 µg/m ³ (24 hours)	2002	62.8	3/0
			2003	32.0	0/0
			2004	48.3	1/0
			2005	40.3	0/0
			2006	83.6	3/0
Fine Particulate Matter ^{2,3,4} (PM _{2.5})	No Separate State Standard	35 µg/m ³ (24 hours)	2002	76.7	NA /1
			2003	49.7	NA /0
			2004	73.7	NA /1
			2005	48.9	NA /0
			2006	62.1	NA/0
Sulfur Dioxide ¹ (SO ₂)	0.25 ppm (1 hour)	0.14 ppm for 24 hours or 0.03 ppm annual arithmetic mean	2002	0.005	0/0
			2003	0.006	0/0
			2004	0.005	0/0
			2005	0.006	0/0
			2006	0.006	0/0

Source: Aerometric Data Analysis and Measurement System (ADAM), summaries from 2002 to 2006, <http://www.arb.ca.gov/adam>.

ppm = parts per million; PM₁₀ = particulate matter 10 microns in diameter or less; NM = not measured; µg/m³ = micrograms per cubic meter; PM_{2.5} = particulate matter 2.5 microns in diameter or less; NA = not applicable.

Notes:

1. Measurements were taken at San Pablo – Rumrill Boulevard Monitoring Station located at 1865 Rumrill Boulevard, San Pablo, CA 94806.
2. Measurements for PM₁₀ and PM_{2.5} were obtained from the Concord – 2975 Treat Boulevard Monitoring Station.
3. Maximum concentrations are measured over the same period as the California standard.
4. PM₁₀ exceedances are based on State thresholds established prior to amendments adopted on June 20, 2002.
5. PM₁₀ and PM_{2.5} exceedances are derived from the number of samples exceeded, not days.

Nitrogen Dioxide

Nitrogen oxides (NO_x) are a family of highly reactive gases that are a primary precursor to the formation of ground-level ozone, and react in the atmosphere to form acid rain. NO₂ (often used interchangeably with NO_x) is a reddish-brown gas that can cause breathing difficulties at high levels. Peak readings of NO₂ occur in areas that have a high concentration of combustion sources (e.g., motor vehicle engines, power plants, refineries, and other industrial operations).

NO_x can irritate and damage the lungs, and lower resistance to respiratory infections such as influenza. The health effects of short-term exposure are still unclear. However, continued or frequent exposure to NO_x concentrations that are typically much higher than those normally found in the ambient air may increase acute respiratory illnesses in children and increase the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO₂ may aggravate eyes and mucus membranes and cause pulmonary dysfunction. State and Federal standards were not exceeded between 2002 and 2006 at the San Pablo-Rumrill Boulevard Monitoring Station.

Coarse Particulate Matter (PM₁₀)

PM₁₀ refers to suspended particulate matter which is smaller than ten microns or ten one-millionths of a meter. PM₁₀ arises from sources such as road dust, diesel soot, combustion products, construction operations and dust storms. PM₁₀ scatters light and significantly reduces visibility. In addition, these particulates penetrate into lungs and can potentially damage the respiratory tract. On June 19, 2003, the CARB adopted amendments to the statewide 24-hour particulate matter standards based upon requirements set forth in the Children's Environmental Health Protection Act (Senate Bill 25). The State standard for PM₁₀ is 50 micrograms per cubic meter (µg/m³) averaged over 24 hours; this standard was exceeded seven days at the Concord Station between 2002 and 2006. The Federal standard for PM₁₀ is 150 µg/m³ averaged over 24 hours and was not exceeded at the Concord Station.

Fine Particulate Matter (PM_{2.5})

Due to recent increased concerns over health impacts related to fine particulate matter (particulate matter 2.5 microns in diameter or less), both State and Federal PM_{2.5} standards have been created. Particulate matter impacts primarily affect infants, children, the elderly, and those with pre-existing cardiopulmonary disease. In 1997, the Environmental Protection Agency (EPA) announced new PM_{2.5} standards. Industry groups challenged the new standard in court and the implementation of the standard was blocked. However, upon appeal by the EPA, the United States (U.S.) Supreme Court reversed this decision and upheld the EPA's new standards.

On January 5, 2005, the EPA published a Final Rule in the Federal Register that designates the Basin as a nonattainment area for Federal PM_{2.5} standards. On June 20, 2002, CARB adopted amendments for statewide annual ambient particulate matter air quality standards. These standards were revised due to increasing concern by CARB that previous standards were inadequate, as almost everyone in California is exposed to levels at or above the current State standards during some parts of the year, and the statewide potential for significant health impacts associated with particulate matter exposure was determined to be large and

wide-ranging. For PM_{2.5}, the Federal standard is 35 µg/m³ over 24 hours. There is no separate State standard for PM_{2.5}. At the Concord Monitoring Station, there were four exceedances between 2002 and 2006.

Sulfur Dioxide

Sulfur dioxide (SO₂) is a colorless, pungent gas belonging to the family of sulfur oxide gases (SO_x), formed primarily by combustion of sulfur-containing fossil fuels (primarily coal and oil), metal smelting and other industrial processes.

The major health concerns associated with exposure to high concentrations of SO_x are effects on breathing, respiratory illness, diminishment of pulmonary defenses, and aggravation of existing cardiovascular disease. Major subgroups of the population that are most sensitive to SO_x are individuals with cardiovascular disease or chronic lung disease (such as bronchitis or emphysema), as well as children and the elderly. Emissions of SO_x also can damage the foliage of trees and agricultural crops. Together, SO_x and NO_x are the major precursors to acid rain, which is associated with the acidification of lakes and streams, and the accelerated corrosion of buildings and public monuments. Sulfur oxides can react to form sulfates, which significantly reduce visibility. SO₂ (often used interchangeably with SO_x) did not exceed Federal or State standards at the San Pablo-Rumrill Boulevard Monitoring Station between 2002 and 2006.

Toxic Air Contaminants

According to Section 39655 of the California Health and Safety Code, a Toxic Air Contaminant (TAC) is "an air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health." In addition, 189 substances that have been listed as Federal hazardous air pollutants (HAPs), pursuant to Section 7412 of Title 42 of the United States Code are TACs under the State's air toxics program, pursuant to Section 39657 (b) of the California Health and Safety Code.

TACs can cause various cancers, depending on the particular chemicals, their type, and the duration of exposure. Additionally, some TACs may cause other health effects over the short or long term. The ten TACs posing the greatest health risk in California are acetaldehyde, benzene, 1-3 butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchlorethylene, and diesel particulate matter.

Reactive Organic Gases and Volatile Organic Compounds

Hydrocarbons are organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including reactive organic gases (ROGs) and volatile organic compounds (VOCs). ROGs comprise all hydrocarbons except those exempted by the CARB; therefore, ROGs are a set of organic gases based on State rules and regulations. VOCs are similar to ROGs in that they are all organic gases, but federal law exempts some ROGs. VOCs are, therefore, a set of organic gases based on Federal rules and regulations. Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil

refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).

The health effects of hydrocarbons result from the formation of ozone and its related health effects. High levels of hydrocarbons in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons are considered TACs (“air toxics”). There are no separate health standards for VOCs, although some VOCs are also toxic; an example is benzene, which is both a VOC and a carcinogen.

Global Climate Change Gases

The natural process through which heat is retained in the troposphere is called the “greenhouse effect.”¹ The greenhouse effect traps heat in the troposphere through a three fold process as follows: Short wave radiation emitted by the Sun is absorbed by the Earth; the Earth emits a portion of this energy in the form of long wave radiation; and greenhouse gases in the upper atmosphere absorb this long wave radiation and emit this long wave radiation into space and toward the Earth. This “trapping” of the long wave (thermal) radiation emitted back toward the Earth is the underlying process of the greenhouse effect.

The most abundant greenhouse gases are water vapor and carbon dioxide. Many other trace gases have greater ability to absorb and re-radiate long wave radiation; however, these gases are not as plentiful. For this reason, and to gauge the potency of greenhouse gases, scientists have established a Global Warming Potential for each greenhouse gas based on its ability to absorb and re-radiate long wave radiation. The Global Warming Potential of a gas is determined using carbon dioxide as the reference gas with a Global Warming Potential of 1.

Greenhouse gases include, but are not limited to, the following:²

- Water Vapor (H_2O). Although water vapor has not received the scrutiny of other greenhouse gases, it is the primary contributor to the greenhouse effect. Natural processes, such as evaporation from oceans and rivers and transpiration from plants, contribute 90 percent and ten percent of the water vapor in our atmosphere, respectively. The primary human related source of water vapor comes from fuel combustion in motor vehicles; however, this is not believed to contribute a significant amount (less than one percent) to atmospheric concentrations of water vapor. The Intergovernmental Panel on Climate Change has not determined a Global Warming Potential for water vapor.
- Carbon Dioxide (CO_2). Carbon dioxide is primarily generated by fossil fuel combustion in stationary and mobile sources. Due to the emergence of industrial facilities and mobile sources in the past 250 years, the concentration of carbon dioxide

¹ The troposphere is the bottom layer of the atmosphere, which varies in height from the Earth’s surface to 10 to 12 kilometers.

² All Global Warming Potentials are given as 100 year GWP. Unless noted otherwise, all Global Warming Potentials were obtained from the Intergovernmental Panel on Climate Change. Climate Change (Intergovernmental Panel on Climate Change, *Climate Change, The Science of Climate Change – Contribution of Working Group I to the Second Assessment Report of the IPCC*, 1996).

in the atmosphere has increased 35 percent.³ Carbon dioxide is the most widely emitted greenhouse gas and is the reference gas (Global Warming Potential of 1) for determining Global Warming Potentials for other greenhouse gases. In 2004, 83.8 percent of California's greenhouse gas emissions were carbon dioxide.⁴

- *Methane (CH₄)*. Methane is emitted from biogenic sources, incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. In the U.S., the top three sources of methane come from landfills, natural gas systems, and enteric fermentation. Methane is the primary component of natural gas, which is used for space and water heating, steam production, and power generation. The Global Warming Potential of methane is 21.
- *Nitrous Oxide (N₂O)*. Nitrous oxide is produced by both natural and human related sources. Primary human related sources include agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. The Global Warming Potential of nitrous oxide is 310.
- *Hydrofluorocarbons (HFCs)*. HFCs are typically used as refrigerants for both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is growing as the continued phase out of chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) gains momentum. The Global Warming Potential of HFCs range from 140 for HFC-152a to 6,300 for HFC-236fa.
- *Perfluorocarbons (PFCs)*. Perfluorocarbons are compounds consisting of carbon and fluorine. They are primarily created as a byproduct of aluminum production and semiconductor manufacturing. Perfluorocarbons are potent greenhouse gases with a Global Warming Potential several thousand times that of carbon dioxide, depending on the specific PFC. Another area of concern regarding PFCs is their long atmospheric lifetime (up to 50,000 years).⁵ The Global Warming Potential of PFCs range from 5,700 to 11,900.
- *Sulfur hexafluoride (SF₆)*. Sulfur hexafluoride is a colorless, odorless, nontoxic, nonflammable gas. It is most commonly used as an electrical insulator in high voltage equipment that transmits and distributes electricity. Sulfur hexafluoride is the most potent greenhouse gas that has been evaluated by the Intergovernmental Panel on Climate Change with a Global Warming Potential of 23,900. However, its global warming contribution is not as high as the Global Warming Potential would indicate due to its low mixing ratio compared to carbon dioxide (four parts per trillion [ppt] in 1990 versus 365 parts per million [ppm]).⁶
- In addition to the six major greenhouse gases discussed above (excluding water vapor), many other compounds have the potential to contribute to the greenhouse effect. Some of these substances were previously identified as stratospheric O₃

³ United States Environmental Protection Agency, *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990 to 2004*, April 2006, <http://www.epa.gov/climatechange/emissions/usinventoryreport.html>.

⁴ California Energy Commission, *Inventory of California Greenhouse Gas Emissions and Sinks 1990 to 2004*, December 2006, http://www.energy.ca.gov/2006publications/CEC_600_2006_013/CEC_600_2006_013_SF.PDF.

⁵ Energy Information Administration, *Other Gases: Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride*, October 29, 2001, http://www.eia.doe.gov/oiaf/1605/gg00rpt/other_gases.html.

⁶ United States Environmental Protection Agency, *High GWP Gases and Climate Change*, October 19, 2006, <http://www.epa.gov/highgwp/scientific.html#sf6>.

depletors; therefore, their gradual phase out is currently in effect. The following is a listing of these compounds:

- *Hydrochlorofluorocarbons (HCFCs)*. HCFCs are solvents, similar in use and chemical composition to CFCs. The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, all developed countries that adhere to the Montreal Protocol are subject to a consumption cap and gradual phase out of HCFCs. The U.S. is scheduled to achieve a 100 percent reduction to the cap by 2030. The Global Warming Potentials of HCFCs range from 93 for HCFC-123 to 2,000 for HCFC-142b.⁷
- *1,1,1 trichloroethane*. 1,1,1 trichloroethane or methyl chloroform is a solvent and degreasing agent commonly used by manufacturers. In 1992, the EPA issued a Final Rule (57 FR 33754) scheduling the phase out of methyl chloroform by 2002. Therefore, the threat posed by methyl chloroform as a greenhouse gas would diminish. However, the Global Warming Potential of methyl chloroform is 110 times that of carbon dioxide.⁸
- *Chlorofluorocarbons (CFCs)*. CFCs are used as refrigerants, cleaning solvents, and aerosols spray propellants. CFCs were also part of the EPA's Final Rule (57 FR 3374) for the phase out of O₃ depleting substances. Currently, CFCs have been replaced by HFCs in cooling systems and a variety of alternatives for cleaning solvents. Nevertheless, CFCs remain suspended in the atmosphere contributing to the greenhouse effect. CFCs are potent GHGs with Global Warming Potentials ranging from 4,600 for CFC 11 to 14,000 for CFC 13.⁹
- *Ozone*. O₃ occurs naturally in the stratosphere where it is largely responsible for filtering harmful ultraviolet (UV) radiation. In the troposphere, O₃ acts as a greenhouse gas by absorbing and re-radiating the infrared energy emitted by the Earth. As a result of the industrial revolution and rising emissions of oxides of nitrogen (NO_x) and volatile organic compounds (VOCs) (O₃ precursors), the concentrations of O₃ in the troposphere have increased. Due to the short life span of O₃ in the troposphere, its concentration and contribution as a greenhouse is not well established. However, the greenhouse effect of tropospheric O₃ is considered small, as the radiative forcing of O₃ is 25 percent of that of carbon dioxide.¹⁰

SENSITIVE RECEPTORS

Sensitive populations are more susceptible to the effects of air pollution than are the general population. Sensitive populations (sensitive receptors) that are in proximity to localized sources of air toxics and CO are of particular concern. Land uses considered sensitive

⁷ United States Environmental Protection Agency, *Protection of Stratospheric Ozone: Listing of Global Warming Potential for Ozone Depleting Substances*, November 7, 2006, <http://www.epa.gov/fedrgstr/EPA/AIR/1996/January/Day 19/pr 372.html>.

⁸ United States Environmental Protection Agency, *Protection of Stratospheric Ozone: Listing of Global Warming Potential for Ozone Depleting Substances*, November 7, 2006, <http://www.epa.gov/fedrgstr/EPA/AIR/1996/January/Day 19/pr 372.html>.

⁹ United States Environmental Protection Agency, *Class I Ozone Depleting Substances*, March 7, 2006, <http://www.epa.gov/ozone/ods.html>.

¹⁰ Intergovernmental Panel on Climate Change, *Climate Change 2007: The Physical Science Basis, Summary for Policymakers*, February 2007.

receptors are residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent center, and retirement homes. The HNTC planning area is immediately surrounded by vacant land and commercial uses, while residential uses are north of State Route 4 (SR 4), west of San Pablo Avenue, and south of the railroad right-of-way. Table 4.4-2 (Sensitive Receptors) describes the location of the sensitive receptors closest to the planning area.

**Table 4.4-2
Sensitive Receptors**

Receptor	Location
Schools	
Hercules High School	1900 Refugio Valley Road, 4,276 feet to the southeast
Ohlone Elementary School	1616 Pheasant Drive, 2,006 feet to the south
Lupine Hills Elementary School	1919 Lupine Road, 1,953 feet to the southeast
Institutional	
Valley Bible Church	1477 Willow Avenue, 369 feet to the north
St. Patrick's Catholic Church	825 7 th Street, Rodeo, CA, 1 mile to the north
Parks	
Foxboro Park	1025 Canterbury Avenue, 1,161.6 feet to the north
Refugio Valley Park	Corner of Refugio Valley Road and Pheasant Drive, 1,372 feet to the south
Ohlone Park	190 Turquoise Drive, 1.07 miles to the south
Woodfield Park	1991 Lupine Road, 2,376 feet to the east
Residential	
Senior Housing	111 Civic Drive, 380 feet to the south
Single Family Residential	Approximately 1,500 feet to the north, across SR-4,
Single Family Residential	Approximately 780 feet west of the PNR Parcel, across San Pablo Avenue
Single Family Residential	Approximate 250 to the south, across the railroad tracks
Source: Google, maps.google.com, January 2008. City of Hercules: Local Parks, http://www.ci.hercules.ca.us/New/Rec/parks.htm	

4.4.2 REGULATORY SETTING

Regulatory oversight for air quality in the Basin rests at the regional level with the Bay Area Air Quality Management District (BAAQMD), the California Air Resources Board at the State level, and the EPA Region IX office at the Federal level.

FEDERAL FRAMEWORK

U.S. Environmental Protection Agency

The EPA is responsible for implementing the Federal Clean Air Act, which was first enacted in 1955 and amended numerous times after. The Federal Clean Air Act established Federal air quality standards known as the National Ambient Air Quality Standards. These standards identify levels of air quality for “criteria” pollutants that are considered the maximum levels of ambient (background) air pollutants that are safe, with an adequate margin of safety, to protect the public health and welfare. The criteria pollutants are ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂, which is a form of nitrogen oxides

[NO_x], sulfur dioxide (SO₂, which is a form of sulfur oxides [SO_x]), particulate matter less than 10 and 2.5 microns in diameter (PM₁₀ and PM_{2.5}, respectively) and lead (Pb); refer to Table 4.4-3 (National and California Ambient Air Quality Standards).

STATE FRAMEWORK

California Air Resources Board

CARB administers the air quality policy in California. The California Ambient Air Quality Standards were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the National Ambient Air Quality Standards in Table 4.4-3, are generally more stringent and apply to more pollutants than the National Ambient Air Quality Standards. In addition to the criteria pollutants, California Ambient Air Quality Standards have been established for visibility-reducing particulates, hydrogen sulfide and sulfates.

The California Clean Air Act, which was approved in 1988, requires that each local air district prepare and maintain an Air Quality Management Plan (AQMP) to achieve compliance with the California Ambient Air Quality Standards. These AQMPs also serve as the basis for preparation of the State Implementation Plan (SIP) for the State of California.

Like the EPA, CARB also designates areas within California as either attainment or nonattainment for each criteria pollutant based on whether the California Ambient Air Quality Standards have been achieved. Under the California Clean Air Act, areas are designated as nonattainment for a pollutant if air quality data shows that a state standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a state standard, and are not used as a basis for designating areas as nonattainment.

Under the California Clean Air Act, the Basin is designated as a nonattainment area for O₃, PM_{2.5}, and PM₁₀. The Basin is designated as an attainment area for CO, NO₂, SO₂, and Pb; refer to Table 4.4-3. Similar to the Federal Clean Air Act, all areas designated as nonattainment under the California Clean Air Act are required to prepare plans showing how the area would meet the California Ambient Air Quality Standards by its attainment dates. The AQMP is the plan for improving air quality in the region.

The amendments to the California Clean Air Act establish the California Ambient Air Quality Standards, and a legal mandate to achieve these standards by the earliest practicable date. These standards apply to the same criteria pollutants as the Federal Clean Air Act, and also include sulfate, visibility, hydrogen sulfide, and vinyl chloride; refer to Table 4.4-3.

**Table 4.4-3
National and California Ambient Air Quality Standards**

Pollutant	Averaging Time	California ¹		Federal ²	
		Standard ³	Attainment Status	Standards ⁴	Attainment Status
Ozone (O ₃)	1 Hour	0.09 ppm (180 µg/m ³)	Unclassified	N/A ⁵	N/A ⁵
	8 Hours	0.07 ppm (137 µg/m ³)	Nonattainment	0.08 ppm (157 µg/m ³)	Nonattainment
Particulate Matter (PM ₁₀)	24 Hours	50 µg/m ³	Nonattainment	150 µg/m ³	Unclassified
	Annual Arithmetic Mean	20 µg/m ³	Nonattainment	50 µg/m ³	Attainment
Fine Particulate Matter (PM _{2.5})	24 Hours	No Separate State Standard		35 µg/m ³	Unclassified
	Annual Arithmetic Mean	12 µg/m ³	Nonattainment	15 µg/m ³	Unclassified
Carbon Monoxide (CO)	8 Hours	9.0 ppm (10 µg/m ³)	Attainment	9 ppm (10 µg/m ³)	Attainment
	1 Hour	20 ppm (23 µg/m ³)	Attainment	35 ppm (40 µg/m ³)	Attainment
Nitrogen Dioxide ⁶ (NO ₂)	Annual Arithmetic Mean	N/A	N/A	0.053 ppm (100 µg/m ³)	Attainment
	1 Hour	0.18 ppm (338 µg/m ³)	Attainment	N/A	N/A
Lead (Pb)	30 days average	1.5 µg/m ³	Attainment	N/A	N/A
	Calendar Quarter	N/A	N/A	1.5 µg/m ³	Attainment
Sulfur Dioxide (SO ₂)	Annual Arithmetic Mean	N/A	N/A	0.030 ppm (80 µg/m ³)	Attainment
	24 Hours	0.04 ppm (105 µg/m ³)	Attainment	0.14 ppm (365 µg/m ³)	Attainment
	3 Hours	N/A	N/A	N/A	Attainment
	1 Hour	0.25 ppm (655 µg/m ³)	Attainment	N/A	N/A
Visibility-Reducing Particles	8 Hours (10 a.m. to 6 p.m., PST)	Extinction coefficient = 0.23 km@<70% RH	Unclassified	No Federal Standards	
Sulfates	24 Hour	25 µg/m ³	Attainment		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Unclassified		

µg/m³ = micrograms per cubic meter; ppm = parts per million; km = kilometer(s); RH = relative humidity; PST = Pacific Standard Time; N/A = Not Applicable.

- California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, suspended particulate matter-PM₁₀ and visibility-reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations. In 1990, California Air Resources Board identified vinyl chloride as a toxic air contaminant, but determined that there was not sufficient available scientific evidence to support the identification of a threshold exposure level. This action allows the implementation of health-protective control measures at levels below the 0.010 ppm ambient concentration specified in the 1978 standard.
- National standards (other than ozone, particulate matter and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The Environmental Protection Agency also may designate an area as *attainment/unclassifiable*, if: (1) it has monitored air quality data that show that the area has not violated the ozone standard over a three-year period; or (2) there is not enough information to determine the air quality in the area. For PM₁₀, the 24-hour standard is attained when 99 percent of the daily concentrations, averaged over the three years, are equal to or less than the standard. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
- Concentration is expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 mm of mercury. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 mm of mercury (1,013.2 millibar); ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.
- The Federal 1-hour ozone standard was revoked on June 15, 2005.
- The NO₂ ambient air quality standard was amended on February 22, 2007, to lower the 1-hour standard to 0.18 ppm and establish a new annual standard of 0.030 ppm. These changes become effective after regulatory changes are submitted and approved by the Office of Administrative Law.

Source: California Air Resources Board and U.S. Environmental Protection Agency, February 22, 2007.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

CARB has established a state, health-based, air quality standard for ozone. Under the California Clean Air Act, areas not in compliance with this standard must prepare an ozone reduction plan. All major metropolitan areas within the State of California, including the

Bay Area, must comply with this standard and, therefore, must submit an attainment plan every three years. Pursuant to the California Clean Air Act and subsequent amendments, the BAAQMD prepared the *Bay Area 2005 Ozone Strategy*, which was adopted on January 4, 2006. Ozone conditions in the Basin have improved significantly over the years. The *2005 Ozone Strategy* provides useful background information on topics including the Basin's emission inventory, historical ozone trends and the implementation status of past control measures.

The *2005 Ozone Strategy* describes how the Basin will fulfill California Clean Air Act planning requirements for the State one-hour ozone standard and transport mitigation requirements through the proposed control strategy. The control strategy includes stationary source control measures to be implemented through BAAQMD regulations; mobile source control measures to be implemented through incentive programs and other activities; and transportation control measures to be implemented through transportation programs in cooperation with the Metropolitan Transportation Committee (MTC), local governments, transit agencies, and others. The BAAQMD will continue to adopt regulations, implement programs and work cooperatively with other agencies, organizations and the public on a wide variety of strategies to improve air quality in the region and reduce transport to neighboring air basins.

The *2005 Ozone Strategy* explains how the BAAQMD plans to achieve these goals with regard to ozone, and also discusses related air quality issues of interest including our public involvement process, climate change, fine particulate matter, the BAAQMD's Community Air Risk Evaluation (CARE) program, local benefits of ozone control measures, the environmental review process, national ozone standards, and photochemical modeling.

4.4.3 ENVIRONMENTAL ANALYSIS

THRESHOLDS OF SIGNIFICANCE

California Environmental Quality Act

According to Appendix G of the *CEQA Guidelines*, the proposed project would have a significant impact on air quality if it would:

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

Bay Area Air Quality Management District

For purposes of this air quality analysis, actions that violate Federal standards for criteria pollutants (i.e., primary standards designed to safeguard the health of people considered to be sensitive receptors, and outdoor and secondary standards designed to safeguard human welfare) are considered significant impacts. Additionally, actions that violate State standards developed by the CARB or criteria developed by the BAAQMD, including thresholds for criteria pollutants, are considered significant impacts. Table 4.4-4 (Bay Area Air Quality Management District Thresholds) provides the thresholds set forth by the BAAQMD.

**Table 4.4-4
Bay Area Air Quality Management District Thresholds**

Pollutant	Emissions Threshold (pounds/day)
	Daily
Reactive Organic Gases(ROGs)	80 pounds
Nitrogen Oxides (NOx)	80 pounds
Particulate Matter (PM ₁₀)	80 pounds
Source: Bay Area Air Quality Management District, <i>CEQA Guidelines</i> , December 1999.	

In addition to the pounds per day (lbs/day) thresholds cited above, the BAAQMD has thresholds applicable to CO emissions that require projects to perform localized CO modeling. These thresholds include the following:

- Project traffic would impact intersections or roadway links operating at level of service (LOS) D, E or F or would cause LOS to decline to D, E or F
- Project traffic would increase traffic volumes on nearby roadways by ten percent or more.
- Project would contribute to CO concentrations exceeding the State Ambient Air Quality Standard of nine parts per million (ppm) averaged over eight hours and 20 ppm for one hour

The BAAQMD’s approach to analyses of construction impacts is to emphasize implementation of effective and comprehensive control measures rather than detailed quantification of emissions. The BAAQMD has identified a set of feasible PM₁₀ control measures for construction activities. These control measures are listed in Table 4.4-5 (Bay Area Air Quality Management District Control Measures). As noted in Table 4.4-5, “Basic Measures” should be implemented at all construction sites, regardless of size. Additional “Enhanced Measures” should be implemented at larger construction sites greater than four acres where PM₁₀ emissions generally will be higher. Table 4.4-5 also lists other PM₁₀ controls (Optional Measures) that may be implemented if further emission reductions are deemed necessary by the lead agency.

The determination of significance with respect to construction emissions should be based on a consideration of the control measures to be implemented. According to the BAAQMD, quantification of construction emissions is not necessary (although a lead agency may elect to

do so). If all of the control measures indicated in Table 4.4-5 (as appropriate, depending on the size of the project area) would be implemented, then air pollutant emissions from construction activities would be considered a less than significant impact. If all of the appropriate measures in Table 4.4-5 would not be implemented, then construction impacts would be considered to be significant (unless the lead agency provides a detailed explanation as to why a specific measure is unnecessary or not feasible).

**Table 4.4-5
Bay Area Air Quality Management District Control Measures**

<p>Basic Control Measures - The following controls should be implemented at all construction sites.</p> <ul style="list-style-type: none"> • Water all active construction areas at least twice daily. • Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard. • Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites. • Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites. • Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.
<p>Enhanced Control Measures - The following measures should be implemented at construction sites greater than four acres in area.</p> <ul style="list-style-type: none"> • All "Basic" control measures listed above. • Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more). • Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.) • Limit traffic speeds on unpaved roads to 15 mph. • Install sandbags or other erosion control measures to prevent silt runoff to public roadways. • Replant vegetation in disturbed areas as quickly as possible.
<p>Optional Control Measures - The following control measures are strongly encouraged at construction sites that are large in area, located near sensitive receptors or which for any other reason may warrant additional emissions reductions.</p> <ul style="list-style-type: none"> • Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site. • Install wind breaks, or plant trees/vegetative wind breaks at windward side(s) of construction areas. • Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph. • Limit the area subject to excavation, grading and other construction activity at any one time.
<p>Source: Bay Area Air Quality Management District, <i>CEQA Guidelines</i>, December 1999.</p>

Health Risk Thresholds

For pollutants without defined significance standards or air contaminants not covered by the State and Federal ambient air quality standards, the definition of substantial pollutant concentrations varies. For TACs, "substantial" is taken to mean that the individual cancer risk exceeds a threshold considered to be a prudent risk management level. If best available

control technology for toxics (T-BACT) has been applied, the individual cancer risk to the maximum exposed individual (MEI) must not exceed ten in one million in order for an impact to be determined not to be significant.

Airborne impacts are also derived from materials considered to be a nuisance for which there may not be associated standards. Odors or the deposition of large diameter dust particles outside the PM_{10} size range would be included in this category. It is considered a significant impact for odors and large diameter dust particles if the BAAQMD nuisance (Rule 6-1-305) would be potentially violated.

The following limits for maximum individual cancer risk (MICR), cancer burden, and noncancer acute and chronic hazard indices (HI) from project emissions of TACs have been established for the Basin:

- *MICR and Cancer Burden.* (MICR is the estimated probability of a potential maximally exposed individual contracting cancer as a result of exposure to TACs over a period of 70 years for residential and 46 years for worker receptor locations. The MICR calculations include multipathway consideration, when applicable. Cancer Burden is the estimated increase in the occurrence of cancer cases in a population subject to a MICR of greater than or equal to one in one million (1.0×10^{-6}) resulting from exposure to TACs.

The cumulative increase in MICR that is the sum of the calculated MICR values for all TACs emitted from the project would not result in any of the following:

- (A) An increased MICR greater than ten in one million (1.0×10^{-5}) at any receptor location (assumes the project would be constructed with T-BACT); or
- (B) A cancer burden greater than 0.5.

- *Chronic HI.* (This is the ratio of the estimated long-term level of exposure to a TAC for a potential maximally exposed individual to its chronic reference exposure level. The chronic hazard index calculations include multipathway consideration, when applicable.)

The cumulative increase in total chronic HI for any target organ system due to total emissions from the project would not exceed 1.0 at any receptor location.

- *Acute HI.* (This is the ratio of the estimated maximum one-hour concentration of a TAC for a potential maximally exposed individual to its acute reference exposure level.)

The cumulative increase in total acute HI for any target organ system due to total emissions from the project would not exceed 1.0 at any receptor location.

- *Risk per year.* The risk per year shall not exceed 1/70 of the maximum allowable risk specified above at any receptor locations in residential areas.

Global Climate Change Regulatory Programs

Kyoto Protocol. The original Kyoto Protocol was negotiated in December 1997 and came into effect on February 16, 2005. As of December 2006, 169 countries have ratified the agreement with the exception of the U.S. and Australia. Participating nations are separated into Annex 1 (i.e., industrialized countries) and Non-Annex 1 (i.e., developing countries) countries that have different requirements for greenhouse gas reductions. The goal of the Protocol is to achieve overall emissions reduction targets for six greenhouse gases by the period of 2008 to 2012. The six greenhouse gases regulated under the Protocol are carbon dioxide, methane, nitrous oxide, sulfur hexafluoride, Hydrofluorocarbons and Perfluorocarbons. Each nation has an emissions reduction target for which they must reduce greenhouse gas emissions a certain percentage below 1990 levels (e.g., eight percent reduction for the European Union, six percent reduction for Japan). The average reduction target for nations participating in the Kyoto Protocol is approximately five percent below 1990 levels. Although the U.S. has not ratified the Protocol, it has established an 18 percent reduction in greenhouse gas emissions intensity by 2012. Greenhouse gas intensity is the ratio of greenhouse gas emissions to economic output (i.e., gross domestic product).

Assembly Bill 1493. In a response to the transportation sector accounting for more than half of California's carbon dioxide (CO₂) emissions, Assembly Bill 1493 (Assembly Bill 1493, Pavley) was enacted on July 22, 2002. Assembly Bill 1493 required the California Air Resources Board to set greenhouse gas emission standards for passenger vehicles, light duty trucks, and other vehicles determined to be vehicles whose primary use is noncommercial personal transportation in the State. The bill required that the California Air Resources Board set the greenhouse gas emission standards for motor vehicles manufactured in 2009 and all subsequent model years. In setting these standards, the California Air Resources Board must consider cost effectiveness, technological feasibility, economic impacts, and provide maximum flexibility to manufacturers. The California Air Resources Board adopted the standards in September 2004. These standards are intended to reduce emissions of carbon dioxide and other greenhouse gases (e.g., nitrous oxide, methane). The new standards would phase in during the 2009 through 2016 model years. When fully phased in, the near term (2009 to 2012) standards would result in about a 22 percent reduction in greenhouse gas emissions compared to the emissions from the 2002 fleet, while the midterm (2013 to 2016) standards would result in a reduction of about 30 percent. Some currently used technologies that achieve greenhouse gas reductions include small engines with superchargers, continuously variable transmissions, and hybrid electric drive.

Executive Order S-3-05. In June 2005, Governor Schwarzenegger established California's greenhouse gas emissions reduction targets in Executive Order S-3-05. The Executive Order established the following goals: greenhouse gas emissions should be reduced to 2000 levels by 2010; greenhouse gas emissions should be reduced to 1990 levels by 2020; and greenhouse gas emissions should be reduced to 80 percent below 1990 levels by 2050. The Secretary of the California Environmental Protection Agency (the Secretary) is required to coordinate efforts of various agencies in order to collectively and efficiently reduce greenhouse gases. Some of the agencies involved in the greenhouse gas reduction plan include Secretary of Business, Transportation and Housing Agency, Secretary of Department of Food and Agriculture, Secretary of Resources Agency, Chairperson of California Air Resources Board, Chairperson of the Energy Commission, and the President of the Public Utilities Commission. The Secretary is required to submit a biannual progress report to the Governor

and State Legislature disclosing the progress made toward greenhouse gas emission reduction targets. In addition, another biannual report must be submitted illustrating the impacts of global warming on California's water supply, public health, agriculture, the coastline and forestry, and report possible mitigation and adaptation plans to combat these impacts.

Assembly Bill 32. The Legislature enacted Assembly Bill 32 (Assembly Bill 32, Nuñez), the California Global Warming Solutions Act of 2006, which Governor Schwarzenegger signed on September 27, 2006, to further the goals of Executive Order S-3-05. Assembly Bill 32 represents the first enforceable statewide program to limit greenhouse gas emissions from all major industries, with penalties for noncompliance. The CARB has been assigned to carry out and develop the programs and requirements necessary to achieve the goals of Assembly Bill 32. The foremost objective of the CARB is to adopt regulations that require the reporting and verification of statewide greenhouse gas emissions. This program would be used to monitor and enforce compliance with the established standards. The first greenhouse gas emissions limit is equivalent to the 1990 levels, which are to be achieved by 2020. The CARB is also required to adopt rules and regulations to achieve the maximum technologically feasible and cost effective greenhouse gas emission reductions. Assembly Bill 32 allows the CARB to adopt market based compliance mechanisms to meet the specified requirements. Finally, the CARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market based compliance mechanism adopted.

Executive Order S-1-07. On January 18, 2007, California further solidified its dedication to reducing greenhouse gases by setting a new Low Carbon Fuel Standard for transportation fuels sold within the State. Executive Order S-1-07 sets a declining standard for greenhouse gas emissions measured in carbon dioxide equivalent gram per unit of fuel energy sold in California. The target of the Low Carbon Fuel Standard is to reduce the carbon intensity of California passenger vehicle fuels by at least ten percent by 2020. The Low Carbon Fuel Standard applies to refiners, blenders, producers and importers of transportation fuels and would use market-based mechanisms to allow these providers to choose how they reduce emissions during the "fuel cycle" using the most economically feasible methods. The Executive Order requires the Secretary of the California Environmental Protection Agency to coordinate with actions of the California Energy Commission, the CARB, the University of California and other agencies to develop a protocol to measure the "life cycle carbon intensity" of transportation fuels. This protocol is currently under development.

Senate Bill 97. SB 97 of 2007 requires the California Office of Planning and Research (OPR) to develop CEQA Guidelines for analysis and, if necessary, the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions to the Resources Agency by July 1, 2009. These guidelines for analysis and mitigation must address, but are not limited to, GHG emissions effects associated with transportation or energy consumption. Following receipt of these guidelines, the CARB must certify and adopt the guidelines prepared by OPR by January 1, 2010. In his signing statement, Governor Arnold Schwarzenegger noted:

Current uncertainty as to what type of analysis of greenhouse gas emissions is required under the California Environmental Quality Act has led to legal claims being asserted which would stop these important infrastructure projects. Litigation under CEQA is not the best approach to reduce greenhouse gas emissions and maintain a sound and

vibrant economy. To achieve these goals, we need a coordinated policy, not a piecemeal approach dictated by litigation.

OPR has begun the process of formulating the guidelines called for in SB 97. Part of that effort included a survey of existing climate change analyses performed by various lead agencies under CEQA. OPR's effort revealed many questions surrounding such analyses, including, among others, what is a "new" greenhouse gas emission, what is the appropriate baseline for a climate change analysis, and when would emissions become significant under CEQA.

POTENTIAL IMPACTS AND MITIGATION MEASURES: GENERAL PLAN AND ZONING ORDINANCE AMENDMENTS

Short-Term (Construction) Impacts

- ◆ ***SHORT-TERM AIR QUALITY IMPACTS COULD OCCUR DURING SITE PREPARATION AND PROJECT CONSTRUCTION ASSOCIATED WITH FUTURE DEVELOPMENT IN THE HNTC PLANNING AREA CONSISTENT WITH THE NTC LAND USE DESIGNATION AND ZONING DISTRICT.***

Level of Significance Before Mitigation: Potentially Significant Impact.

Impact Analysis: Construction-related emissions are generally short-term in duration, but may still cause adverse air quality impacts. Particulate matter is the pollutant of greatest concern with respect to construction activities. PM₁₀ emissions can result from a variety of construction activities, including excavation, grading, demolition, vehicle travel on paved and unpaved surfaces, and vehicle and equipment exhaust. Construction-related emissions can cause substantial increases in localized concentrations of PM₁₀. Particulate emissions from construction activities can lead to adverse health effects as well as nuisance concerns such as reduced visibility and soiling of exposed surfaces. Construction emissions of PM₁₀ can vary greatly depending on the level of activity, the specific operations taking place, the equipment being operated, local soils, weather conditions and other factors. The BAAQMD's approach to CEQA analysis of construction impacts is to emphasize implementation of effective and comprehensive control measures rather than detailed quantification of emissions. Implementation of Mitigation Measures AQ1 and AQ2 would reduce impacts from particulate emissions to less than significant.

Construction Equipment and Worker Vehicle Exhaust

Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the project area, emissions produced on-site as the equipment is used, and emissions from trucks transporting materials to/from the project area. Emitted pollutants would include CO, VOCs, NO_x, SO_x, PM₁₀, and PM_{2.5}. Standard BAAQMD regulations would be adhered to, such as maintaining all construction equipment in proper tune and shutting down equipment when not in use for extended periods of time.

Reactive Organic Gas and Volatile Organic Compound Emissions

In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates ROG emissions, which are ozone precursors. Implementation of Mitigation Measure AQ3, which would require future development within the planning area to adhere to BAAQMD Regulation 8 (Organic Compounds), Rule 3 (Architectural Coatings) would reduce impacts from ROG emissions to less than significant.

Odors

Potential sources that may emit odors during construction activities include the use of architectural coatings and solvents. BAAQMD Regulation 8 (Organic Compounds), Rule 3 (Architectural Coatings) limits the amount of volatile organic compounds from architectural coatings and solvents. Implementation of Mitigation Measure AQ3, which would require future development within the planning area to adhere to BAAQMD Regulation 8 (Organic Compounds), Rule 3 (Architectural Coatings) would reduce impacts from construction related odors and emissions to less than significant

Overall Construction Emissions

Implementation of projects within the HNTC planning area would occur over several years, with a buildout date of 2035. At this point, detailed construction assumptions have not yet been developed. Additionally, the BAAQMD does not require quantification of construction-related emission. Thus, per the BAAQMD CEQA Guidelines, a qualitative analysis was performed to disclose the anticipated impacts and mitigation measures. For construction sites larger than four acres, as would typically occur within the HNTC planning area, the BAAQMD recommends adoption of both basic and “enhanced” measures, including watering exposed soils, covering truck loads, sweeping, soil stabilization, limiting traffic speeds, and others; refer to Table 4.4-5 for the applicable BAAQMD control measures. With implementation of recommended mitigation measures, a reduction in construction related criteria pollutants would occur. Additionally, with implementation of BAAQMD control measures construction-related air quality impacts would be less than significant.

Mitigation Measures:

- AQ1 The project sponsor shall submit a grading plan to the City’s Engineering Services Manager for review and approval. The grading plan shall include measures to reduce emissions from construction equipment and wind blown soils and shall be followed for all construction activities for the project. The following measures shall be incorporated into the grading plan:
- Water all active construction areas at least twice daily.
 - Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.
 - Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.

- Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.
- Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for 10 days or more).
- Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.).
- Limit traffic speeds on unpaved roads up to 15 mph.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
- Replant vegetation in disturbed areas as quickly as possible.

AQ2 In addition to the dust control measures required in Mitigation Measure AQ1, the following enhanced control measures shall be included on grading plans:

- Cover all trucks hauling soil, sand, and other loose materials *or* require all trucks to maintain at least two feet of freeboard
- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites
- Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites
- Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets
- Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more)
- Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.)
- Limit traffic speeds on unpaved roads to 15 mph.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways
- Replant vegetation in disturbed areas as quickly as possible
- Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site
- Install wind breaks, or plant trees/vegetative wind breaks at windward side(s) of construction areas
- Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph
- Limit the area subject to excavation, grading and other construction activity at any one time.

AQ3 The construction contractor shall adhere to BAAQMD Regulation 8, Rule 3 (Architectural Coatings) which limits the VOC content of architectural coatings used in the BAAQMD. The construction contractor shall not allow the averaging of such coatings to exceed the allowable emissions specified in BAAQMD Regulation 8, Rule 3. Coatings applied to stationary structures and their appurtenances at the site of installation, to portable buildings at the site of installation, to pavements, or to curbs shall adhere to this BAAQMD Rule. Coatings applied in shop applications or to non-stationary structures such as airplanes, ships, boats, railcars, and automobiles, and adhesives are not considered architectural coatings for the purpose of this rule.

Level of Significance After Mitigation: Less Than Significant Impact.

Long-Term Operational Impacts

- ◆ **LONG-TERM AIR QUALITY IMPACTS COULD OCCUR DURING PROJECT OPERATIONS ASSOCIATED WITH FUTURE DEVELOPMENT IN THE HNTC PLANNING AREA CONSISTENT WITH THE NTC LAND USE DESIGNATION AND ZONING DISTRICT**

Level of Significance Before Mitigation: Potentially Significant Impact.

Impact Analysis: Long-term air quality impacts would consist of mobile source emissions generated from project-related traffic and from stationary source emissions. It is anticipated that development of the New Town Center would occur over several years. For analysis purposes, a buildout year of 2035 is used. As stated in Section 3.0 (Project Description), Table 4.4-6 (Hercules New Town Center Development Plan Buildout Summary) lists the anticipated development that would occur within the planning area.

**Table 4.4-6
Hercules New Town Center Development Plan Buildout Summary**

Parcel	Size (Acres)	Residential		Office	Retail
		Square Feet	Number of Units	Square Feet	Square Feet
PNR (1)	6.62	360,000	400	80,000	60,000
C1 (2)	8.69	250,000	250	31,250	62,500
Loop (3)	6.25	375,000	375	31,250	156,250
Ramp (4)	3.23	175,000	175	43,750	31,250
Caltrans (5)	6.35	300,000	300	6,250	6,250
Carone/WC Drilling (6 & 7)	3.81	150,000	150	3,750	3,750
Total	34.95	1,610,000	1,650	196,250	320,000

Mobile Source Emissions

Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG_s, NO_x, SO₂, PM₁₀, and PM_{2.5} are all pollutants of regional concern. However, CO tends to be a localized pollutant, dispersing rapidly at the source.

Project-generated vehicle emissions have been estimated using the URBEMIS 2007 computer model. This model predicts ROG_s, CO, NO_x, SO₂, PM₁₀, and PM_{2.5} emissions from motor vehicle traffic associated with new or modified land uses; refer to Appendix B (Air Modeling Data) for model input values used for this project with the model output. Project trip generation rates were based on the traffic impact analysis prepared by Fehr & Peers and contained in Section 4.14, Transportation/Traffic, of this EIR. Table 4.4-7 (Hercules New Town Center Year 2035 Air Emissions) presents anticipated mobile emissions. As shown in Table 4.4-7, except for PM₁₀ emissions, mobile source emissions alone would not exceed the established BAAQMD thresholds.

Area Source Emissions

Buildout of the New Town Center would generate electrical demand and heating demands resulting in combustion of natural gas. Area source emissions were estimated using a variety of sources including the URBEMIS 2007 model, along with generally accepted emission factors for certain stationary sources. While previous versions of URBEMIS were designed to estimate emissions only from motor vehicle trips, the current version can estimate emissions from gas heaters, furnaces and landscape maintenance equipment. The model accounts for specific meteorological conditions and topography that characterize each air basin in California. Electricity and natural gas are utilized by almost every residential development. As indicated in Table 4.4-7, except for ROG emissions, area source emissions alone would not exceed established BAAQMD thresholds.

**Table 4.4-7
Hercules New Town Center Year 2035 Air Emissions**

Project	Pollutant (pounds/day) ¹		
	ROG	NO _x	PM ₁₀
▪ Area Source Emissions	96.49	16.91	0.04
▪ Vehicle Emissions	62.39	48.12	351.05
Total Operational Emissions	158.88	65.03	351.09
BAAQMD Threshold	80	80	80
Is Threshold Exceeded? (Significant Impact?)	Yes	No	Yes
<small>ROG = reactive organic gases; NO_x = nitrogen oxides; CO = carbon monoxide; SO₂ = sulfur dioxide; PM₁₀ = particulate matter; up to 10 microns;</small>			
<small>Notes:</small>			
<small>1. Based on URBEMIS 2007 version 9.2.2 modeling results, worst-case seasonal emissions for area and mobile emissions have been modeled.</small>			

Total Hercules New Town Center Project Operational Emissions

The total project operational emissions are described in terms of area source and mobile source (vehicle) emissions. Transportation control measures and design features can be

incorporated into the project to reduce emissions from mobile sources. Mitigation Measure AQ4 has been recommended to reduce area source emissions and potential sources of ROG emissions. However, as indicated in Table 4.4-7, operational emissions would still exceed the BAAQMD thresholds for PM₁₀ and ROGs due to the net increase in daily trips. Thus, the project would result in significant and unavoidable impacts for long-term operations under Year 2035 conditions.

Mitigation Measure:

AQ4 Prior to the approval of plans submitted for building permits, the Building Division shall confirm that proposed development within the Hercules New Town Center incorporates measures to reduce project operational emissions, which may include but are not limited to the following:

- Use solar or low-emission water heaters in the residential buildings
- Each appliance (i.e., washer/dryers, refrigerators, stoves, etc.) provided by the builder must be Energy Star qualified if an Energy Star designation is applicable for that appliance
- Low flow appliances (i.e., toilets, dishwashers, shower heads, washing machines) shall be installed if provided by the builder/applicant
- Require that residential landscapers providing services at the common areas of a project site use electric or battery-powered equipment, or other internal combustion equipment that is either certified by the California Air Resources Board or is three years old or less at the time of use, to the extent that such equipment is reasonably available and competitively priced

Level of Significance After Mitigation: Significant and Unavoidable Impact.

Localized Carbon Monoxide Impacts

- ◆ ***DEVELOPMENT CONSISTENT WITH THE NTC LAND USE DESIGNATION AND ZONING DISTRICT COULD CONFLICT WITH THE LOCAL AIR QUALITY MANAGEMENT PLAN.***

Level of Significance Before Mitigation: Less Than Significant Impact.

Impact Analysis: The BAAQMD requires that proposed projects are analyzed for the potential to cause localized CO hotspots. Per the BAAQMD CO screening guidelines, a project would have CO impacts if the following were to occur:

- Project traffic would impact intersections or roadway links operating at level of service (LOS) D, E or F or would cause LOS to decline to D, E or F
- Project traffic would increase traffic volumes on nearby roadways by 10 percent or more

- Project would contribute to CO concentrations exceeding the State Ambient Air Quality Standard of 9 parts per million (ppm) averaged over 8 hours and 20 ppm for one hour

Because traffic congestion is highest at intersections where vehicles queue and are subject to reduced speeds, these hot spots are typically produced at intersections. Based on the traffic impact analysis, the intersections listed in Table 4.4-9 (Project Buildout Carbon Monoxide Concentrations) would require CO hotspot analysis.

A receptor height of 1.8 meters was used in accordance with EPA’s recommendations. The calculations assume a meteorological condition of almost no wind (0.5 meters per second), a flat topological condition between the source and the receptor and a mixing height of 1,000 meters. A standard deviation of five degrees was used for the deviation of wind direction. The suburban land classification was used for the aerodynamic roughness coefficient. This follows the CALINE-4 user’s manual definition of suburban as, “regular coverage with large obstacles, open spaces roughly equal to obstacle heights, villages, mature forests.” For the purposes of this analysis, the ambient concentration used in the modeling was the highest one-hour measurement from the past five years of monitoring data at the San Pablo-Rumrill Boulevard Station. Actual future ambient CO levels may be lower due to emissions control strategies that would be implemented between now and the project buildout date. As indicated in Table 4.4-9, CO concentrations would be well below the State and Federal standards. The modeling results are compared to the California Ambient Air Quality Standards for carbon monoxide of nine ppm on an eight-hour average and 20 ppm on a one-hour average. Neither the one-hour average nor the 8-hour average would be equaled or exceeded. Impacts in regards to CO hot spots would be less than significant.

**Table 4.4-8
Project Buildout Carbon Monoxide Concentrations**

Intersection	1-Hour CO (ppm) ¹		8-Hour CO (ppm) ¹	
	1-Hour Standard	Future + Project	8-Hour Standard	Future + Project
Willow Avenue and Sycamore Avenue	20 ppm	2.7	9 ppm	1.89
Sycamore Avenue and San Pablo Avenue	20 ppm	2.8	9 ppm	1.96
San Pablo Avenue and John Muir Parkway	20 ppm	2.7	9 ppm	1.89
Willow Avenue and Palm Avenue	20 ppm	2.7	9 ppm	1.89
Palm Avenue and Sycamore Avenue	20 ppm	2.6	9 ppm	1.82
San Pablo Avenue and PNR Driveway	20 ppm	2.7	9 ppm	1.89
TC East Driveway and Willow Avenue	20 ppm	2.6	9 ppm	1.82

1. As measured at a distance of 10 feet from the corner of the intersection predicting the highest value. Presented 1 hour CO concentrations include a background concentration of 2.5 ppm. Eight-hour concentrations are based on a persistence of 0.7 of the 1-hour concentration.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

Health Risk Assessment Impacts

- ◆ ***DEVELOPMENT CONSISTENT WITH THE NTC LAND USE DESIGNATION AND ZONING DISTRICT COULD RESULT IN SIGNIFICANT HEALTH RISK IMPACTS.***

Level of Significance Before Mitigation: Less Than Significant Impact.

Impact Analysis: This section examines the potential health effects on future residents from the long-term exposure to vehicular traffic on the I-80 and SR 4. Health risk assessments are based on assuming the worst case of an individual living 70 years in one house, actually residing in that house 350 days out of every year and 24 hours of each of those days. Most people do not stay in one house their entire lifetime, and only stay home all 24 hours in any given day on rare occasions. This assessment includes both the required 70-year risks plus 30-year risks to represent the more realistic exposure any resident would have. This assessment focuses on the risks from diesel exhaust particulate and gasoline exhaust VOC emissions. The Office of Environmental Health Hazard Assessment (OEHHA) has determined that long-term exposure to diesel exhaust particulates poses the highest cancer risk of any toxic air contaminant it has evaluated. Fortunately, improvements to diesel fuel and diesel engines have already reduced emissions of some of the contaminants, which, when fully implemented, would result in a 75 percent reduction in particle emissions from diesel-powered trucks and other equipment by 2010 (compared to 2000 levels) and an 85 percent reduction by 2020.

There are currently no federal project-level requirements for air toxics analysis, and CEQA only requires a consideration of the risks from toxics, with the BAAQMD providing the *Toxic Air Contaminant Control Program Annual Report* (August 2007) for guidance. The BAAQMD has established a maximum individual cancer risk significance threshold of ten in one million (1.0×10^{-5}) (assumes emissions are controlled with best-available control technology for toxics [T-BACT]) and a noncarcinogenic hazard index of 1.0.

According to CARB,¹¹ when conducting a Health Risk Assessment (HRA), the surrogate for whole diesel exhaust is diesel particulate matter and it is used as the basis for the potential risk calculations. When conducting an HRA, the potential cancer risk from inhalation exposure to diesel particulate matter would outweigh the potential noncancer health impacts. Therefore, inhalation cancer risk is required for every HRA. When comparing whole diesel exhaust to speciated diesel exhaust (e.g., polycyclic aromatic hydrocarbons [PAHs], metals), potential cancer risk from inhalation exposure to whole diesel exhaust would outweigh the multipathway cancer risk from the speciated components. For this reason, there would be few situations where an analysis of multipathway risk is necessary.¹² To estimate the potential cancer risk associated with project-related diesel engine exhaust, a dispersion model is used to translate an emission rate from a source location to a concentration at a receptor location of interest. Dispersion modeling varies from the simpler, more conservative screening-level analysis to the more complex and refined detailed analysis. This assessment

¹¹ HARP Model Documentation, Appendix K, *Risk Assessment Procedures to Evaluate Particulate Emissions from Diesel-Fueled Engines*, ARB, <http://www.arb.ca.gov/toxics/harp/docs/userguide/appendixK.pdf>, February 2005.

¹² OEHHA, *Air Toxics Hot Spots Program Risk Assessment Guidelines*, August 2003, Appendix D, *Risk Assessment Procedures to Evaluate Particulate Emissions from Diesel-Fueled Vehicles*, Section B.

was conducted using the CARB health risk model, HARP, which has the EPA dispersion model ISCST3 built in. In addition to examining the risks from diesel exhaust particulate, this assessment includes the exhaust from gasoline-fueled vehicles.

Based on 2006 Caltrans traffic data¹³ there is 185,000 average annual daily traffic (AADT) along the I-80 (northbound and southbound combined), of which 2,883 were light-duty trucks (two-axle trucks), 637 were medium-duty trucks (three-axle trucks), and 4,990 were heavy-duty trucks (four- and five-axle trucks). On SR 4 in 2006 there was 39,500 AADT (eastbound and westbound combined), of which 848 were light-duty trucks, 201 were medium-duty trucks, and 1,286 were heavy-duty trucks. The CARB model, EMFAC 2007, was used for emissions factors. Built into the model are assumptions of technological and regulatory changes that would reduce emission rates over time. Because this health risk analysis is examining long-term, 70-year carcinogenic and chronic effects, and because the HARP model only allows for a single emission rate for the entire period, a median set of emission factors from the year 2025 was used to represent the entire period.

For the purposes of this analysis, all vehicle exhaust was modeled as if it came from volume sources located along the two freeways, extending beyond the edge of the proposed project site in each direction to account for wind direction variations. The geometries of the sources are combined with the traffic data and emission factor information described above to derive emission rates for each of the sources for both diesel particulate and gasoline VOC. Within each of the truck categories, data from the URBEMIS 2007 model was used to determine the percentage of trucks that are diesel. Table 4.4-10 (I-80 and SR-4 Diesel Truck Exhaust into ISCST3 Emissions Rates) shows the derivation of the overall on-site diesel exhaust emission rate, which was then distributed over the 22 sources, refer to Figure 4.4-1 (Health Risk Analysis Results).

Receptors were placed in a general grid extending far enough in all directions to characterize the risk level isopleths for all future residences of the project. Year 2005 meteorological data from the Phillips Hillcrest¹⁴ area was used to represent the conditions at the planning area. While this is older data, this is the State-supplied meteorological data for this area for use with the HARP model.

Acute Project-Related Emission Impacts

The emissions of gasoline-powered vehicles include several Toxic Air Pollutants (TAPs) that have acute health effects. Table 4.4-11 (Health Risk Analysis Results) shows that the potential for short-term acute exposure would be less than significant to future residents of the proposed project.

¹³ <http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/>

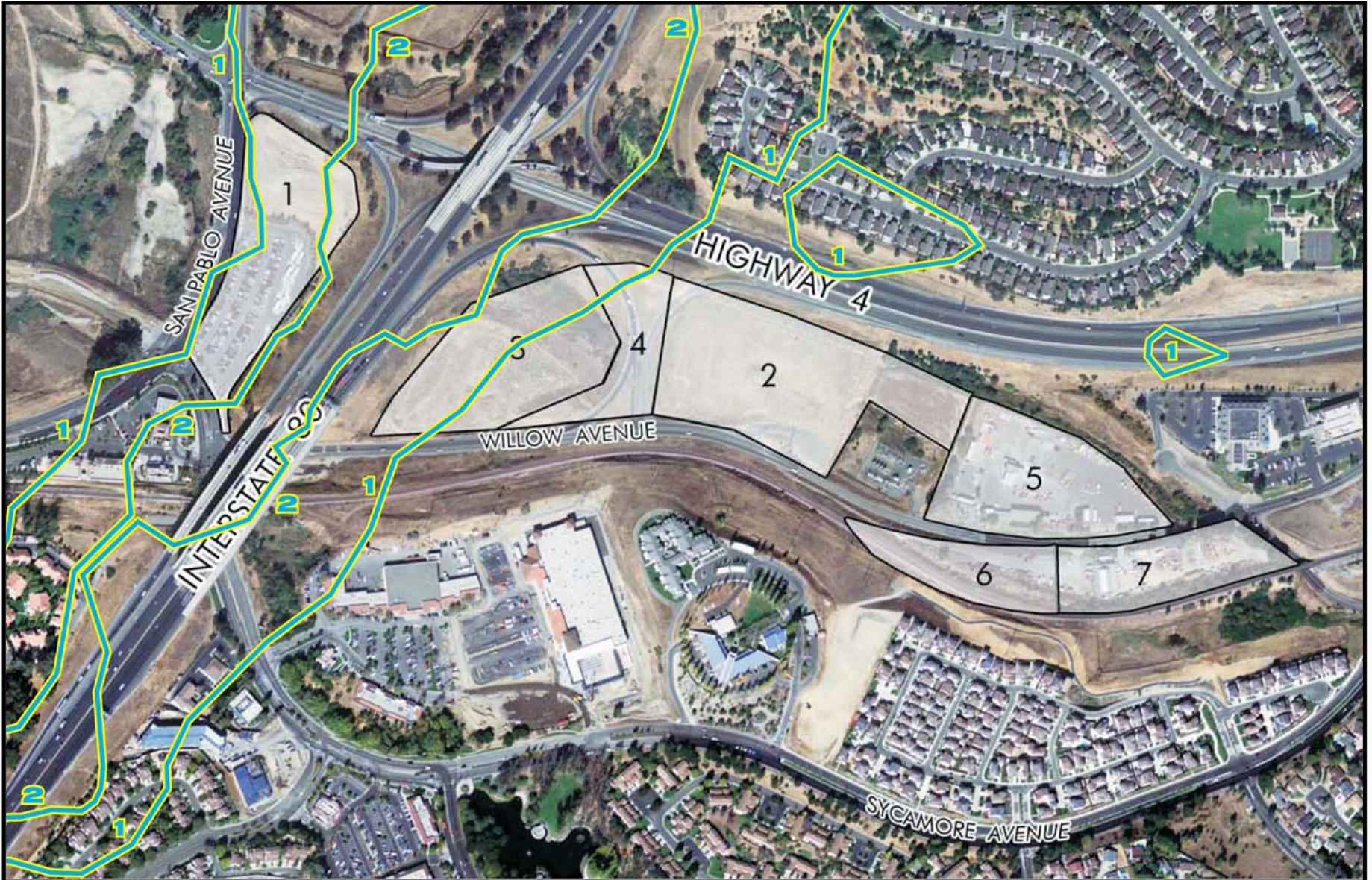
¹⁴ Data from BAAQMD Web site: www.baaqmd.gov/tec/data/metdata2774.html

**Table 4.4-9
I-80 and SR 4 Diesel Truck Exhaust into ISCST3 Emissions Rates**

Roadway Data		Exhaust Emissions				Emission Rates Per Source		
						grams/second	pounds /hour	pounds/year
I-80 ¹		Diesel Exhaust PM₁₀ Emissions						
		% of Vehicles That Are Diesel						
		LDA	LDT	MDT	HDT			
		0%	20.0%	70.0%	87.5%			
		AADT	0	577	446			
	60 mph	0	9.40E-06	8.55E-06	4.64E-04	3.45E-05	0.00027	2.4
		Gasoline Exhaust ROG Emissions						
		% of Vehicles That Are Gasoline						
		LDA	LDT	MDT	HDT			
		100%	80.0%	30.0%	12.5%			
AADT		176,490	2,306	191	624			
60 mph	2.54E-03	6.19E-05	6.58E-06	8.50E-05	1.92E-04	0.0015	13	
Roadway Data		Exhaust Emissions				Emission Rates Per Source		
						grams/second	pounds /hour	pounds/year
SR 4 ²		Diesel Exhaust PM₁₀ Emissions						
		% of Vehicles That Are Diesel						
		LDA	LDT	MDT	HDT			
		0%	20.0%	70.0%	87.5%			
		AADT		1,691	740			
	60 mph		4.70E-06	7.20E-06	2.82E-04	2.94E-04	0.00233	20.5
		Gasoline Exhaust ROG Emissions						
		% of Vehicles That Are Gasoline						
		LDA	LDT	MDT	HDT			
		100%	80.0%	30.0%	12.5%			
AADT		123,917	1,691	740	3,652			
60 mph	1.38E-03	2.63E-05	6.02E-06	5.24E-05	1.46E-03	0.0116	102	
AADT = Average Annual Daily Traffic; HDT = Heavy-Duty Trucks; LDA = Light-Duty Autos; LDT = Light-Duty Trucks; MDT = Medium-Duty Trucks								
Notes:								
1. Total AADT along I-80 is projected to be 185,000 (northbound and southbound combined).								
2. Total AADT along SR-4 is projected to be 39,500 (eastbound and westbound combined).								
Source: LSA Associates, Inc., <i>Health Risk Assessment, Hercules New Town Center</i> , February 2008.								

Carcinogenic and Chronic Project-Related Emission Impacts

The results of the health risk assessment are shown in Table 4.4-11. Figure 4.4-1 shows isopleths of cancer risk levels resulting from the vehicle emissions near the planning area. Individuals that stay in one of the proposed residences for 30 years would be exposed to an inhalation cancer risk of one in one million, and an individual that stayed for 70 years would be exposed to an inhalation cancer risk of 1.8 in one million. Thus, all the residents of the proposed project would be exposed to a health risk from vehicles operating on the I-80 and SR-4 that is less than the 10 in 1 million threshold. The maximum chronic hazard index for any resident is 0.003; therefore, impacts in this regard would be less than significant.



LEGEND

-  - Carcinogenic Risk Level - 1 in 1 Million
-  - Carcinogenic Risk Level - 2 in 1 Million



JN 35-100742

Hercules New Town Center EIR
Health Risk Analysis Results

Figure 4.4-1

**Table 4.4-10
Health Risk Analysis Results**

	Cancer Risk (number in 1 million)	Chronic Hazard Index	Acute Hazard Index
MICR – 30-year exposure	1.0	0.001	0.0005
MICR – 70-year exposure	1.8	0.001	0.0005
Threshold	10	1.0	1.0
Source: LSA Associates, Inc., <i>Health Risk Assessment, Hercules New Town Center</i> , February 2008.			

Mitigation Measures: No mitigation is required.

Level of Significance After Mitigation: Not applicable.

POTENTIAL IMPACTS AND MITIGATION MEASURES: MARKET TOWN PROJECT

Short-Term (Construction) Impacts

- ◆ **THE PROPOSED MARKET TOWN PROJECT WOULD RESULT IN SHORT-TERM AIR QUALITY IMPACTS DURING SITE PREPARATION AND PROJECT CONSTRUCTION.**

Level of Significance Before Mitigation: Potentially Significant Impact.

Impact Analysis: The Market Town project would develop the PNR parcel located within the HNTC planning area. Development associated with the project would result in the same potentially significant impacts as those for future development associated with the General Plan and Zoning Ordinance Amendments. Corresponding mitigation measures for potentially significant impacts associated with construction of the Market Town project would be the same as those identified for future development facilitated by the General Plan and Zoning Ordinance Amendments. With implementation of recommended mitigation measures, a reduction in Market Town construction related criteria pollutants would occur.

Mitigation Measures: Implement Mitigation Measures AQ1, AQ2 and AQ3.

Level of Significance After Mitigation: Less Than Significant Impact.

Long-Term Operation Impacts

- ◆ **THE PROPOSED MARKET TOWN PROJECT WOULD RESULT IN LONG-TERM AIR QUALITY IMPACTS DURING PROJECT OPERATIONS.**

Level of Significance Before Mitigation: Potentially Significant Impact.

Impact Analysis: Operational impacts are the long-term emissions that would occur indefinitely as a result of the activities associated with the Market Town project operations. “Project operations” are the full range of activities that can or may generate pollutant emissions when the development is functioning in its intended use. For a majority of indirect

sources, motor vehicles traveling to and from the projects represent the primary source of air pollutant emissions, but also include energy consumption emissions.

Mobile Source Emissions

The traffic impact analysis prepared by Fehr & Peers and contained in Section 4.14, Transportation/Traffic of this EIR, indicates that the Market Town project would generate approximately 4,613 new net daily trips. Utilizing this trip generation rate, the Market Town project-generated vehicle emissions have been estimated using the URBEMIS 2007 computer model. Project operational emissions for ROG, NO_x, and PM₁₀ based on the Initial Planned Development Plan (IPDP) have been included in Table 4.4-11A (Market Town Project Air Emissions- IPDP) and in Table 4.4-11B (Market Town Project Air Emissions- FPDP) for the Final Planned Development Plan (FPDP).

Area Source Emissions

The Market Town project would generate electrical demand and heating demands resulting in combustion of natural gas. As shown in Table 4.4-11A, based on the IPDP, stationary source emissions generated directly from the natural gas consumed and indirectly from the power plant providing electricity to the project site would exceed BAAQMD thresholds for PM₁₀ and emissions of ROG and NO_x would be below BAAQMD thresholds. Based on the FPDP, stationary source emissions generated from Market Town would not exceed BAAQMD thresholds for PM₁₀, ROG or NO_x.

**Table 4.4-11A
Market Town Project Air Emissions - IPDP**

Project	Pollutant (pounds/day) ¹		
	ROG	NO _x	PM ₁₀
▪ Area Source Emissions	23.78	4.19	0.02
▪ Vehicle Emissions	36.04	41.36	83.11
Total Operational Emissions	59.82	45.44	83.13
BAAQMD Threshold	80	80	80
Is Threshold Exceeded? (Significant Impact?)	No	No	Yes
<small>ROG = reactive organic gases; NO_x = nitrogen oxides; CO = carbon monoxide; SO₂ = sulfur dioxide; PM₁₀ = particulate matter; up to 10 microns;</small>			
<small>Notes:</small>			
<small>1. Based on URBEMIS 2007 version 9.2.2 modeling results, worst-case seasonal emissions for area and mobile emissions have been modeled.</small>			

**Table 4.4-11B
Market Town Project Air Emissions - FPDP**

Project	Pollutant (pounds/day) ¹		
	ROG	NO _x	PM ₁₀
▪ Area Source Emissions	18.22	3.50	0.02
▪ Vehicle Emissions	31.38	36.30	72.91
Total Operational Emissions	49.60	39.80	72.93
BAAQMD Threshold	80	80	80
Is Threshold Exceeded? (Significant Impact?)	No	No	No
<small>ROG = reactive organic gases; NO_x = nitrogen oxides; CO = carbon monoxide; SO₂ = sulfur dioxide; PM₁₀ = particulate matter; up to 10 microns;</small>			

Notes:

1. Based on URBEMIS 2007 version 9.2.2 modeling results, worst-case seasonal emissions for area and mobile emissions have been modeled.

Total Market Town Project Operational Emissions

The Market Town project operational emissions are described in terms of area source and mobile source (vehicle) emissions. Transportation control measures and design features can be incorporated into the project to reduce emissions from mobile sources. According to Table 4.4-11A, operational emissions would still exceed the BAAQMD thresholds for PM₁₀ due to the net increase in daily trips under the IPDP. Under the FPDP, operational emissions would not exceed BAAQMD thresholds. However, since the proposed project is being analyzed under IPDP assumptions, the Market Town project would result in significant and unavoidable impacts for long-term operations.

Mitigation Measure: Implement Mitigation Measure AQ4. No other feasible mitigation measures are available.

Level of Significance After Mitigation: Significant and Unavoidable Impact.

- ◆ **THE PROPOSED MARKET TOWN PROJECT COULD CONFLICT WITH THE LOCAL AIR QUALITY MANAGEMENT PLAN.**

Level of Significance Before Mitigation: Less Than Significant Impact.

Impact Analysis: Long-term air quality impacts would consist of mobile source emissions generated from project-related traffic and from stationary source emissions. For purposes of this air quality emissions analysis, operation-related air quality impacts were analyzed for the cumulative (2035) project buildout conditions since the Market Town project would be included in the project buildout. As indicated in Table 4.4-9, CO concentrations would be well below the State and Federal standards. Impacts in regards to CO hot spots would be less than significant.

Mitigation Measures: No mitigation is required

Level of Significance After Mitigation: Not applicable.

CUMULATIVE IMPACTS

Plan Consistency Impacts

- ◆ **THE PROPOSED PROJECT COULD CONFLICT WITH THE LOCAL AIR QUALITY MANAGEMENT PLAN.**

Level of Significance Before Mitigation: Potentially Significant Impact.

Impact Analysis: According to the BAAQMD CEQA Guidelines, for any project that does not individually have significant operational air quality impacts, the determination of significant cumulative impacts should be based on an evaluation of the consistency of the project with the local general plan and of the general plan with the regional air quality plan.

If a project is proposed in a city or county with a general plan that is consistent with the AQMP, then the project would not have a significant cumulative impact.

The BAAQMD uses population projections from the Association of Bay Area Governments (ABAG) for planning purposes. ABAG produces a biannual report on regional population and employment trends. The *2000 Clean Air Plan* used population projections from the 1998 annual report (*Projections '98*) to estimate emission inventories from 2000 through 2006. *Projections '98* predicts that the population in the nine Bay Area counties would increase from 6,824,200 to 7,142,800 between 2000 and 2005; for an average annual increase of about 318,600 residents or a 0.9 percent annual population growth rate.

Based on the General Plan, the City's population at buildout would be 29,927 residents. Development within the HNTC planning area would result in approximately 1,650 multi-family residential units and an increase in population of 3,482 residents.¹⁵ This would represent incremental increase in population and would be within the growth estimates identified in the General Plan.

Currently, the PNR parcel has a General Plan land use designation and zoning district of Commercial Public (CP). All other parcels in the HNTC planning area currently have a General Plan land use designation and zoning district of General Commercial (CG). With project implementation, the land use designation and zoning district would change to "New Town Center" (NTC), which would allow a mix of residential and non-residential uses. The change in land use designation and zoning would result in a population growth in the planning area. However, the City has anticipated this growth in the Housing Element of the General Plan. Therefore, there would not be an impact as a result of population growth.

Proposed amendments to the General Plan and Zoning Ordinance would increase the number of people residing in Hercules; however, this increase would be consistent with General Plan Housing Element Policies 1.1, 1.2, 2.1, 2.2, and 5.1. Policy 1.2, Adequate Sites, promotes rezoning properties to high densities or non-residential land to residential or mixed use to meet the City's housing needs and create adequate development opportunities. Policies 1.1, 2.1, and 2.2 encourage the development with a variety of housing types, density, and price, which are in keeping with community design goals and standards. Policy 5.1 encourages residential uses in commercial areas.

The proposed project would focus growth in the HNTC planning area such that it would be conveniently located near to transit and other City services. However, the proposed project would have significant operational air quality impacts and would, therefore, conflict with the local air quality management plan.

Determining Local Plan Consistency With Clean Air Plan Transportation Control Measures

Determining consistency of local plans with the Clean Air Plan involves assessing whether the *2000 Clean Air Plan* transportation control measures (TCMs) for which local governments are implementing agencies are indeed being implemented. The *2000 Clean Air Plan* identifies implementing agencies/entities for each of the TCMs. Cities and counties are

¹⁵ Calculation: 1,650 dwelling units x 2.11 persons per household = 3,482 residents.

identified among the implementing agencies for some of the TCMs. Local plans that do not demonstrate reasonable efforts to implement TCMs in the *2000 Clean Air Plan* would be considered to be inconsistent with the regional air quality plan and, therefore, have a significant air quality impact.

The *2000 Clean Air Plan* is an update of the original *Clean Air Plan* adopted by the BAAQMD in 1991. The *1991 Clean Air Plan* proposed 23 Transportation Control Measures (which have been subsequently amended and revised to the current 22 measures) to be implemented in an effort to reduce ozone. The BAAQMD guidelines list seven measures that local governments should implement as part of area plans. These are as follows:

- TCM 1: Support voluntary employer-based trip reduction programs
- TCM 9: Improve bicycle access and facilities
- TCM 12: Improve arterial traffic management
- TCM 15: Local clean air plans policies and programs should incorporate measures to reduce the number and length of single-vehicle occupant trips
- TCM 17: Conduct demonstration projects which will reduce vehicle emissions
- TCM 19: Promote pedestrian travel
- TCM 20: Promote traffic calming

The Hercules Transit Center is currently located on the Market Town project site (PNR Parcel) and would be relocated to a more central location within the HNTC planning area. The Hercules Transit Center is a terminal for express bus service to the El Cerrito del Norte Bay Area Rapid Transit (BART) station. The secondary function of the Transit Center is as the hub for local Western Contra Costa County Transit Authority (WestCAT) routes, which serve the City and nearby communities.

As noted above, the PNR parcel has a General Plan land use designation and zoning district of CP. The CP land use designation and zoning district allows transit-related uses with the potential to combine transit uses with commercial development. The overall intent of the NTC land use designation and zoning district is to create a "Transit-Oriented Town Center" that has a pedestrian- and transit-friendly mix of residential, commercial, office, and public and quasi public uses, designed in a more urban pattern of development with buildings set close to defined streets in the center of town. Second, the Market Town project would redevelop the PNR parcel with a mixed-use, transit-oriented development. Key objectives of the proposed project are to provide transit users with opportunities to reduce vehicle travel through the provision of goods and services at or near transit stations and to work with BART to develop both short-term and long-term transit facility uses. As a result, the proposed project would comply with the TCMs within the *2000 Clean Air Plan* by facilitating transit-oriented development that intends to reduce vehicle trips and miles traveled. Thus, the proposed project would be in conformance with the *2000 Clean Air Plan*. However, as stated in the discussion above, the proposed project would exceed BAAQMD thresholds for operational emissions. As a result, the proposed project would not be in conformance with the local air quality management plan.

Mitigation Measures: No feasible mitigation measures are available.

Level of Significance After Mitigation: Significant and Unavoidable Impact.

Cumulative Construction Impacts

- ◆ ***DEVELOPMENT ASSOCIATED WITH THE PROPOSED PROJECT AND RELATED CUMULATIVE PROJECTS COULD RESULT IN SIGNIFICANT SHORT-TERM CUMULATIVE AIR QUALITY IMPACTS.***

Level of Significance Before Mitigation: Potentially Significant Impact.

Impact Analysis: The BAAQMD recommends that for any project that does not individually have significant operational air quality impacts, the determination of significant cumulative impact should be based on an evaluation of the consistency of the project with the local general plan and of the general plan with the regional air quality plan. Individual development projects that generate construction-related or operational emissions that exceed the BAAQMD recommended daily thresholds for project-specific impacts would also cause a cumulatively considerable increase in emissions. As stated in the Short-Term (Construction) Impacts discussion, with implementation of BAAQMD control measures, construction-related air quality impacts would be less than significant. Therefore, construction of the proposed project would not result in a cumulatively considerable impact.

Mitigation Measures: Implement Mitigation Measures AQ1 through AQ3.

Level of Significance After Mitigation: Less Than Significant Impact.

Cumulative Operational Impacts

- ◆ ***REGIONAL AIR QUALITY EMISSIONS RESULTING FROM OPERATION OF THE PROPOSED PROJECT AND OTHER RELATED CUMULATIVE PROJECTS COULD IMPACT EXISTING REGIONAL AIR QUALITY LEVELS ON A CUMULATIVE BASIS.***

Level of Significance Before Mitigation: Potentially Significant Impact.

Impact Analysis: As previously stated, the BAAQMD recommends that for any project that does not individually have significant operational air quality impacts, the determination of significant cumulative impact should be based on an evaluation of the consistency of the project with the local general plan and of the general plan with the regional air quality plan.

As indicated previously in the Plan Consistency Impact discussion and Section 4.1 (Land Use and Planning), the proposed project would comply with the General Plan. Additionally, the proposed project would not exceed the mobile source (carbon monoxide) standards and would not result in a significant health risk impact. However, based on the Long-Term Operational Impacts analysis, the proposed project would exceed the BAAQMD's thresholds of significance for ROG and PM₁₀ at project buildout. Therefore, cumulative operational impacts associated with the proposed operation of the project would be significant and unavoidable.

Global Climate Change Discussion

California is a substantial contributor of global greenhouse gases, emitting over 400 million tons of carbon dioxide (CO₂) a year.¹⁶ Climate studies indicate that California is likely to see an increase of three to four degrees Fahrenheit over the next century. Methane is also an important greenhouse gas that potentially contributes to global climate change. Greenhouse gases are global in their effect and increase the earth's ability to absorb heat in the atmosphere. Because primary greenhouse gases have a long lifetime in the atmosphere, accumulate over time, and are generally well mixed, their impact on the atmosphere is mostly independent of the point of emission.

Sources of Greenhouse Gases

Levels of several important greenhouse gases have increased by about 25 percent since large-scale industrialization began. During the past 20 years, about three-quarters of human-made carbon dioxide emissions were generated by burning fossil fuels.¹⁷ Fossil fuel combustion accounts for approximately 98 percent of carbon dioxide emissions from human activity.

The proposed Hercules New Town Center would develop a total of 320,000 square feet of retail uses, 196,250 square feet of office uses, and 1,650 residential dwelling units. Table 4.4-12 (Estimated Annual Greenhouse Gas Emissions Projections by Pollutant Source) estimates the CO₂ emissions of the proposed project. These estimations are based on energy emissions from both electrical power and natural gas generation and usage, as well as automobile emissions. Currently, there is no industry-wide accepted method to quantify greenhouse gases generated by specific development projects. As shown in Table 4.4-12, the proposed project would result in approximately 38,295.21 tons of CO₂ greenhouse gas emissions. As such, the proposed project would be subject to any regulations developed under Assembly Bill 32 and Senate Bill 97 as determined by the California Air Resources Board.

**Table 4.4-12
Estimated Annual Greenhouse Gas Emissions Projections
by Pollutant Source**

Source	CO ₂ Emissions ¹ (tons/year)
Area Source Emissions	3,863.82
Vehicle Emissions	34,431.39
Total Emissions	38,295.21
Note: 1. Emissions calculated using the URBEMIS 2007 Version 9.2.2 Computer Model. 2. The project is not expected to result in the emissions of hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), or sulfur hexafluoride (SF ₆), the other gases identified as greenhouse gases in Assembly Bill 32. Source: RBF Consulting, 2008	

¹⁶ California Energy Commission, *Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004* (Staff Final Report). Publication CEC-600-2006-013-SF, 2006. http://www.energy.ca.gov/global_climate_change/inventory/documents/index.html.

¹⁷ United States Department of Energy, *Greenhouse Gases, Climate Changes, and Energy*. <http://www.eia.doe.gov/oiaf/1605/ggcebro/chapter1.html>.

Impact Conclusion

Although the issue of global climate change remains a widely accepted theory, the extent of global climate change or the exact contribution from anthropogenic sources is still highly debated. For instance, the following is a sample of the variability in the current global climate change models and world temperature data collection methods that have been documented:

- “Since 1940 . . . data have undergone predominantly a cooling trend The Greenland ice sheet and coastal regions are not following the current global warming trend” (P. Chylek, et al. 2004, *Global warming and the Greenland ice sheet*, Climatic Change 62, 201-21.).
- “In climate research and modeling [sic], we should recognize that we are dealing with a coupled non-linear chaotic system, and therefore that the long-term prediction of future climate states is not possible” (United Nations Intergovernmental Panel on Climate Change, *Climate Change 2001: The Scientific Basis*. Cambridge, UK: Cambridge University press, 2001, p. 774.).
- “Natural climate variability on long-term scales will continue to be problematic for CO₂ climate change analysis and detection” (United Nations Intergovernmental Panel on Climate Change, *Climate Change 1995: The Science of Climate Change*, p. 330.).

CEQA requires an agency to engage in forecasting “to the extent that an activity could reasonably be expected under the circumstances. An agency cannot be expected to predict the future course of governmental regulation or exactly what information scientific advances may ultimately reveal” (*CEQA Guidelines* Section 15144, Office of Planning Research commentary, citing the California Supreme Court decision in *Laurel Heights Improvement Association v. Regents of the University of California* [1988] 47 Cal. 3d 376).

CEQA does not require an agency to evaluate an impact that is “too speculative” provided that the agency identifies the impact, engages in a “thorough investigation” but is “unable to resolve an issue,” and then discloses its conclusion that the impact is too speculative for evaluation (*CEQA Guidelines* Section 15145, Office of Planning and Research commentary). Additionally, CEQA requires that impacts be evaluated at a level that is “specific enough to permit informed decision making and public participation” with the “production of information sufficient to understand the environmental impacts of the proposed project and to permit a reasonable choice of alternatives so far as environmental aspects are concerned” (*CEQA Guidelines* Section 15146, Office of Planning and Research commentary).

Table 4.4-13 (Applicable Global Climate Change Strategies) provides a list of recommended measures and strategies to help reduce global climate impacts as identified by the California Environmental Protection Agency and the Climate Action Team. The strategies listed in Table 4.4-13 would directly apply to the proposed project. Table 4.4-13 provides an analysis of the project’s conformance with the greenhouse gas reduction strategies.

**Table 4.4-13
Applicable Global Climate Change Strategies**

Strategies for Reducing Greenhouse Gas Emission Reduction ¹	Project Conformance
<u>Vehicle Climate Change Standards.</u> AB 1493 (Pavley) required the state to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light duty trucks. Regulations were adopted by the CARB in September 2004.	Following a phase-in period, the majority of the vehicles that access the project would be expected to be in compliance with any vehicle standards that CARB adopts.
<u>Other Light Duty Vehicle Technology.</u> New standards would be adopted to phase in beginning in the year 2017 model year.	Following a phase-in period, the majority of the vehicles that access the project would be expected to be in compliance with any vehicle standards that CARB adopts.
<u>Diesel Anti-Idling.</u> In July 2004, the CARB adopted a measure to limit diesel-fueled commercial motor vehicle idling.	All vehicles, including diesel trucks accessing the project site, would be subject to the CARB measures and would be required to adhere to the 5-minute limit for vehicle idling.
<u>Hydrofluorocarbon Reduction.</u> 1) Ban retail sale of HFC in small cans; 2) Require that only low GWP refrigerants be used in new vehicular systems; 3) Adopt specifications for new commercial refrigeration; 4) Add refrigerant leak-tightness to the pass criteria for vehicular inspection and maintenance programs; 5) Enforce federal ban on releasing HFCs.	This measure applies to consumer products. When CARB adopts regulations for these reduction measures, any products that the regulations cover would comply with the measures.
<u>Heavy-Duty Vehicle Emission Reduction Measures.</u> Increased efficiency in the design of heavy-duty vehicles and an education program for the heavy-duty vehicle sector.	These are CARB enforced standards; vehicles that access the project that are required to comply with the standards would comply with the strategy.
<u>Achieve 50% Statewide Recycling Goal and Zero Waste – High Recycling -</u> 1) Design locations for separate waste and recycling receptacles; and 2) Utilize recycled components in the building design.	Pursuant to Assembly Bill 939, all development projects within the City of Hercules (including the proposed project) would be required to divert 50 percent of their solid waste stream.
<u>Appliance Energy Efficiency Use.</u> Use of energy efficient appliances (i.e., washer/dryers, refrigerators, stoves, etc.).	In October 2006, the State of California adopted Appliance Efficiency Regulations, which include standards for both Federally regulated appliances and non-Federally-regulated appliances. These regulations would apply to the proposed project.
<u>Measures to Improve Transportation Energy Efficiency.</u> Builds on current efforts to provide a framework for expanded and new initiatives including incentives, tools and information that advance cleaner transportation and reduce climate change emissions.	The project promotes fuel conservation through design features, which promote pedestrian traffic, and proximity to mass transit, which encourages public transportation use.
<u>Smart Land Use and Intelligent Transportation.</u> Transportation Systems Encourage high-density residential and commercial mixed use.	The proposed project would include high-density residential and commercial mixed uses that would be considered a smart land use.
<u>Water Use Efficiency Features.</u> To increase water use efficiency include use of both potable and non-potable water to the maximum extent practicable and use of low flow appliances (i.e., toilets, shower heads, washing machines, etc).	The proposed project would be required to comply with California Health and Safety Code (HSC) section 17921.3, which sets efficiency standards for bathroom fixtures. Additionally, California Code of Regulations, Title 20, Division 2, Chapter 4, Article 4, Section 1605.3 sets standards for washing machines and commercial pre-rinse spray valves.
<u>Afforestation/Reforestation.</u> Clustering residential development to preserve forest/woodland resources, increasing density, and preserving and restoring open space would comply with this strategy.	The proposed project would be a mixed-use development located near developed areas in the Bay Area. The proposed project would not remove woodland resources. Additionally, the mix of uses would represent an increased density of dwelling units, minimizing impacts on open spaces and reducing commuter traffic.
<u>Achieve 50 percent Statewide Recycling Goal.</u> In multi-family housing, separate recycling and waste receptacles should be planned.	The City of Hercules is required to meet the 50 percent Statewide recycling goal, and would continue to implement solid waste reduction measures.
Notes: 1 - Only the applicable strategies for reducing greenhouse gas emissions were included.	
Source: California Environmental Protection Agency, <i>Climate Action Team Report to Governor Schwarzenegger and the Legislature</i> , March 2006.	

Global Climate Change impacts are a result of cumulative emissions from human activities in the region, the state, and the world. A reduction in vehicle miles traveled results in a decrease in fuel consumption and a decrease in greenhouse gas emissions. Based on an investigation of compliance with local air quality thresholds and resultant future long-term

operational impacts, the proposed project would still have the potential to result in emissions associated with greenhouse gas emissions and global climate change. However, there is significant uncertainty involved in making predictions regarding the extent to which the operations of mixed-use developments, such as the proposed project, would affect greenhouse gas emissions and global climate change. Therefore, a conclusion on the significance of the environmental impact of climate change cannot be reached. Section 15145 of the *CEQA Guidelines* provides that, if after a thorough investigation a lead agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impacts.

The proposed project, in combination with other cumulative projects, would increase air emissions within the surrounding areas, thereby decreasing ambient air quality. The contribution of the proposed project has been compared to emissions from anticipated projects within the area. Cumulative impacts resulting from the proposed project would be significant and unavoidable for ROG and PM₁₀ emissions.

Mitigation Measures: Implement Mitigation Measure AQ4. No other feasible mitigation measures are available.

Level of Significance After Mitigation: Significant and Unavoidable Impact for cumulative long-term operational impacts. As previously stated, a significance determination cannot be made for global climate change impacts.

4.5 BIOLOGICAL RESOURCES

This section of the EIR evaluates potential impacts to biological resources that could result from future development within the Hercules New Town Center (HNTC) planning area consistent with the proposed amendments to the General Plan and Zoning Ordinance and implementation of the Market Town project.

4.5.1 ENVIRONMENTAL SETTING

BIOLOGICAL COMMUNITIES

A biological assessment was conducted by WRA for the planning area, which included a site visit on April 5, 2007, and rare plant surveys on several dates in 2006. Conditions within the planning area remain unchanged from the time of the surveys (2006 and 2007) and, therefore, the analysis and conclusions made in the biological assessment remain valid. A biological assessment provides general information on the potential presence of sensitive species and habitats, but is not an official protocol-level survey for listed special-species that may be required for project approval by local, state, or federal agencies. Specific findings on the occurrence of any special-status species or the presence of sensitive habitats may require that protocol surveys be conducted. The biological assessment was primarily based on information available at the time of the study, as well as on-site conditions that were observed on the date of the site visit(s). Results from previous biological assessments conducted within the planning area were also included in the assessment.

HNTC Planning Area

The HNTC planning area is comprised primarily of four plant communities: (1) non-native annual grassland/ruderal vegetation; (2) coyote brush scrub; (3) riparian woodland; and (4) wetland. Plant communities were classified based on existing descriptions developed by The Manual of California Vegetation (Sawyer and Keeler-Wolf, 1995). However, in some cases it was necessary to identify variants of plant community types that are not described in the literature. All of the plant communities identified within the planning area are discussed below.

The principal natural hydrological sources for the planning area are precipitation, surface runoff from adjacent lands, and culverted water originating outside of the planning area boundary. Wetlands found in the planning area are a variety of types: seasonal wetlands, freshwater marsh, ephemeral and perennial waters. Water in the planning area generally flows from east to west and travels under Interstate 80 (I-80) via underground culverts. There it reaches Refugio Creek, which drains into San Pablo Bay, a navigable Water of the United States (U.S.) located approximately one mile to the west of the planning area.

All waterways and wetlands in the planning area are potential jurisdictional waters subject to regulation under the Clean Water Act (refer to "Regulatory Setting," later in this section), with the exception of man-made drainage ditches excavated from dry land, which may not be jurisdictional. A jurisdictional delineation was completed by WRA for the Ramp Relocation project, covering the C1 parcel, Loop parcel, Ramp parcel, Caltrans parcel and Carone and WC Drilling parcels (Parcels 2 through 7) of the planning area, and has been submitted to the U.S. Army Corps of Engineers (ACOE) for verification. The PNR parcel (Parcel 1) was

not included in the wetland delineation because the site does not contain any potential jurisdictional waters.

Non-Sensitive Biological Communities

Non-Native Annual Grassland/Ruderal Vegetation

The valley and foothill grassland/ruderal vegetation is the largest plant community in the planning area and is classified by Sawyer and Keeler-Wolf (1995) as the California annual grassland series. Of this community, there are 20.5 acres present within the planning area. This series is highly variable among stands and is composed of both native and non-native annual species. Dominant species are generally bromes (*Bromus* sp.). In the planning area, this community is dominated by non-native grasses such as wild slender oats (*Avena barbata*), soft chess (*Bromus hordeaceus*), Italian ryegrass (*Lolium multiflorum*), and rip-gut brome (*Bromus diandrus*).

Areas of ruderal habitat intermingled with the non-native annual grassland habitat are also present. These areas have been disturbed by highway and ramp construction activities, deposition fill material, and some grazing. Dominant ruderal vegetation includes Italian thistle (*Carduus pycnocephalus*), bristly ox-tongue (*Picris echioides*), broadleaved pepperweed (*Lepidium latifolium*), and wild mustard (*Hirschfeldia incana*).

Coyote Brush (Baccharis) Scrub

The coyote brush scrub community is scattered throughout the planning area, commonly along the upland edges of wetland communities. Of this community, there are 1.3 acres present within the planning area. The dominant plant in this community is coyote brush (*Baccharis pilularis*) and the understory is dominated by the non-native grasses and forbs also observed in the non-native annual grassland/ruderal vegetation community. This community is described by Sawyer and Keeler-Wolf (1995) as the coyote brush series.

Sensitive Biological Communities

Riparian Woodland

Riparian woodland habitat occupies a small area near the center of the HNTC planning area, north of a Pacific Gas and Electric (PG&E) substation and west of a California Department of Transportation (Caltrans) maintenance yard. Approximately 0.3 acres of this community are present within the planning area. The riparian woodland consists almost entirely of arroyo willow (*Salix lasiolepis*). Sawyer and Keeler-Wolf (1995) describe this community as the arroyo willow series. Most of this community is considered wetland habitat.

Wetlands

The wetland plant communities observed within the planning area were divided into three subcategories: seasonal wetland, freshwater marsh, and roadside ditches. These plant communities are not described by Sawyer and Keeler-Wolf as distinct series, because they are not characterized by a single dominant plant species, or a typical group of plant species. The

vegetation in each type of wetland is described below and locations within the planning area are shown on Figure 4.5-1 (Biological Communities).

Seasonal Wetland

Seasonal wetland plant communities within the planning area generally occur within topographic depressions scattered throughout the planning area. Approximately 0.3 acres of seasonal wetland are present within the planning area. The dominant plants within these wetlands varies, but generally consists of rabbitsfoot grass (*Polypogon monspeliensis*, facultative wetland [FACW]), Italian rye grass, facultative (FAC), broadleaved pepperweed (FACW), tall flatsedge (*Cyperus eragrostis*, FACW) and curly dock (*Rumex crispus*, FACW).¹

Freshwater Marsh

Freshwater marsh is located in permanently saturated wetland ditches or depressions throughout the planning area. Approximately 1.4 acres of this community are present within the planning area. The prolonged hydrological regime of freshwater marshes allows the development of obligate wetland species (OBL) such as cattail (*Typha angustifolia*, OBL), bull tule (*Scirpus robustus*, OBL), and duckweed (*Lemna minor*, OBL) in addition to some facultative (FAC) and facultative wetland species commonly observed in the seasonal wetlands. Freshwater marsh was observed in the Loop parcel, and along the riparian zone in the creek north of the Caltrans parcel.

Roadside Ditches

Some of the parcels within the planning area contain non-jurisdictional roadside ditches. Approximately 481 linear feet of ditches are present within the planning area. The dominant vegetation within these features was typical of that observed in the seasonal wetlands since the ditches appear to be saturated only during the rainy season. These man-made features appear to have been dug in uplands with the express purpose of draining stormwater from adjacent roads and lands.

SPECIAL-STATUS SPECIES

Plants

Forty-three special-status plant species have been documented in the vicinity of the planning area. Appendix B of this EIR summarizes the potential for occurrence for each special-status plant species occurring in the vicinity of the planning area. One special-status plant species (Contra Costa goldfields, *Lasthenia conjugens*) has been considered to have a high potential to occur in the planning area, and three special-status plant species (bent-flowered fiddleneck, *Amsinckia lunaris*; San Joaquin spearscale, *Atriplex joaquiniana*; and Congdon's tarplant, *Centromadia parryi* ssp. *congdonii*) have been considered to have a moderate potential to occur in the planning area. However, no special-status plant species were observed in the planning area (Parcels 1 –7) during the April 5, 2007 site visit. Figure 4.5-2

¹ OBL = Obligate, always found in wetlands (> 99% frequency of occurrence); FACW = Facultative wetland, usually found in wetlands (67-99% frequency of occurrence); FAC = Facultative, equal occurrence in wetland or non-wetlands (34-66% frequency of occurrence).

(Special-Status Plants Within Five Miles of Planning Area) shows known occurrences of special-status plants within five miles of the planning area.

In addition to the site visit, rare plant surveys were conducted for Parcels 2 through 7 on February 23, May 1 and August 15, 2006 (WRA 2006b). These surveys coincided with peak blooming periods for all of the special-status plant species with moderate or high potential to occur in the planning area. The April site visit also included rare plant species surveys for the early-blooming rare plants with potential to occur on-site. Eighty-three plant species were observed within the planning area, but none of the potentially occurring special-status plant species listed in previous documentation were detected during these surveys. Thus, the species previously considered to have moderate or high potential to occur are considered to be unlikely to occur on the planning area. Table 1 in Appendix B of this EIR lists all California Natural Diversity Database (CNDDDB) and California Native Plant Society (CNPS) plant species recorded in the vicinity of the planning area.

Wildlife

A previous biological resources assessment was conducted in 2001 for the Hercules Hotel Site (Parcel 3 or Loop parcel) (Impact Sciences, 2001). The 2001 assessment summarized results of previous biological studies, and conducted focused surveys for California red-legged frog (CRLF) (*Rana aurora draytonii*), after observing this species within the parcel. Results from these previous biological assessments were used for the present analysis; no new wildlife surveys were conducted. An updated CNDDDB search was conducted for this assessment to evaluate the likelihood of occurrence for special-status wildlife species recorded in the vicinity of the planning area. Figure 4.5-3 (Special-Status Wildlife Within Five Miles of Planning Area) shows CNDDDB special-status wildlife occurrences within five miles of the planning area.

A total of 50 special-status species of wildlife have been recorded in the vicinity of the planning area. One species, California red-legged frog, has been observed in the planning area during wildlife surveys. One additional species, White-tailed kite (*Elanus leucurus*), has moderate potential to occur within the planning area while foraging. The remaining special-status wildlife species were considered to have low or no potential to occur in the planning area, due to lack of suitable habitat. Table 2 in Appendix B of this EIR summarizes the potential for each of wildlife species recorded in CNDDDB to occur within the planning area boundary.

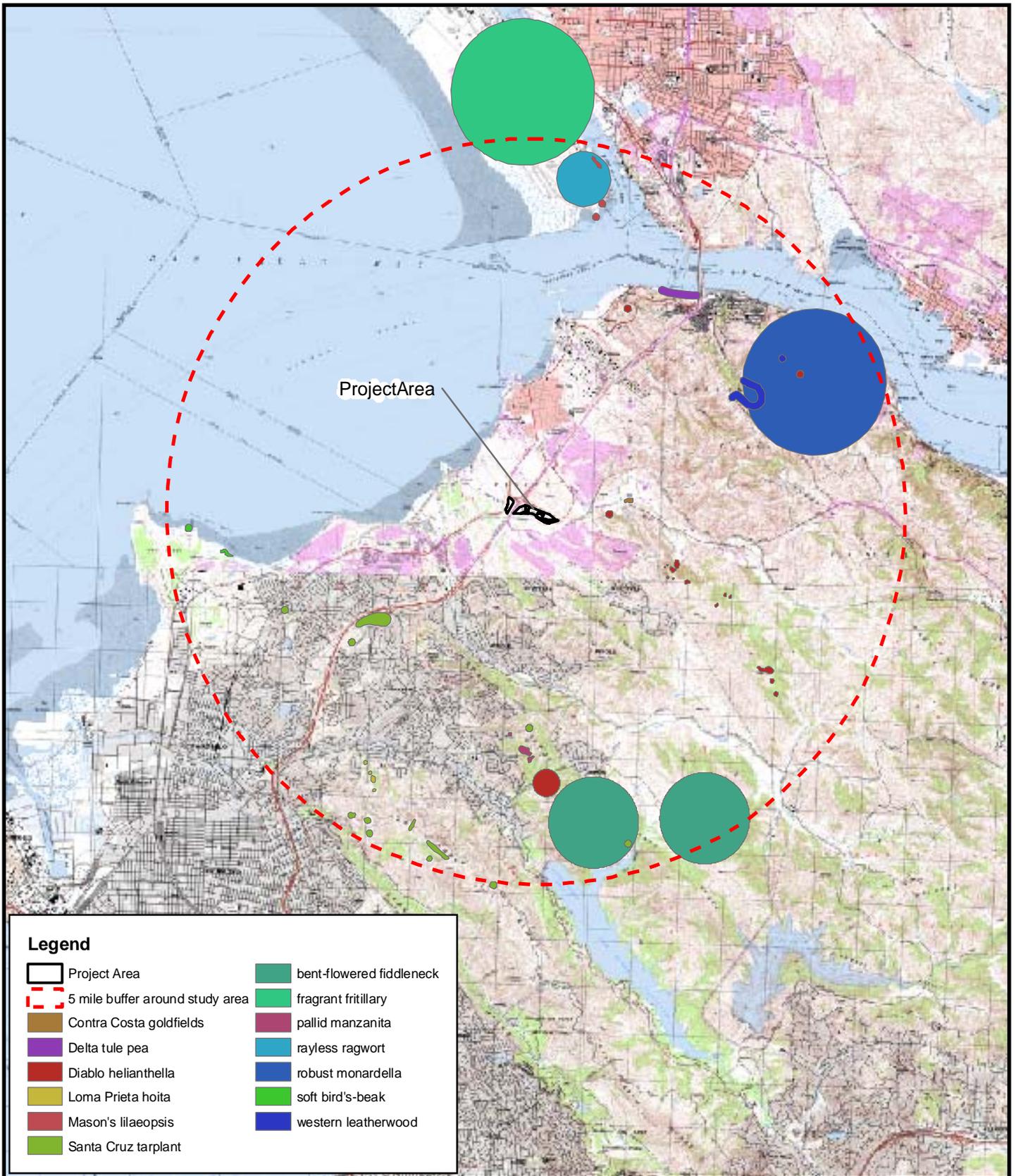
In addition to special-status species, the vegetation communities present may provide habitat for common wildlife species. Ruderal grassland provides forage for mule deer (*Odocoileus hemionus*), coyote (*Canis latrans*), hawks, and owls, as well as forage and breeding habitat for small ground-dwelling reptiles and mammals. Several non-special-status bird species may also nest within the riparian and wetland vegetation (Impact Sciences, 2001).

No special-status wildlife species were identified on the PNR parcel (Parcel 1). The two special-status species found or moderately likely to occur within the planning area (Parcels 2 – 7) are discussed below.



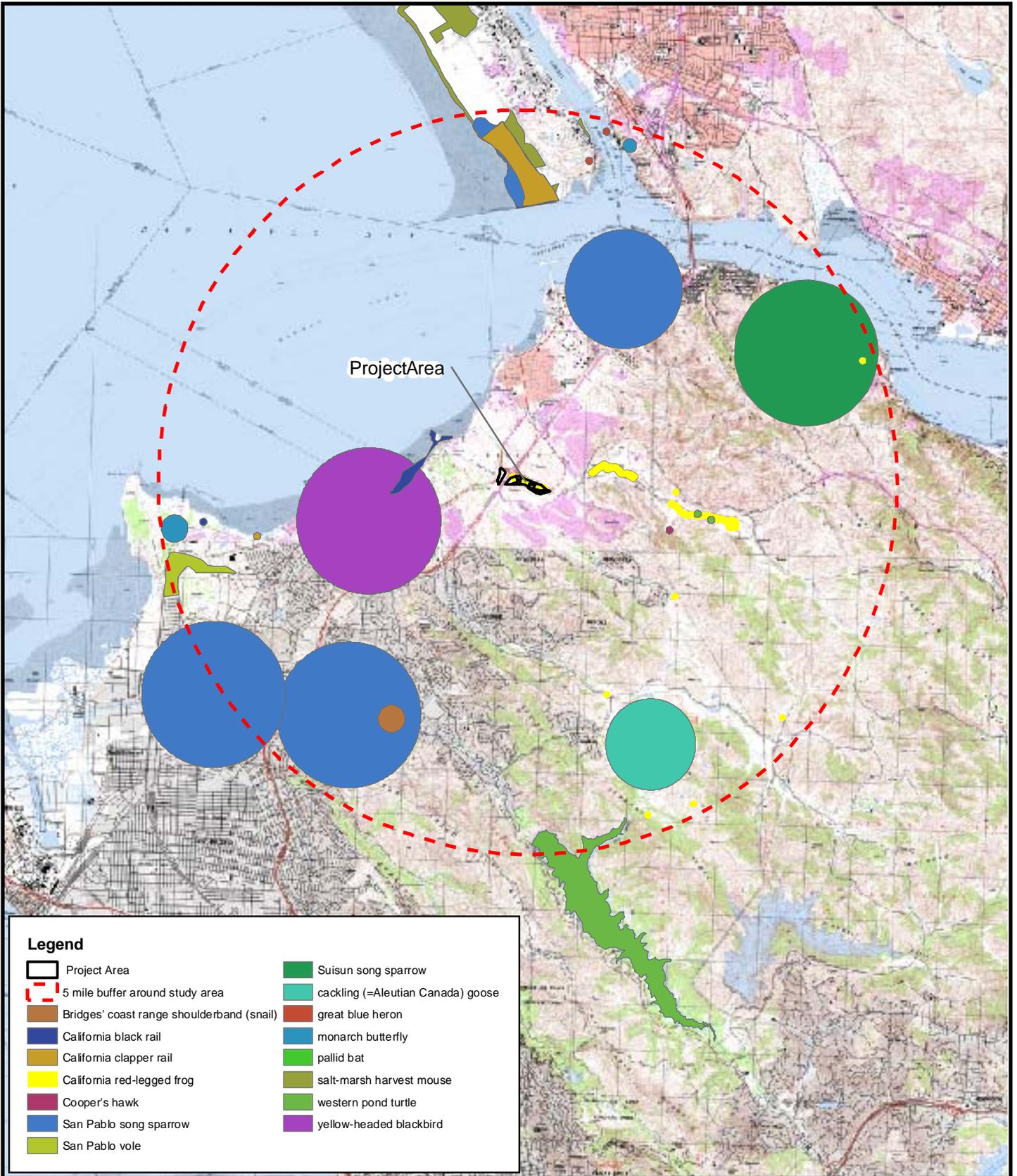
- Legend**
- Ditch
 - allParcels
 - Baccharis Scrub (1.3 ac)
 - Developed (13.3 ac)
 - Freshwater Marsh (1.4 ac)
 - Landscaped (1.0 ac)
 - Riparian (0.3 ac)
 - Ruderal (20.5 ac)
 - Wetland (0.3 ac)





Hercules New Town Center EIR
**Special-Status Plants Within
 Five Miles of Planning Area**

Figure 4.5-2



Hercules New Town Center EIR
**Special-Status Wildlife Within
 Five Miles of Planning Area**

Figure 4.5-3

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California red-legged frog (*Rana aurora draytonii*), United States Fish and Wildlife Service, Threatened Species)

California red-legged frog is a medium-sized frog with reddish-colored legs. The species is generally restricted to riparian and lake edge habitats in California and northern Baja California. In response to a significant decrease in the historic range of the California red-legged frog, the U.S. Fish and Wildlife Service (USFWS) listed it as Threatened in 1996. Red-legged frogs prefer deep, quiet pools in creeks, rivers, or lakes below approximately 4,100 feet in elevation. Breeding habitat frequently includes deep-water pools or ponds with fresh emergent or dense riparian vegetation, especially willows (*Salix* sp.) adjacent to shorelines. CRLF disperse upstream and downstream of their breeding habitat to forage, seek estivation² habitat, and disperse. Foraging habitat includes aquatic features and adjacent riparian and emergent vegetation that provides habitat for the CRLF prey, such as insects, larvae, newts, and salamanders. Estivation habitat includes well-vegetated terrestrial areas within the riparian corridor (200 feet from aquatic breeding sites). CRLF typically estivate in small mammal burrows and moist leaf litter, but estivation habitats could include boulders, rocks and organic debris, such as downed trees or logs; industrial debris; or agricultural drains, watering troughs, abandoned sheds, or hay-ricks. CRLF can survive in seasonal bodies of water that are dry for short periods if a permanent water body or dense vegetation stand is nearby. During dispersal, CRLF have been observed to travel in straight-line movements one to two miles over upland habitats during rain events, regardless of topography, and without the use of riparian or wetland corridors (USFWS, 2002).

Final critical habitat for the CRLF was designated in April 2006 (USFWS, 2006). The closest CRLF critical habitat mapping unit (#CCS-1A) is located approximately eight miles southeast of the planning area near Interstate 680 (I-680). CRLF have been observed in biological surveys conducted by Impact Sciences on August 10 and 17, 2000 (Impact Sciences, 2001). Over the course of two survey days, a total of eight juvenile red-legged frogs were observed in freshwater marsh habitat, located approximately 550 feet south of I-80 in the Loop parcel. This population of CRLF is presumed extant (CNDDDB, 2007). CRLF have also been observed upstream in the marshland south of the planning area across Willow Avenue (Impact Sciences, 2001).

Due to the two positive findings in earlier surveys, CRLF has been assumed to be present within the Loop parcel and throughout the riparian corridor along the northern edge of the HNTC planning area. The Willow Avenue marsh outside the planning area is hydrologically connected to the Loop parcel. Water from the marsh south of Willow Avenue is piped in a culvert beneath the roadway, then flows east to west, receiving water from the PG&E substation area and several smaller drainages. These waters collect in the eastern portion of the C1 parcel, and flow through a culvert for approximately 1,000 feet underneath the highway ramps, daylighting again in the Loop parcel and forming the freshwater marsh area in which CRLF have been observed.

² Estivation is a state of dormancy similar to hibernation, but occurring in summer. Animals that estivate spend the summer inactive to avoid the potentially harmful effects of heat, and/or to conserve energy when their food and water supply is low.

White-tailed Kite (Elanus leucurus), California Department of Fish and Game-CDFG Fully Protected Species

White-tailed kites are associated with annual grasslands, agricultural areas, scrub habitats, wet meadows, and emergent wetlands throughout the lower elevations of California. Nesting generally occurs in large shrubs or broad-leaved deciduous trees. White-tailed kite primarily hunt small mammals, but will also eat small birds, reptiles and amphibians. Kites search for prey from a distinctive soaring or hovering flight pattern. Suitable foraging habitat exists within the grasslands of the planning area. This species is considered to have a moderate potential to occur within the planning area, based on the results of CNDDDB database search. This species may use the planning area to forage for prey, but is unlikely to nest there due to high levels of disturbance and absence of suitable habitat.

4.5.2 REGULATORY SETTING

FEDERAL AND STATE FRAMEWORK

Special Status Species

Special-status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the federal Endangered Species Act (FESA) or California Endangered Species Act (CESA). These Acts afford protection to both listed and proposed species. In addition, California Department of Fish and Game (CDFG) Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue, USFWS Birds of Conservation Concern, sensitive species included in USFWS Recovery Plans, and CDFG special-status invertebrates are all considered special-status species. Although CDFG Species of Special Concern generally have no special legal status, they are given special consideration under the California Environmental Quality Act (CEQA). In addition to regulations for special-status species, most birds in the U.S., including non-special-status species, are protected by the Migratory Bird Treaty Act of 1918. Under this legislation, destroying active nests, eggs, and young is illegal. Plant species on CNPS Lists 1 and 2 are also considered special-status plant species. Impacts to these species are considered significant according to CEQA. CNPS List 3 plants have little or no protection under CEQA, but are included in this analysis for completeness.

Critical Habitat

Critical habitat is a term defined and used in the FESA as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. The FESA requires federal agencies to consult with the USFWS to conserve listed species on their lands and to ensure that any activities or projects they fund, authorize, or carry out will not jeopardize the survival of a threatened or endangered species. In consultation for those species with critical habitat, federal agencies must also ensure that their activities or projects do not adversely modify critical habitat to the point that it will no longer aid in the species' recovery. In many cases, this level of protection is similar to that already provided to species by the FESA "jeopardy standard." However, areas that are currently unoccupied by the species but which are

needed for the species' recovery, are protected by the prohibition against adverse modification of critical habitat.

Sensitive Biological Communities

Sensitive biological communities include habitats that fulfill special functions or have special values, such as wetlands, streams, and riparian habitat. These habitats are regulated under federal regulations (such as the Clean Water Act), state regulations (such as the Porter-Cologne Act and the CDFG Streambed Alteration Program), or local ordinances or policies (city or county tree ordinances, special habitat management areas, and general plan elements).

Waters of the United States

The ACOE regulates "Waters of the U.S." under Section 404 of the Clean Water Act. "Waters of the U.S." are defined broadly as waters susceptible to use in commerce, including interstate waters and wetlands, all other waters (intrastate water bodies, including wetlands), and their tributaries (33 CFR 328.3). Potential wetland areas, according to the three criteria used to delineate wetlands stated in the ACOE Wetlands Delineation Manual (1987), are identified by the presence of: (1) hydrophytic vegetation; (2) hydric soils; and (3) wetland hydrology. Areas that are inundated for sufficient duration and depth to exclude growth of hydrophytic vegetation are subject to Section 404 jurisdiction as "other waters" and are often characterized by an ordinary high water line. Other waters, for example, generally include lakes, rivers, and streams. The placement of fill material into "Waters of the U.S." (including wetlands) generally requires an individual or nationwide permit from the ACOE under Section 404 of the Clean Water Act.

Waters of the State

The term "Waters of the State" is defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The Regional Water Quality Control Board (RWQCB) protects all waters in its regulatory scope, but has special responsibility for wetlands, riparian areas, and headwaters. These waterbodies have high resource value, are vulnerable to filling, and are not systematically protected by other programs. RWQCB jurisdiction includes "isolated" wetlands and waters that may not be regulated by the ACOE under Section 404. "Waters of the State" are regulated by the RWQCB under the State Water Quality Certification Program, which regulates discharges of fill and dredged material under Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act. Projects that require an ACOE permit, or fall under other federal jurisdiction, and have the potential to impact "Waters of the State," are required to comply with the terms of the Water Quality Certification determination. If a proposed project does not require a federal permit, but does involve dredge or fill activities that may result in a discharge to "Waters of the State," the RWQCB has the option to regulate the dredge and fill activities under its state authority in the form of Waste Discharge Requirements or Certification of Waste Discharge Requirements.

Streams, Lakes and Riparian Habitat

Streams and lakes, as habitat for fish and wildlife species, are subject to jurisdiction by CDFG under Sections 1600-1616 of the CDFG Code. Alterations to or work within or adjacent to streambeds or lakes generally require a Section 1602 Lake and Streambed Alteration Agreement. The term stream, which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as follows: “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation” (14 CCR 1.72). In addition, the term stream can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife (CDFG ESD, 1994). Riparian is defined as, “on, or pertaining to, the banks of a stream;” therefore, riparian vegetation is defined as, “vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself” (CDFG, ESD 1994). Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from CDFG.

Other Sensitive Biological Communities

Other sensitive biological communities not discussed above include habitats that fulfill special functions or have special values. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the CDFG. CDFG ranks sensitive communities as “threatened” or “very threatened” and keeps records of their occurrences in its Natural Diversity Database. Sensitive plant communities are also identified by CDFG on their List of California Natural Communities Recognized by the CNDDDB. Impacts to sensitive natural communities identified in local or regional plans, policies, regulations, or by the CDFG or USFWS, must be considered and evaluated under CEQA. Specific habitats may also be identified as sensitive in city or county general plans or ordinances.

LOCAL FRAMEWORK

City of Hercules General Plan

The Open Space and Conservation Element of the Hercules General Plan contains several goals and policies with respect to Biological Resources, including the following:

Open Space and Conservation Element

Policy 2a The City shall require project proponents to design construction footprints to avoid any wetlands and buffer zones around the wetlands. If avoidance is not possible projects shall be redesigned so as to impact the least amount of wetlands. Any areas that are classified as wetlands and will be affected by project development shall be recreated wither on or off site in accordance with CDFG and ACOE.

- Policy 3a Design of building footprints along any riparian corridor shall be outside the CDFG and/or ACOE pre-approved buffer zone. Sensitive riparian habitats shall be marked by a qualified biologist to deter any destruction by equipment during construction.
- Policy 4a Protect riparian and wetland habitat communities from degradation through introduction of urban pollutants in stormwater runoff.
- Policy 5a The City shall review development proposals for consistency with minimizing impacts to salt march zones. Buildings shall be located on existing developed or graded areas, where practicable.
- Policy 6a The City shall continue to utilize environmental review under California Environmental Quality Act (CEQA) to review development projects that are not exempt from the CEQA for impacts on sensitive species and their habitat.
- Policy 6b The City shall require that development within the General Plan area incorporate features to preserve habitat for sensitive species.
- Policy 6c As much open space as possible within sites proposed for development shall be retained as informal open space for wildlife habitat, rather than as formal, landscaped parks or grounds. The City shall require that native plants from local area be used in landscaping, and in areas with a lower water table, native draught tolerant species shall be used in landscaping.

4.5.3 ENVIRONMENTAL ANALYSIS

THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the *CEQA Guidelines*, the proposed project would have a significant impact on biological resources if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service
- Have a substantial adverse effect on any riparian habitat or other sensitive community or habitat identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance

- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan

METHODS

A biological assessment was conducted for the planning area in order to determine: (1) which plant communities are present within the planning area; (2) if existing conditions provide suitable habitat for any special-status plant or wildlife species; and (3) if sensitive habitats are present.

Biological Communities

Prior to the April 2007 site visit, the Soil Survey of Contra Costa County, California [U.S. Department of Agriculture (USDA) 1977] was examined to determine if any unique soil types that could support sensitive plant communities and/or aquatic features were present in the planning area. A wetland delineation (WRA, 2006a) and rare plant report (WRA, 2006b), previously completed for the Ramp Relocation project, were also reviewed. Biological communities present in the planning area were classified based on existing plant communities described in the Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland, 1986). However, in some cases it is necessary to identify variants of community types or to describe non-vegetated areas that are not described in the literature. Biological communities were classified as sensitive or non-sensitive as defined by CEQA and other applicable laws and regulations.

Non-Sensitive Biological Communities

Non-sensitive biological communities are those communities that are not afforded special protection under CEQA, and other state, federal, and local laws, regulations and ordinances. These communities may, however, provide suitable habitat for some special-status plant or wildlife species and are identified or described where applicable below.

Sensitive Biological Communities

Sensitive biological communities are defined as those communities that are given special protection under CEQA and other applicable federal, state, and local laws, regulations and ordinances. Applicable laws and ordinances were discussed above. Special methods used to identify sensitive biological communities are discussed below.

Areas of No Impact

The following impacts either are not applicable to the project or are not reasonably foreseeable:

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

The HNTC planning area is located in a mostly urbanized area and is surrounded by various residential and industrial land uses. The planning area does not link two or more large regional open space areas, is not part of a regional wildlife movement corridor, and is not located near a river, stream or lake that contains fish. Therefore, the proposed HNTC planning area would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. There would be no impact.

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Projects within the HNTC planning area would be required to demonstrate compliance with all applicable local policies or ordinances associated with biological resources. As such, there would be no impact.

- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

There are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans that would be applicable to the HNTC planning area.

Furthermore, the PNR Parcel is composed entirely of developed land, ruderal grassland, and ornamental vegetation, and contains no sensitive biological communities (e.g., wetlands or riparian habitat). WRA's biological assessment of the PNR parcel indicated that there are no special-status species present on-site. Therefore, implementation of the proposed Market Town project on the PNR parcel would not result in any impacts associated with biological resources. The remainder of the analysis below focuses on the program-level impacts associated with future development within the planning area consistent with the proposed amendments to the General Plan and Zoning Ordinance.

POTENTIAL IMPACTS AND MITIGATION MEASURES: GENERAL PLAN AND ZONING ORDINANCE AMENDMENTS

Special-Status Species Impacts

- ◆ ***DEVELOPMENT CONSISTENT WITH THE NTC LAND USE DESIGNATION AND ZONING DISTRICT COULD HAVE A SUBSTANTIAL ADVERSE EFFECT, EITHER DIRECTLY OR THROUGH HABITAT MODIFICATIONS, ON ANY SPECIES IDENTIFIED AS A CANDIDATE, SENSITIVE, OR SPECIAL-STATUS SPECIES IN LOCAL OR REGIONAL PLANS, POLICIES, OR REGULATIONS, OR BY THE CALIFORNIA DEPARTMENT OF FISH AND GAME OR THE U.S. FISH AND WILDLIFE SERVICE.***

Level of Significance Before Mitigation: Potentially Significant Impact.

Impact Analysis: Potential occurrence of special-status species in the HNTC planning area was evaluated by first determining which special-status species occur in the vicinity of the

planning area through a literature and database search. Database searches for known occurrences of special-status species focused on the Mare Island 7.5-minute U.S. Geological Survey (USGS) quadrangle and the eight surrounding USGS quadrangles (Cuttings Wharf, Cordelia, Fairfield South, Benicia, Vine Hill, Richmond, Briones Valley, and Walnut Creek). The following sources were reviewed to determine which special-status plant and wildlife species have been documented to occur in the vicinity of the HNTC planning area:

- CNDDDB records (CDFG 2007)
- CNPS Electronic Inventory records (CNPS 2007)
- CDFG publication “California’s Wildlife, Volumes I-III” (Zeiner *et al.* 1990)
- CDFG publication “Amphibians and Reptile Species of Special Concern in California” (Jennings 1994)
- Impact Sciences Biological Resources Assessment for Hercules Hotel Project Site, Hercules, California (Impact Sciences, 2001)

As previously mentioned, a site visit was made by WRA on April 5, 2007, to search for suitable habitats for species identified in the literature review as occurring in the vicinity of the HNTC planning area. The potential for each special-status species to occur in the planning area was then evaluated according to the following criteria:

- 1) No Potential. Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- 2) Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- 3) Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- 4) High Potential. All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- 5) Present. Species is observed on the site or has been recorded (i.e., in CNDDDB or other reports) on the site recently.

The site assessment was intended to identify the presence or absence of suitable habitat for each special-status species known to occur in the vicinity in order to determine its potential to occur in the planning area. The site visit did not constitute a protocol-level survey and was not intended to determine the actual presence or absence of a species; however, if a special-status species was observed during the site visit, its presence was recorded. Appendix B of this EIR presents the evaluation of potential for occurrence of each special-status plant and wildlife species known to occur in the vicinity of the planning area with their habitat

requirements, potential for occurrence, and rationale for classification, based on criteria listed above.

The California red-legged frog is known to be present on the Loop parcel (Parcel 3), and is assumed to be present in the other seasonal wetland areas (Parcels 2, 4 and 5) within the HNTC planning area. Potential impacts to CRLF could occur as a result of direct mortality during construction activities, particularly construction in the vicinity of the freshwater marsh on the Loop parcel (e.g., if CRLF dispersed from wetland areas into roads or parking lots); development of habitat occupied by CRLF; development of dispersal corridors for CRLF; water quality and hydrology changes to occupied CRLF habitat or dispersal corridors (e.g., if CRLF habitat was damaged by stormwater flow leading to diminished water quality); increased human and/or pet activity within and adjacent to occupied habitat; and increased nighttime lighting.

White-tailed kite may be disturbed by construction activities or the resulting loss of foraging or possible nesting habitat, and common avian species and bat species may be subject to impacts from construction of the future development within the planning area, if they use trees, shrubs, open space, wetland or riparian habitat for breeding. Potential impacts to breeding birds or bats could occur during construction as a result of tree and shrub removal, removal of riparian habitat, ground disturbance, equipment movement, increased nighttime lighting, or by direct mortality. The above activities would also result in permanent removal of potential nesting habitat. Under the Migratory Bird Treaty Act, an impact to migratory breeding birds and their active nests, eggs, and/or young is considered a significant impact.

Implementation of the following mitigation measures would reduce potential impacts to CRLF, White-tailed kite and non-special-status bird and bat species to a less than significant level. Future development plans that may impact CRLF would require agency consultation, avoidance measures, and mitigation for unavoidable impacts to CRLF habitat. Note that the following mitigation measures may be modified by USFWS during the Section 7 Consultation process.

Mitigation Measures:

BIO1 To determine areas of aquatic habitat occupied by CRLF, pre-construction surveys shall be performed in all portions of the HNTC planning area where suitable aquatic habitat exists. Wherever practicable, CRLF aquatic habitat shall be avoided and those areas containing CRLF shall be preserved.

To offset impacts to aquatic, upland, or dispersal habitat containing CRLF, the project sponsor shall create wetland with suitable breeding hydrology and vegetation within the planning area or in a suitable alternative location approved by USFWS. If this is not feasible, the project sponsor shall provide off-site habitat conservation through a conservation bank and/or easement, at a 3:1 ratio of like-habitat for every acre of occupied CRLF habitat filled or removed. For example, CRLF mitigation credits may be purchased for projects in Contra Costa County at the Ohlone Preserve Conservation Bank, located in Livermore, CA.

- BIO2 Mass grading shall be limited to the period between April 1 and October 31 to avoid potential impacts to dispersing frogs during the rainy season. A USFWS-approved biologist shall be specifically approved to monitor work in the HNTC planning area. If fill is placed in aquatic habitat occupied by CRLF or surrounding upland habitat within 50 feet of aquatic habitat, or if other construction activity is necessary in occupied aquatic habitat, it shall be conducted between July and November, outside the breeding season. A USFWS-approved biologist shall conduct training of construction crews to identify CRLF and the importance of avoiding harm to CRLF if observed. If CRLF are observed in construction areas, a USFWS-approved biologist shall relocate CRLF to suitable preserved habitat prior to the start of construction, with prior notification of USFWS.
- BIO3 Prior to the commencement of construction activities within the HNTC planning area, an exclusion fence plan designed by a USFWS-approved biologist and approved by USFWS shall be placed at the limit of grading, forming an adequate barrier between aquatic habitat and the construction areas. Fences shall be constructed with one-way openings or exit funnels approximately every 300 feet to allow the movement of terrestrial wildlife species out of, but not into, the construction areas. The fence shall be installed before the first rainy season prior to ground disturbance, or earlier. This will give CRLF, which are adapted to migration in the winter months, a chance to leave the work area via the one-way exit funnels.
- A permanent exclusion fence/barrier around new residential or commercial developments adjacent to or near aquatic habitat shall be installed to reduce access by humans and pets into habitat areas, or CRLF into developed areas. Signage shall be installed near fenced areas, to provide information to residents in the area and discourage disturbance or entry into wildlife habitat. The fencing/barrier shall be designed by a USFWS-approved biologist and approved by USFWS.
- BIO4 Proposed projects within the HNTC planning area shall be required to satisfy the requirements of provision C.3 of the National Pollution Discharge Elimination System (NPDES) permit under Section 401 of the Clean Water Act. The proposed project shall implement Policy 6-29 to control stormwater quality and discharge quantities so that they are not significantly affected by urban development in the planning area.
- BIO5 Prior to the commencement of activities in the HNTC planning area, pre-construction surveys for nesting birds and bats shall be conducted if construction will occur during the potential breeding period, generally between February and August, to determine if any of these species are present. If present, temporary protective breeding season buffers shall be established to avoid direct take of nesting birds and bats. Alternatively, suitable nesting habitat shall be removed prior to construction and outside of the nesting or maternity roosting period (September through January).

Level of Significance After Mitigation: Less Than Significant Impact.

Wetlands and Riparian Habitat Impacts

- ◆ ***DEVELOPMENT CONSISTENT WITH THE NTC LAND USE DESIGNATION AND ZONING DISTRICT COULD HAVE A SUBSTANTIAL ADVERSE EFFECT ON FEDERALLY PROTECTED WETLANDS AS DEFINED BY SECTION 404 OF THE CLEAN WATER ACT THROUGH DIRECT REMOVAL, FILLING, HYDROLOGICAL INTERRUPTION, OR OTHER MEANS, OR HAVE A SUBSTANTIAL ADVERSE EFFECT ON ANY RIPARIAN HABITAT OR OTHER SENSITIVE COMMUNITY OR HABITAT IDENTIFIED IN LOCAL OR REGIONAL PLANS, POLICIES, REGULATIONS, OR BY THE CALIFORNIA DEPARTMENT OF FISH AND GAME OR THE U.S. FISH AND WILDLIFE SERVICE.***

Level of Significance Before Mitigation: Potentially Significant Impact.

Impact Analysis: The HNTC planning area was surveyed to determine if any wetlands and waters potentially subject to jurisdiction by the ACOE, RWQCB, or CDFG were present. The assessment was based primarily on the presence of wetland plant indicators, but may also include any observed indicators of wetland hydrology or wetland soils. Potential wetland areas were identified as areas dominated by plant species with a wetland indicator status of OBL, FACW, or FAC, as given on the USFWS List of Plant Species that Occur in Wetlands (Reed 1988). Evidence of wetland hydrology can include direct evidence (primary indicators), such as visible inundation or saturation, surface sediment deposits, algal mats and drift lines, or indirect indicators (secondary indicators), such as oxidized root channels. Some indicators of wetland soils include dark colored soils, soils with a sulfidic odor, and soils that contain redoximorphic features, as defined by the ACOE Manual (Environmental Laboratory, 1987) and Field Indicators of Hydric Soils in the United States (NRCS, 2002).

A wetland delineation was previously completed for portions of the HNTC planning area (WRA, 2006a). Parcels 2 through 7 were reviewed as part of the Ramp Relocation project. The waters assessment was based primarily on the presence of unvegetated, ponded areas or flowing water, or evidence indicating their presence such as a high water mark or a defined drainage course. WRA is currently coordinating with the ACOE regarding the verification of the wetland delineation.

Most of the HNTC planning area is comprised of non-native annual grassland, which is not a sensitive biological community. The coyote brush scrub located in Parcel 3 (Loop parcel) is not a sensitive community. However, two sensitive biological communities, wetland and riparian woodland are found in the HNTC planning area. A freshwater wetland area is located in Parcel 3, and seasonal wetlands and riparian woodland are located in Parcels 2 and 5 (C1 and Caltrans parcels). A small stream is also located in Parcel 2. Full development of the HNTC planning area could result in placement of fill into approximately 1.4 acres of wetlands and approximately 481 linear feet of streams, and approximately 0.3 acres of riparian forest would be impacted.

Implementation of the following mitigation measures (applying to only those parcels with identified jurisdictional habitat) would reduce potential impacts from the loss of wetlands, streams, and riparian forests to a less than significant level:

Mitigation Measures:

BIO6 To mitigate for fill placed in wetlands, creation of wetlands at a minimum of a 1:1 ratio, created to filled acreage or functions and values basis, shall be implemented within the HNTC planning area or in an off-site location. Wetland mitigation may be accomplished in combination with mitigation described for CRLF (Mitigation Measure BIO 1). Mitigation wetlands shall be created prior to or concurrent with filling of existing wetlands. If mitigation wetlands are to be created, a Mitigation Plan shall be developed for the site, which shall specify the use of locally native wetland plant species, quantities for planting, irrigation and maintenance requirements, performance criteria, and annual monitoring and reporting methods for a five-year period. In addition, when a specific project is designed that will impact a wetland, a Section 404 Individual or Nationwide Permit must be obtained from the ACOE, and a Section 401 Water Quality Certification must be obtained from the RWQCB, prior to the placement of any fill in wetlands.

BIO7 To mitigate for fill placed in streams and impacts to riparian areas, planting of riparian vegetation at a 2:1 ratio of planted riparian vegetation acreage and length to impacted stream acreage and length, shall be implemented as part of the HNTC planning area. Planting of riparian vegetation shall be accomplished along existing creeks or streams within or adjacent to the planning area to increase the riparian corridor and provide added habitat value. If riparian planting cannot be accomplished within or adjacent to the planning area, riparian plantings to compensate for stream and riparian impacts shall be performed at a 3:1 ratio in a suitable off-site location. A Mitigation Plan developed shall be prepared and specify the use of locally native, riparian plant species, quantities for planting, irrigation and maintenance requirements, performance criteria, and annual monitoring methods for a five-year monitoring period. In addition, a Section 404 Individual or Nationwide Permit shall be obtained from the USACOE, a Section 401 Water Quality Certification shall be obtained from the RWQCB, and a Section 1602 Lake and Streambed Alteration Agreement must be obtained from the CDFG prior to impacting existing streams or riparian areas.

Level of Significance After Mitigation: Less Than Significant Impact.

4.6 CULTURAL RESOURCES

This section of the EIR evaluates the potential impacts to cultural resources that could result from future development within the Hercules New Town Center (HNTC) planning area consistent with the proposed amendments to the General Plan and Zoning Ordinance and implementation of the Market Town Project. The description of the affected environment and analysis of impacts are based on review of existing information and archival records research conducted by the Northwest Information Center (NWIC), summarized in a letter to RBF Consulting, titled, *Records Search Results for the Proposed Hercules New Town Center Project, City of Hercules, Contra Costa County, California, July 1, 2007*. The records search identified three archaeological studies covering 100 percent of the HNTC planning area on file at the NWIC. Based on their review of available information on file, the NWIC center concluded that no further archaeological study of the HNTC planning area is necessary.

Cultural resources include paleontological resources (fossils), archaeological resources, historical resources, and human remains. Both prehistoric and historic resources are considered archaeological resources.

4.6.1 ENVIRONMENTAL SETTING

PREHISTORIC SETTING

The following information was obtained from the Hercules General Plan (General Plan). Prehistoric sites within northwestern Contra Costa County are generally located near the edge of historic bay margins, on valley and midslope terraces, and in hilly areas on terraces near seasonal watercourses. Due to the presence of abundant wildlife, such as shellfish, fish, birds, and other animals, bay margins in particular were desirable places to live for the prehistoric populace of the Bay Area. This is evidenced by the numerous aboriginal village and camp sites that have been uncovered in the bay margins of northwestern Contra Costa County. Hercules has one confirmed prehistoric site (CA-CCO-370) and one unconfirmed prehistoric site (CA-CCO-248), both of which are located west of Interstate (I-80). A 1910 account of the unconfirmed prehistoric site describes it as, "a scant deposit of what was once probably a large village." Prehistoric site CA-CCO-370 is located in the City of Hercules Historic District. The conservation of a number of historic buildings in the Historic District has preserved the integrity of CA-CCO-370. The construction of a nearby dam disturbed the general vicinity of CA-CCO-248.

ETHNOGRAPHIC SETTING

Information in this section was derived from: *The Ohlone: Past and Present Native Americans of the San Francisco Bay Region*, Lowell John Bean, editor, (1994); *Costanoan, in Handbook of North American Indians, vol. 8 (California)*, by Richard Levy (1978); and information provided by the NWIC.

The HNTC planning area lies within the ethnographic territory of the Ohlone. The territory of the Ohlone extended along the coast from the current day locations of the Golden Gate Bridge in the north to just beyond Carmel in the south, and as much as 60 miles inland. The Ohlone are a linguistically defined group speaking eight different but related languages. The Ohlone languages, together with Miwok, comprise the Utian language family of the Penutian

stock. The Ohlone's political organization was by tribelet, which consisted of one or more villages and camps within a territory generally designated by geographic features. Tribelets generally had 100 to 250 members. The Chochenyo- (also called Chocheño, Chocenyó and East Bay Costanoan) speaking Ohlone tribal groups resided in the East Bay, primarily in the western portion of what is now Alameda County and Contra Costa County, including the vicinity of the present day HNTC planning area.

The Ohlone were hunter-gatherers and relied on acorns and seafood. The coastal Ohlone appear to have exploited the wetland areas in particular; their primary food sources consisted of wetland plants, shellfish, birds, and mammals. They also exploited a wide range of other foods, including various seeds (the growth of which was promoted by controlled burning), buckeye, berries, roots, land and sea mammals, waterfowl, reptiles, and insects. The Ohlone used tule balsas for watercraft, as well as bow and arrow, cordage, bone tools, and twined basketry to procure and process their foodstuffs.

Coastal Native American habitation sites in Contra Costa County are often marked by the presence of midden soil deposits, which are a buildup of organic debris and contain marine shells and animal bones. Other types of features that distinguish Native American activity areas are scatters of "flakes" of chipped material that resulted from the manufacturing of chipped stone tools and bedrock milling features (mortar depressions). Native American cultural resources in western Contra Costa County are typically found near the bayshore and adjacent to other seasonal and perennial watercourses. The former north fork of the Refugio Creek historically ran through the majority of the northern portion of the HNTC planning area, just south of the present day location of State Route 4 (SR 4) until most of it was filled in with soil. The remaining portion of the creek, which was left in place in the northeastern portion of the C1 parcel, was directed to flow westward into a culvert located beneath the northern portion of the C1 parcel, and empties into a freshwater marsh located in the Loop parcel.

HISTORIC SETTING

This section summarizes information found in the General Plan and on the City's website (<http://www.ci.hercules.ca.us/index.aspx?page=50>; accessed September 9, 2008). In the early to mid 1800s, the area that now encompasses the City of Hercules was part of a Spanish land grant called Rancho El Pinole. By the late 1800s, the land (no longer part of Rancho El Pinole) was purchased by the California Powder Works as the new site for its dynamite production facilities and Hercules was established as a company town of the California Powder Works. The City was incorporated in 1900 as the Town of Hercules. In the late 1800s, the DuPont Company acquired the California Powder Works and in 1912, the plant was sold once again, now known as Hercules Incorporated. In 1917, after the United States (U.S.) had entered World War I, Hercules Incorporated became the largest producer of dynamite in the country. Prior to the U.S. entry into the war, the plant supplied explosives to Great Britain, France, and Russia. At its height, Hercules Incorporated covered 3,000 acres, including many gullies that were used for mixing and packing explosives. The gullies provided a safety feature for possible explosions by separating mixing and packing operations.

During the 1960s, the plant transitioned from producing dynamite and black powder to fertilizer production. By the mid 1970s the fertilizer operation ceased and plant property was

sold to developers. By the late 1970s the plant closed permanently due to economic factors. Housing development exploded in Hercules during the 1970s and 1980s, creating the modern suburban community of today.

A number of company buildings and Victorian-style homes remain from the historic company town. The company administrative offices are listed in the National Register of Historic Places. After an architectural evaluation of company buildings and Victorian-style company homes in 1977, the City expanded its Historic District and renovated and relocated company homes to the expanded Historic District area, south of the former administrative center. The company homes were listed in the National Register of Historic Places in 1980.

PALEONTOLOGICAL SETTING

Section 4.7 (Geology and Soils) describes the geology of the HNTC planning area in detail. The following provides a brief summary of the detailed description presented in that section.

As stated in Section 4.7, the HNTC planning area is located in the Coast Ranges geomorphic province of California, which is characterized by a series of parallel, northwesterly trending, folded and faulted mountain ranges and valleys. Specifically, the HNTC planning area is located within the Refugio Valley of the Coast Ranges with lands ranging from hilly to flat on either side of the former north fork of the Refugio Creek. Geology in the region consists of alluvial (stream-related) deposits of Quaternary age (less than two million years old) on the floor of the Refugio Valley, surrounded by marine sedimentary rocks of Miocene age (between five and 23 million years old) in adjacent uplands. Alluvium in the Refugio Valley varies from about 12 feet in thickness in the southeast portion of the valley to about 80 feet in thickness near the valley mouth. Much of the older valley floor deposits are covered by loose, artificial fill with the majority of the HNTC planning area containing artificial fill. Soils within the HNTC planning area generally consist of one or more of these soil types.

4.6.2 CULTURAL RESOURCES WITHIN THE HNTC PLANNING AREA

PREHISTORIC RESOURCES

The ethnographic literature references one Native American tribal area in the vicinity of the HNTC planning area; however, there are no recorded Native American archaeological resources in the HNTC planning area or its surroundings. Nonetheless, due to the historical presence of the former north fork of the Refugio Creek in the majority of the northern portion of the HNTC planning area and the current presence of a remaining segment of the creek in the eastern portion of the C1 parcel, there is a moderate potential for Native American sites to be present, as Native American cultural resources within Contra Costa County are typically found adjacent to seasonal and perennial watercourses. Moreover, the *City of Hercules General Plan Land Use and Circulation Elements Update and Redevelopment Plan Amendments - Environmental Impact Report (GP/Redevelopment Plan EIR)* concluded that the area has a moderate potential to contain pre-historic cultural resources.

HISTORIC RESOURCES

There are no historic resources within the HNTC planning area. Historic literature and maps reviewed by researchers at the NWIC gave no indication of any historic-period archaeological resources within the HNTC planning area or its surroundings, although the HNTC planning area is adjacent to historic site P-07-000515, a portion of the historic segment of SR 4. State and federal inventories do not list any historic properties within the HNTC planning area or its surroundings. Finally, according to the *GP/Redevelopment Plan EIR*, no known historic resources exist within HNTC planning area or its surroundings. Therefore, the probability that the HNTC planning area contains historic-period resources is low.

PALEONTOLOGICAL RESOURCES

According to the *GP/Redevelopment Plan EIR*, there are no known or recorded fossil resources within HNTC planning area or its surroundings and researchers from the NWIC did not identify any unique paleontological resources in the area. Consequently, there is a low probability that the HNTC planning area contains paleontological resources.

4.6.3 REGULATORY SETTING

FEDERAL FRAMEWORK

National Historic Preservation Act of 1966 (16 U.S.C. 470)

The National Historic Preservation Act (NHPA) is the most comprehensive national policy on historic preservation. The NHPA, which is designed to encourage the preservation and wise use of our historic resources, establishes the policy of the U.S. Government regarding historic preservation. The NHPA defines historic preservation to include "the protection, rehabilitation, restoration and reconstruction of districts, sites, buildings, structures, and objects significant in American history, architecture, archaeology, or culture." The NHPA includes several key provisions, including requiring federal agencies to "take into account" the effect of their projects on historical and archaeological resources, even if the projects would not be located on their land and authorizing the Department of the Interior to establish, maintain, and expand the National Register of Historic Places (National Register or NRHP). The National Register, which is maintained by the National Park Service (NPS), is a compilation of cultural resources that have been nominated and accepted as having historic, architectural, archaeological, engineering, or cultural significance, at the national, state, or local level.

Paleontological Resources Preservation Act

The federal Paleontological Resources Preservation Act of 2002 codifies the generally accepted practice of limited vertebrate fossil collection and limited collection of other rare and scientifically significant fossils by qualified researchers. Researchers must obtain a permit from the appropriate state or federal agency and agree to donate any materials recovered to recognized public institutions, where they will remain accessible to the public and to other researchers.

STATE FRAMEWORK

California Register of Historical Resources

The California Register of Historical Resources (California Register or CRHR) is a statewide program that is similar in scope to the National Register. It consists of a compilation of cultural resources that are significant within the context of local, California, or national history, but not necessarily history germane to other states. All resources listed in or formally determined eligible for the National Register are also eligible for the California Register, as are properties designated under municipal or county ordinances.

California Environmental Quality Act (CEQA)

The CEQA Statute and Guidelines include procedures for identifying, analyzing, and disclosing potential adverse impacts on cultural resources, which include all resources listed in or formally determined eligible for the National Register, the California Register, or local registers. CEQA requires agencies that finance or approve public or private projects to assess the effects of the project on cultural resources. If a project results in significant effects on important cultural resources, alternative plans or mitigation measures must be considered. However, only significant cultural resources need to be addressed.

California Public Resources Code

California Public Resources Code Section 5097.5 prohibits excavation or removal of any “vertebrate paleontological site, or any other archaeological, paleontological, or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands.” Public lands are defined to include lands owned by or under the jurisdiction of the state or any city, county, district, authority or public corporation, or any agency thereof. Section 5097.5 also states that any unauthorized disturbance or removal of archaeological, historical, or paleontological materials or sites located on public lands is a misdemeanor. Section 30244 requires reasonable mitigation for impacts on paleontological resources that occur as a result of development on public lands.

Section 5097.98 of the California Public Resources Code prohibits obtaining or possessing Native American artifacts or human remains taken from a grave or cairn, and sets penalties for such acts. Additionally, Section 5097.98, as amended by Assembly Bill 2641, states:

- (a) Whenever the commission receives notification of a discovery of Native American human remains from a county coroner pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, it shall immediately notify those persons it believes to be most likely descended from the deceased Native American. The descendants may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The descendants shall complete their inspection and make their recommendation within 24 hours of their notification by the Native American Heritage Commission. The recommendation may include the scientific removal and

nondestructive analysis of human remains and items associated with Native American burials.

- (b) Whenever the commission is unable to identify a descendent, or the descendent identified fails to make a recommendation, or the landowner or his or her authorized representative rejects the recommendation of the descendent and the mediation provided for in subdivision (k) of Section 5097.94 fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall re-inter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance.

CITY OF HERCULES

The General Plan includes several objectives, policies and programs designed to preserve and protect important prehistoric, and historic resources. The following lists the General Plan objectives, policies, and programs regarding preservation and protection of prehistoric and historic resources that are relevant to the proposed project.

Hercules General Plan

Land Use Element

Objective 8 Preserve Hercules history while developing its future.

Open Space and Conservation Element

Objective 12 Protect and preserve important historic and prehistoric resources.

Policy 12a Historic resources shall be identified and preserved to the extent feasible. If previously unknown subsurface cultural resources are discovered during excavation activities on the identified parcels or elsewhere in the study area, excavation would be temporarily halted and an archaeologist consulted as to the importance of the resources. Should the archaeologist determine that the resources are important, the project sponsor would follow the procedure described in Program 12a.2.

Program 12a.2 Prior to excavation and construction, the prime construction contractor and any subcontractor(s) will be cautioned on the legal and/or regulatory implications of knowingly destroying cultural resources or removing artifacts, human remains, bottles, and other cultural materials from the project site.

The project sponsor will identify a qualified archaeologist prior to any demolition, excavation, or construction. The City will approve the project sponsor's selection for a qualified archaeologist. The archaeologist will have the authority to temporarily halt excavation and construction activities in the immediate vicinity (ten-meter radius) of a find if significant or

potentially significant cultural resources are exposed and/or adversely affected by construction operations.

Reasonable time would be allowed for the qualified archaeologist to notify the proper authorities for a more detailed inspection and examination of the exposed cultural resources. During this time, excavation and construction would not be allowed in the immediate vicinity of the find; however, those activities could continue in other areas of the project site.

If any find were determined to be significant by the qualified archaeologist, representatives of the project sponsor or construction contractor and the City, the qualified archaeologist and a representative of the Native American community (if the discover is an aboriginal burial) would meet to determine the appropriate course of action.

All cultural materials recovered as part of the monitoring program would be subject to scientific analysis, professional museum curation, and a report prepared according to current professional standards.

4.6.4 ENVIRONMENTAL ANALYSIS

THRESHOLDS OF SIGNIFICANCE

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

- Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5
- Cause a substantial adverse change in the significance of an archaeological resource, pursuant to §15064.5
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature
- Disturb any human remains, including those interred outside of formal cemeteries

POTENTIAL IMPACTS AND MITIGATION MEASURES: GENERAL PLAN AND ZONING ORDINANCE AMENDMENTS

Prehistoric Resources and Human Remains Impacts

- ◆ ***FUTURE DEVELOPMENT CONSISTENT WITH THE NTC LAND USE DESIGNATION AND ZONING DISTRICT COULD DISTURB OR DESTROY UNKNOWN PREHISTORIC RESOURCES OR HUMAN REMAINS.***

Level of Significance Before Mitigation: Potentially Significant Impact.

Impact Analysis: Based on a review of existing cultural resource information available for the HNTC planning area and the conclusions of archival records research conducted by the

NWIC, the HNTC planning area has a moderate potential for containing unknown buried prehistoric resources, including human remains, even though there are no known or recorded prehistoric resources or human burials within the area. Because the former north fork of the Refugio Creek historically ran through the majority of the northern portion of the HNTC planning area, just south of SR 4, and a segment of the creek is still located in the eastern portion of the C1 parcel, there is a moderate potential for unknown Native American prehistoric sites and burials to be present in the area, since Native American cultural resources within Contra Costa County are typically found adjacent to seasonal and perennial watercourses.

Future development allowed under the NTC land use designation and zoning district would demolish site features (parking lots, paved areas, buildings, etc.) and the HNTC planning area would undergo excavation and grading. These activities would intrude into the soil, which could uncover previously unknown prehistoric resources, including human remains. Uncovering prehistoric resources or human remains during excavation and/or grading activities could result in their damage or destruction, which is considered a significant impact. Mitigation measure CULT1, which implements General Plan Policy 12a and Program 12a.2, would reduce potential impacts to less than significant.

Mitigation Measure:

CULT1 Prior to the issuance of grading permits for future development allowed under the NTC land use designation and zoning district, the project sponsor(s) shall retain a qualified archaeologist, subject to approval by the City. The qualified archaeologist shall train the construction crew on the mechanisms used to identify cultural resources and to caution them on the legal and/or regulatory implications of knowingly destroying cultural resources or removing artifacts or human remains from the project site(s). In the event that culturally sensitive materials are encountered, work shall be temporarily redirected to another location while the archeologist consults with the City to determine the treatment of those resources. In the event that human remains are discovered, the County Coroner shall be contacted within 24 hours. If the remains are of Native American ancestry, the Coroner shall notify the Native American Heritage Commission, who shall appoint a most likely descendent to determine the proper treatment of the remains. All cultural materials recovered shall be subject to scientific analysis, professional museum curation, and a report prepared according to current professional standards.

Level of Significance After Mitigation: Less Than Significant Impact.

Historical Resources Impacts

- ◆ ***FUTURE DEVELOPMENT CONSISTENT WITH THE NTC LAND USE DESIGNATION AND ZONING DISTRICT COULD DISTURB OR DESTROY UNKNOWN HISTORIC RESOURCES.***

Level of Significance Before Mitigation: Potentially Significant Impact.

Impact Analysis: There are no known historic resources within HNTC planning area or its surroundings, nor do any state or federal inventories list historic properties within the HNTC planning area or its surroundings. Furthermore, the findings of the archival records research conducted by the NWIC concluded that there is a low probability of the HNTC planning area containing historic-period resources. In the unlikely chance that unknown buried historic resources are discovered during project grading activities, Mitigation Measure CULT1, identified above, which implements General Plan Policy 12a and Program 12a.2, would reduce potential impacts to less than significant.

Mitigation Measure: Implement Mitigation Measure CULT1.

Level of Significance After Mitigation: Less Than Significant Impact.

Paleontological Resources Impacts

- ◆ ***FUTURE DEVELOPMENT CONSISTENT WITH THE NTC DESIGNATION AND ZONING DISTRICT COULD DISTURB OR DESTROY UNKNOWN PALEONTOLOGICAL RESOURCES.***

Level of Significance Before Mitigation: Potentially Significant Impact.

Impact Analysis: Although no paleontological resources are known to exist within the HNTC planning area, the presence of unknown paleontological resources cannot be ruled out. Ground disturbing activities as a result of future development allowed under the NTC land use designation and zoning district have the potential to disturb or destroy unknown paleontological resources. Implementation of Mitigation Measure CULT1, identified above, would reduce potential impacts on paleontological resources to less than significant.

Mitigation Measure: Implement Mitigation Measure CULT1.

Level of Significance After Mitigation: Less Than Significant Impact.

POTENTIAL IMPACTS AND MITIGATION MEASURES: MARKET TOWN PROJECT

Prehistoric Resources and Human Remains Impacts

- ◆ ***THE PROPOSED MARKET TOWN PROJECT COULD DISTURB OR DESTROY UNKNOWN PREHISTORIC RESOURCES OR HUMAN REMAINS.***

Level of Significance Before Mitigation: Potentially Significant Impact.

Impact Analysis: Based on a review of existing cultural resource information available for the project site and vicinity and the conclusions of archival records research conducted by the NWIC, the project site has a moderate potential for containing unknown buried prehistoric resources, including human remains, even though there are no known or recorded prehistoric resources or human burials within the project site or vicinity. Because the former north fork of the Refugio Creek historically ran through the majority of the northern portion of the project site there is a moderate potential for unknown Native American prehistoric

sites and burials to be present in the project site, since Native American cultural resources within Contra Costa County are typically found adjacent to seasonal and perennial watercourses.

During construction associated with the Market Town project, the existing park and ride (PNR) lot would be demolished and the project site would undergo excavation and grading. These activities would intrude into the soil, which could uncover previously unknown prehistoric resources, including human remains. Uncovering prehistoric resources or human remains during excavation and/or grading activities could result in their damage or destruction, which is considered a significant impact. Implementation of mitigation measure CULT1, identified above, would reduce potential impacts to less than significant.

Mitigation Measure: Implement Mitigation Measure CULT1.

Level of Significance After Mitigation: Less Than Significant Impact.

Historical Resources Impacts

- ◆ ***DEVELOPMENT OF THE PROPOSED MARKET TOWN PROJECT COULD DISTURB OR DESTROY UNKNOWN HISTORIC RESOURCES.***

Level of Significance Before Mitigation: Potentially Significant Impact.

Impact Analysis: There are no known historic resources within PNR parcel or its surroundings, nor do any state or federal inventories list historic properties within the PNR parcel or its surroundings. Furthermore, the findings of the archival records research conducted by the NWIC concluded that there is a low probability of the PNR parcel containing historic-period resources. In the unlikely chance that unknown buried historic resources are discovered during project grading activities, Mitigation Measure CULT1, identified above, which implements General Plan Policy 12a and Program 12a.2, would reduce potential impacts to less than significant.

Mitigation Measure: Implement Mitigation Measure CULT1.

Level of Significance After Mitigation: Less Than Significant Impact.

Paleontological Resources Impacts

- ◆ ***THE PROPOSED MARKET TOWN PROJECT COULD DISTURB OR DESTROY UNKNOWN PALEONTOLOGICAL RESOURCES.***

Level of Significance Before Mitigation: Potentially Significant Impact.

Impact Analysis: Although no paleontological resources are known to exist within the PNR parcel, the presence of unknown paleontological resources cannot be ruled out. Ground disturbing activities associated with the Market Town project, have the potential to disturb or destroy unknown paleontological resources. Implementation of Mitigation Measure CULT1, identified above, would reduce potential impacts on paleontological resources to less than significant.

Mitigation Measure: Implement Mitigation Measure CULT1.

Level of Significance After Mitigation: Less Than Significant Impact.