PUBLIC REVIEW DRAFT

CITY OF ALBANY
DRAFT 2035 GENERAL PLAN
ENVIRONMENTAL IMPACT REPORT

SCH: 2014032040

LSA

November 2015

City of Albany

NOTICE OF AVAILABILITY
CITY OF ALBANY 2035 DRAFT GENERAL PLAN
AND
DRAFT ENVIRONMENTAL IMPACT REPORT

Date: November 25, 2015

Project Title: City of Albany 2035 General Plan and Draft Environmental Impact Report (Draft EIR)

Project Location: City of Albany, CA

Albany is located on the east shore of San Francisco Bay approximately 12 miles northeast of San Francisco and six miles north of Downtown Oakland. It is the northernmost city in Alameda County. Albany abuts the Contra Costa County cities of Richmond on the northwest and El Cerrito on the north, the unincorporated community of Kensington on the northeast, and the Alameda County city of Berkeley on the east and south. The western side of Albany faces San Francisco Bay.

Lead Agency: City of Albany, CA
1000 San Pablo Ave.
Albany, CA 94706

Contact Person: Anne Hersch, City Planner
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Albany, CA 94706
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Public Review Period: November 25, 2015-January 25, 2016

Planning & Zoning Commission Public Hearing Date during comment period: Wednesday, January 13, 2016, 7pm
Albany City Hall
1000 San Pablo Ave.
Albany, CA 94706

Project Description: The City of Albany has prepared a comprehensive update to the existing General Plan which was adopted in 1992.

The Albany General Plan includes a comprehensive set of goals, policies, implementation measures, and an updated land use map. The State requires that

the General Plan include seven mandatory elements: Land Use, Circulation (Transportation), Housing, Open Space (Parks, Recreation, and Open Space), Noise and Safety (Environmental Hazards), and Conservation (Conservation & Sustainability). The Housing Element was adopted by the City Council on February 2, 2015. The Albany 2035 General Plan includes the State-mandated elements as well as optional elements addressing Community Services and Facilities and the Waterfront.

Every city and county in California is required to prepare a general plan. The plan provides the foundation for each city's zoning map and capital improvements program. It guides basic decisions about the location, type, and character of future development. A general plan also provides information about the community, including data and maps describing existing and projected conditions in the city.

Document Availability: The Draft EIR, Public Draft General Plan, and related documents are available for review at:

- Albany Community Development Department, 1000 San Pablo Avenue, Albany, CA 94706
- Albany Public Library, 1247 Marin Ave., Albany, CA 94706
- City of Albany Website: http://www.albanyca.org
- General Plan Project Website: http://www.albany2035.org

Where to Send Comments: Members of the public and other interested agencies and individuals are invited to provide comments on the 2035 General Plan and Draft EIR. All written comments on the 2035 Draft General Plan and Draft EIR may be provided to the City at the listed address during the 60 day public review period.

City of Albany, Community Development Department
Attention: Anne Hersch
1000 San Pablo Avenue
Albany, CA 94706
ahersch@albanyca.org

Significant Environmental Impacts: Implementation of the proposed General Plan would not result in any cumulatively significant impacts. Significant impacts were identified for the topics of Transportation and Circulation and Cultural Resources and mitigation measures identified in the Draft EIR would minimize impacts to less-than–significant levels.

Hazardous Materials: There are sites within the City of Albany that contain hazardous waste pursuant to California Government Code Section 65962.5.

PUBLIC REVIEW DRAFT

CITY OF ALBANY
DRAFT 2035 GENERAL PLAN
ENVIRONMENTAL IMPACT REPORT

SCH: 2014032040

Submitted to:

City of Albany
1000 San Pablo Avenue
Albany, California 94706

Prepared by:

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2215 Fifth Street
Berkeley, California 94710
510.540.7331

LSA

November 2015

TABLE OF CONTENTS

APPENDICES

FIGURES AND TABLES

FIGURES

TABLES

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I. INTRODUCTION

A. PURPOSE OF THE EIR

In compliance with the California Environmental Quality Act (CEQA), this Draft Environmental Impact Report (Draft EIR) describes the environmental impacts associated with implementation of the City of Albany Draft 2035 General Plan (Draft General Plan). This Draft EIR is designed to fully inform decision-makers in the City of Albany, other responsible agencies, and the general public of the potential environmental consequences of approval and implementation of the updated Draft General Plan. In some instances, it recommends mitigation measure in the form of modifications to the proposed Draft General Plan policies and actions that would reduce or avoid potentially significant impacts. This Draft EIR also examines alternatives to the Draft General Plan.

The City of Albany (City) is the Lead Agency for environmental review of the project. This Draft EIR will be used by City staff and the public in their review of the Draft General Plan. The effects of the Draft General Plan land uses and implementation actions are analyzed in this document as specifically and comprehensively as possible, consistent with State law.

This document is a Program EIR. The preparation, content, and processing of this EIR are covered primarily by CEQA Guidelines Section 15168. A Program EIR is one that may be prepared on a series of actions that can be characterized as one large project, and that are related: (1) geographically; (2) as logical parts in the chain of contemplated actions; (3) in connection with the issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program; or (4) as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar effects that can be mitigated in similar ways.

The Draft General Plan satisfies each of these criteria. The Draft General Plan will shape land use and development within the City of Albany, thus resulting in a geographic relationship. The Draft General Plan includes maps, goals, policies, and actions that are logical parts of a chain of contemplated actions governing future land uses and allowed development. The goals, policies, and actions either directly establish, or will govern future plans that will establish, rules, regulations, plans, or other general criteria governing implementation of the Draft General Plan. The Draft General Plan will be carried out under the authority and approval of the City of Albany. Many of the specific projects and actions carried out pursuant to implementation of the Draft General Plan would have similar environmental impacts which could be mitigated in similar ways

There are several advantages to a Program EIR. It provides a more thorough consideration of regional influences, secondary effects, cumulative impacts, land use and policy alternatives, global climate change, and other factors that apply to the program as a whole. Program EIRs avoid duplicative reconsideration of basic policy considerations. They allow the lead agency to consider broad policy alternatives and program-wide mitigation measures at a time when the agency has greater flexibility to deal with fundamental issues and/or cumulative effects.

Subsequent projects approved or undertaken pursuant to a Program EIR may still require additional environmental review. The level and type of review will be determined by the City on a project-by-project basis based on the details and specifics of the project and/or site, and appropriate subsequent analysis. Program EIRs allow subsequent environmental review to focus on issues unique to the site or individual project that were not specifically addressed in the Program EIR. Decision-makers and interested parties can therefore focus the CEQA analysis of a subsequent project on new effects (if any) not considered previously. The City will consider future discretionary projects and make determinations as to their consistency with the Draft General Plan and other regulations and whether they may properly rely on this Program EIR, and/or whether any subsequent site-level technical studies and resource inventories should be required.

Subject to the foregoing, other planned growth in the Draft General Plan is expected to move forward under categorical exemptions, negative declarations, mitigated negative declarations, and focused environmental impact reports with reliance on the information and analysis contained in this EIR. The City intends to rely, to the extent legally feasible, upon the statutory exemptions provided under State law including: Public Resources Code Section 21083.3 and CEQA Guidelines Section 15183 for land use actions and development consistent with the Draft General Plan.

B. PROPOSED PROJECT

The proposed project evaluated in this Draft EIR is the Draft General Plan which will guide future development within the City. The Draft General Plan is intended to be the foundation for future land use and capital improvement decisions and will replace the existing 1992 General Plan. The purpose of the Draft General Plan is to guide community development, preservation, and environmental conservation in the City through 2035. A detailed overview of the project is provided in Chapter III, Project Description.

C. DRAFT EIR SCOPE

The City of Albany is the Lead Agency for environmental review of this Draft EIR. A Notice of Preparation (NOP) was submitted to the State Clearinghouse and appropriate agencies to identify any issues of concern prior to preparation of this Draft EIR. The NOP included a comment period from March 14 to April 14, 2014. The City then extended the comment period until May 23, 2014. The NOP, and the notice of extended public review, are included in Appendix A of this Draft EIR.

The Draft EIR focuses on the areas of concern resulting from an assessment of potential environmental impacts, discussion with City staff, and review of comments received from public agencies and the general public. The following environmental topics are addressed in this Draft EIR:

A. Land Use, Planning Policy, and Agricultural Resources

B. Population and Housing

C. Transportation and Circulation

D. Air Quality

E. Greenhouse Gas Emissions

F. Noise and Vibration

G. Geology, Seismicity, and Mineral Resources

H. Hydrology and Water Quality

I. Hazards and Hazardous Materials

J. Biological Resources

K. Cultural Resources

L. Public Services and Recreation

M. Utilities and Infrastructure

N. Visual Resources

D. REPORT ORGANIZATION

This Draft EIR is organized into the following chapters:

- *Chapter I – Introduction*: Discusses the overall Draft EIR purpose, provides a summary of the proposed project, describes the Draft EIR scope, and summarizes the organization of the Draft EIR.
- *Chapter II – Summary*: Provides a summary of the impacts that would result from implementation of the project, describes mitigation measures recommended to reduce or avoid significant impacts, and describes the alternatives to the proposed project.
- *Chapter III – Project Description*: Describes the regional location and general setting of the City of Albany; identifies the intended uses of the Draft EIR; describes the relationship of the Draft General Plan to California State law and regional and local initiatives; provides the objectives of the Draft General Plan; describes the components of the Draft General Plan; and describes the anticipated adoption and implementation of the Draft General Plan.
- *Chapter IV – Setting, Impacts and Mitigation Measures*: Describes the following for each environmental technical topic: existing conditions (setting), potential environmental impacts (project level and cumulative) and their level of significance, and mitigation measures recommended to mitigate identified impacts. Potential adverse impacts are identified by levels of significance, as follows: less-than-significant impact (LTS), significant impact (S), and significant and unavoidable impact (SU). The significance of each impact is categorized before and after implementation of any recommended mitigation measure(s).
- *Chapter V – Alternatives*: Provides an evaluation of three alternatives to the Draft General Plan.
- *Chapter VI – CEQA Required Conclusions*: Provides an analysis of effects found not to be significant, growth-inducing impacts, unavoidable significant environmental impacts, significant irreversible changes, and cumulative impacts.
- *Chapter VII – Report Preparation*: Identifies preparers of the Draft EIR, references used, and the persons and organizations contacted.

- *Appendices*: The appendices contain: the NOP and scoping comments; technical calculations; and other documentation prepared in conjunction with this Draft EIR. The appendices included at the end of this Draft EIR. Copies are available for review at the City Community Development Department and at the Albany Library.

II. SUMMARY

This chapter provides an overview of the Draft General Plan, and the findings outlined in this EIR, including a discussion of alternatives and cumulative project impacts.

A. PROJECT UNDER REVIEW

In compliance with the California Environmental Quality Act (CEQA), this Draft Environmental Impact Report (Draft EIR) describes the environmental impacts associated with implementation of the City of Albany Draft 2035 General Plan (Draft General Plan). This Draft EIR is designed to fully inform decision-makers in the City of Albany, other responsible agencies, and the general public of the potential environmental consequences of approval and implementation of the Draft General Plan. This Draft EIR analyzes the potential environmental impacts of the Draft General Plan. A more detailed description of the project can be found in Chapter III, Project Description. This Draft EIR also examines alternatives to the Draft General Plan, which are summarized below and described in detail in Chapter V, Alternatives.

The City of Albany (City) is the Lead Agency for environmental review of the project. This Draft EIR will be used by City staff and the public in their review of the Draft General Plan. The effects of the Draft General Plan land uses and implementation actions are analyzed in this document as specifically and comprehensively as possible, consistent with State law.

B. SUMMARY OF IMPACTS AND MITIGATION MEASURES

This summary provides an overview of the analysis contained in Chapter IV, Setting, Impacts, and Mitigation Measures. CEQA requires a summary to include discussion of: 1) potential areas of controversy; 2) significant impacts; 3) recommended mitigation measures; 4) alternatives to the project; and 5) cumulative impacts.

1. Potential Areas of Controversy

A total of eight letters received on the Notice of Preparation (NOP) raised issues that were then further evaluated in the Draft EIR, including historic preservation of cultural resources, traffic on Caltrans facilities, railroad crossing safety, community art, provision of utilities and water conservation, shoreline development and land use, sea level rise, public access and recreation along the shoreline, water quality, scenic views. The NOP and comments received in response to the NOP are included in Appendix A of this EIR.

2. Significant Impacts

Under CEQA, a significant impact on the environment is defined as "…a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic

significance." Impacts in the following areas would be significant without the implementation of mitigation measures, but would be reduced to a less-than-significant level if the mitigation measures recommended in this report are implemented:

- Transportation and Circulation
- Cultural Resources

3. Significant and Unavoidable Impacts

Implementation of the proposed project would not result in any significant and unavoidable impacts.

4. Alternatives to the Project

The following alternatives were evaluated within the EIR:

- The CEQA-required **No Project alternative**. This alternative assumes that development would occur in the City of Albany, and specifically on available opportunity sites identified in the Housing Element, as allowed under the current General Plan and zoning designations. While approximately the same number of future residents (1,800) and employees (850) are anticipated to occur with implementation of this alternative as with the Draft General Plan, the No Project alternative does not include the new goals, policies, and actions of the Draft General Plan that would provide environmental and community benefits.
- The **Increased Density Near Transit alternative**. This alternative assumes that the City would identify and implement policies and land use regulations to encourage more density, infill development and redevelopment of underutilized parcels along major transit corridors and near transit nodes. Four stories of development would be allowed with a bonus of up to five stories, under the State Density Bonus law, along San Pablo and Solano Avenues and on land within 0.5 miles of the El Cerrito BART Station. This alternative would include the elimination of a parking requirement for the San Pablo and Solano Avenue corridors and within 0.5 miles of the El Cerrito BART station. This alternative is expected to result in an increase in the number of new residents and employees compared to the Draft General Plan.
- The **Reduced Density and Development alternative**. This alternative assumes that the City would reduce the allowable floor area on residential and commercial parcels, maintain its current parking standards, and encourage development practices that retain the one- and two-story profile of the San Pablo Avenue commercial district.

5. Cumulative Impacts

Implementation of the proposed project would not result in any cumulatively significant impacts.

C. SUMMARY TABLE

Information in Table II-1, Summary of Impacts and Mitigation Measures, has been organized to correspond with environmental issues discussed in Chapter IV. The table is arranged in four columns: (1) impacts; (2) level of significance prior to mitigation; (3) mitigation measures; and (4) level of significance after mitigation. Levels of significance are categorized as follows:

SU Significant and Unavoidable
S Significant
LTS Less Than Significant

For a complete description of potential impacts and recommended mitigation measures, please refer to the specific topical discussions in Chapter IV.

Table II-1: Summary of Impacts and Mitigation Measures from the EIR

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
A. LAND USE, PLANNING POLICY, AND AGRICULTURAL RESOURCES			
There are no impacts related to land use, planning policy or agricultural resources.			
B. POPULATION AND HOUSING			
There are no impacts related to population or housing.			
C. TRANSPORTATION AND CIRCULATION			
TRANS-1: Potential traffic calming strategies could result in a significant traffic-related impact.	S	TRANS-1: Prior to approving traffic calming projects, such as a roadway closure, that may divert substantial traffic to other streets, the City shall conduct a transportation impact study to evaluate the potential impacts of the proposed traffic calming project on access and circulation for all travel modes in the vicinity. The study shall identify potential design solutions and/or alternatives to ensure that the proposed traffic calming project would minimize any secondary significant impacts, such as a substantial increase in traffic volumes on nearby streets.	LTS
TRANS-2: The parking policies of the Draft General Plan may cause secondary significant impacts on the environment.	S	TRANS-2: Prior to adopting specific changes to parking requirements, conduct a parking and transportation study to evaluate the potential effects of these changes. Since parking is not considered an environmental topic under CEQA, these studies shall ensure that the changes to parking policies would not result in secondary significant impacts on traffic circulation, safety, noise, and/or air quality. As a result of the study and if necessary, the City shall modify the policy changes and/or identify other measures to minimize potential secondary significant impacts.	LTS
D. AIR QUALITY			
There are no impacts related to air quality.			
E. GLOBAL CLIMATE CHANGE			
There are no impacts related to global climate change.			
F. NOISE AND VIBRATION			
There are no impacts related to noise and vibration.			

Table II-1: Summary of Impacts and Mitigation Measures from the EIR

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
G. GEOLOGY, SEISMICITY, AND SOILS			
There are no impacts related to geology, seismicity, or soils.			
H. HYDROLOGY AND WATER QUALITY			
There are no impacts related to hydrology or water quality.			
I. HAZARDS AND HAZARDOUS MATERIALS			
There are no impacts related to hazards or hazardous materials.			
J. BIOLOGICAL RESOURCES			
There are no impacts related to biological resources.			
K. CULTURAL RESOURCES			
CULT-1: Potential development under the Draft General Plan could impact archaeological deposits that may qualify as historical resources. (S)	S	CULT-1a: Prior to approval of development permits for projects that include significant ground-disturbing activities, City staff may require that the applicant review the most recent and updated Northwest Information Center (NWIC) list: Historic Property Directory to determine if known archaeological and paleontological sites underlie the proposed project. If it is determined that known cultural resources are within ¼ mile of the project site, the City shall require the project applicant to conduct a records search at the NWIC at Sonoma State University to confirm whether there are any recorded cultural resources within or adjacent to the project site. The NWIC will provide recommendations based on previously identified resources, as well as environmental and archival indicators of sensitivity (e.g., proximity to watercourses or historic map information). The studies may include identification efforts for historical buildings and structures, archaeological resources, fossils, and human remains. Consistent with Policy LU-5.4, coordination with local Native American communities shall be done when significant prehistoric archeological sites are identified as part of pre-approval site analysis. Based on that research, the City shall determine whether field study by a qualified cultural resources consultant is recommended.	LTS

Table II-1: Summary of Impacts and Mitigation Measures from the EIR

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
CULT-1 *Continued*		CULT-1b: Should City staff determine that field study for cultural resources is required, the project applicant shall have a cultural resource professional meeting the Secretary of the Interior's Standards in history and/or archaeology conduct a pre-construction survey to identify significant cultural resources – including archaeological sites, paleontological resources, and human remains – in the project site and provide project-specific recommendations, as needed. Pursuant to the recommendations of the consulting archaeologist, and in consultation with City officials and potential stakeholders such as tribal representatives, additional mitigation to offset potential impacts to cultural resources shall be required should the resources at issue qualify as historical or unique archaeological resources under CEQA (cf. PRC Section 21084.1 and 21083.2, respectively). Such mitigation may include further intensive recording/documentation or excavation and analysis according to professional archaeological standards.	
CULT-2: Ground-disturbing activities associated with development allowed under the Draft General Plan could adversely affect significant paleontological deposits under CEQA.	S	CULT-2: Implement Mitigation Measure CULT-1 to determine the potential for paleontological deposits within a project site and, if present, to ensure project-specific mitigations for such resources are identified and incorporated as conditions of project approval.	LTS
L. PUBLIC SERVICES AND RECREATION			
There are no impacts related to public services or recreation.			
M. UTILITIES AND INFRASTRUCTURE			
There are no impacts related to utilities or infrastructure.			
N. VISUAL RESOURCES			
There are no impacts related to visual resources.			

Source: LSA Associates, Inc., 2015.

III. PROJECT DESCRIPTION

This chapter describes the City of Albany (City) Draft General Plan (Draft General Plan), the proposed project evaluated in this document. This chapter provides an overview of the regional location and general setting; intended uses of this Draft Environmental Impact Report (Draft EIR); a description of the General Plan's relationship to State law, regional, City and local initiatives; project objectives for EIR analyses; and a detailed description of the Draft General Plan.

A. INTRODUCTION

The City of Albany has prepared a Draft General Plan to guide the City's growth and development through 2035. As required by State law, the Draft General Plan addresses land use, transportation, housing, open space, conservation, safety and noise through chapters (called "elements") corresponding to these mandated topics. Albany has also added "optional" General Plan elements on: (a) community services and facilities and (b) the waterfront. Each element of the General Plan includes narrative text, maps and tables, and goal, policy, and action statements. The goals, policies and actions are long-range, comprehensive, and internally consistent. The Housing Element is part of the Draft General Plan but is not included within the Draft EIR. The Housing Element was adopted in February 2015, along with a Mitigated Negative Declaration that provided separate environmental review and analysis. The Housing Element goals and policies are consistent with the Draft General Plan, and vice versa.

B. REGIONAL LOCATION AND GENERAL SETTING

Albany is the northernmost city in Alameda County. The City abuts the Contra Costa County cities of Richmond to the northwest, El Cerrito and the unincorporated community of Kensington to the north, and the Alameda County City of Berkeley to the east and south. San Francisco Bay is located on the western side of Albany. Although Albany is physically defined by creeks on its northern and southern borders, the adjacent areas are heavily urbanized and the political boundaries are subtle. Land uses, building types, and densities are similar to those in the adjacent cities. The immediate landscape is distinguished primarily by Albany Hill, which rises to approximately 330 feet in the western part of the City. Figure III-1 shows the City's regional location.

Albany's incorporated area is 5.5 square miles. However, 67.2 percent (3.7 square miles) of this total area is under water, and just 1.8 square miles (or roughly 1,140 acres) is land. Most of the East Bay plain in the Albany vicinity was subdivided and developed in the early part of the 20th Century.

The area of the City consisting of approximately 180 acres west of Interstate 80 (I-80) and Interstate 580 (I-580) freeways includes waterfront open space and the Golden Gate Fields racetrack and parking. The I-80 and I-580 freeways are a significant land use and physical presence in the City, cutting a wide swath across Albany's west side and separating the City's neighborhoods from the waterfront. A relatively narrow industrial area sits alongside the freeway, running north-south and parallel to the Union Pacific railroad. Albany Hill rises in the northwest quadrant, while the southwest quadrant

includes large-scale public land uses. The eastern two-thirds of the City contain residential neighborhoods of varying densities, with single-family uses predominating. Two major commercial corridors cross through this area: San Pablo Avenue runs north-south from El Cerrito on the north to Berkeley on the south, while the Solano Avenue commercial district runs east-west from San Pablo Avenue eastward into Berkeley. The elevated BART tracks also cross through the eastern part of the City, along a north-south alignment and "greenway" running parallel to Masonic Avenue.

Most of Albany's neighborhoods are developed along a rectilinear street grid, although the grid shifts slightly in orientation in the eastern third of the City. There are roughly 25 north-south streets and fewer than ten major east-west streets, forming blocks that are generally 200 feet wide and 400 to 600 feet long. Most of this area was subdivided in the first three decades of the 20th Century, with rectangular lots of 25 to 50 feet in width and 100 feet in depth. The street grid is interrupted in places by schools, parks, and a former streetcar alignment along Key Route Boulevard, but is mostly continuous.

C. INTENDED USES OF THE DRAFT EIR

This Draft EIR is designed to fully inform City decision-makers, in addition to other responsible agencies, persons, and the general public of the potential environmental effects associated with implementation of the Draft General Plan.

This Draft EIR has been prepared in accordance with CEQA (PRC Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 et seq.). The CEQA Guidelines used are those that were in effect at the time of the Notice of Preparation in 2014. This Draft EIR is an informational document that informs public agency decision-makers and the public of the significant environmental effects and the ways in which those impacts could be reduced to less-than-significant levels, either through the imposition of mitigation measures or through the implementation of specific alternatives to the project as proposed. In compliance with CEQA Guidelines Section 15125, this EIR includes a description of the physical environmental conditions as they exist at the time the Notice of Preparation (NOP) was published (2014), unless otherwise noted.

This Draft EIR can be characterized either as a Program EIR prepared pursuant to State CEQA Guidelines Section 15168, or as a first-tier EIR prepared pursuant to State CEQA Guidelines Section 15152. The document is intended to act as an analytical superstructure for subsequent, more detailed analyses associated with individual project applications consistent with the Draft General Plan. One of the City's goals in preparing the current document is to minimize the amount of new information that would be required in the future at the "project level" of planning and environmental review by dealing as comprehensively as possible in this document with cumulative impacts, regional considerations, and similar big-picture issues.

According to State CEQA Guidelines Section 15168(c)(5), "[a] program EIR will be most helpful in dealing with subsequent activities if it deals with the effects of the program as specifically and comprehensively as possible." Later environmental documents (EIRs, Mitigated Negative Declarations, or Negative Declarations) can incorporate by reference materials from the Program EIR regarding regional influences, secondary impacts, cumulative impacts, broad alternatives, and other factors (State CEQA Guidelines Section 15168[d][2]). These later documents need only focus on new impacts that have not been considered before (State CEQA Guidelines Section 15168[d][3]).

LSA

FIGURE III-1

SOURCE: LSA ASSOCIATES, INC., 2015.

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City of Albany General Plan EIR
Regional Location Map

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The City anticipates preparing Notices of Exemption or Categorical Exemptions for most smaller projects, and Initial Studies where larger projects are submitted for site-specific approvals. The Initial Study process may be used to determine how much the environmental review for such applications may rely on this EIR. The City's intent is that new analyses for these site-specific actions will focus on issues and impacts regarding detailed site-specific information, which this Program EIR by definition has not evaluated. Subsequent CEQA documents may include Categorical Exemptions, Negative Declarations, Mitigated Negative Declarations, or Environmental Impact Reports as determined by the City as lead agency.

Future site-specific approvals may also be narrowed pursuant to the rules for tiering set forth in State CEQA Guidelines Section 15152: "'Tiering' refers to using the analysis of general matters contained in a broader EIR (such as one prepared for a general plan or policy statement) with later EIRs and negative declarations on narrower projects; incorporating by reference the general discussions from the broader EIR; and concentrating the later EIR or negative declaration solely on issues specific to the later project." Before deciding to rely in part on a first-tier EIR in connection with a site-specific project, a lead agency must prepare an "initial study or other analysis" to assist it in determining whether the project may cause any significant impacts that were not "adequately addressed" in a prior EIR (State CEQA Guidelines Section 15152[f]).

Second- and third-tier documents may limit the examination of impacts to those that "were not examined as significant effects" in the prior EIR or "[a]re susceptible to substantial reduction or avoidance by the choice of specific revisions in the project, by the imposition of conditions, or other means." As described in CEQA Guidelines Section 15152[f]e,

> Significant environmental effects have been "adequately addressed" if the lead agency determines that:
>
> (A) They have been mitigated or avoided as a result of the prior environmental impact report and findings adopted in connection with that prior environmental impact report; or
>
> (B) They have been examined at a sufficient level of detail in the prior environmental impact report to enable those effects to be mitigated or avoided by site specific revisions, the imposition of conditions, or by other means in connection with the approval of the later project.

As noted above, the City generally will require Initial Studies be prepared for larger, non-exempt projects when landowners submit applications for site-specific approvals in order to determine how much new information will be required for the environmental review for such proposals. In preparing these analyses, the City will assess, among other things, whether any of the significant environmental impacts identified in this program/first-tier EIR have been "adequately addressed." Thus, the new analyses for these site-specific actions will focus on impacts that cannot be "avoided or mitigated" by mitigation measures that either: (1) were adopted in connection with the Draft General Plan; or, (2) were formulated based on information in this Draft EIR. Subsequent CEQA documents may include Categorical Exemptions, Negative Declarations, Mitigated Negative Declarations, or Environmental Impact Reports as determined by the City as lead agency.

a. Notice of Preparation. The City of Albany is the Lead Agency of environmental review of this Draft EIR. An NOP was submitted to the State Clearinghouse and appropriate agencies to identify any issues of concern prior to preparation of this Draft EIR. The NOP, circulated to public agencies

and persons considered likely to be interested in the project and its potential impacts, included a comment period from March 14 to April 14, 2014. The City then extended the comment period until May 23, 2014. The NOP, and the notice of extended public review, are included in Appendix A of this Draft EIR.

b. Review by Other Agencies. The City of Albany is also responsible for submitting the Draft EIR to appropriate public agencies and for submitting the document to the State Clearinghouse.

D. RELATIONSHIP TO CALIFORNIA STATE LAW AND REGIONAL AND CITY INITIATIVES

An overview of California law and regional, City, and local initiatives, as they pertain to the Draft General Plan update process, are provided in this section. These initiatives are briefly described below.

1. State Law

The following provides a summary of State laws or initiatives that relate to the development of the General Plan or the Draft EIR.

a. General Plans in California. California Government Code Section 65300 requires that all cities and counties must adopt a General Plan. The General Plan must be comprehensive, internally consistent and long-term. The General Plan must provide for the physical development of the City and guide all land use and public improvement decisions. All General Plans must include land use, transportation, housing, open space, conservation, noise, and safety components, and may also include optional chapters in response to specific community issues, values, needs, or local conditions. Although required to address the issues specified in State law, the General Plan may be organized in a way that best suits the City. The City of Albany's Draft General Plan has incorporated State required chapters into the following elements:

State Required Chapter	Albany Draft General Plan Element
Land Use	Land Use
Housing	Housing (provided as a separate document)
Circulation	Transportation
Open Space	Parks, Recreation and Open Space
Conservation	Conservation and Sustainability
Safety	Environmental Hazards
Noise	Environmental Hazards

The Draft General Plan also includes optional elements covering Community Services and Facilities and the Waterfront.

The Draft General Plan meets State requirements and contains goals, policies and actions aimed at achieving the City's vision for its long-term physical form and development. The Draft General Plan will serve as a basis for future decision-making by municipal officials, including the Planning and Zoning Commission, City Council and City Boards and Commissions. When adopted, the Draft General Plan will supersede the 1992 General Plan. The Draft General Plan contains actions that

require the City to update other planning and implementation documents and programs to reflect the future growth and development projections contained in the Draft General Plan.

b. California Environmental Quality Act (CEQA). As described above, this document is a Program EIR for the Draft General Plan. The preparation, content, and processing of this document is primarily covered by CEQA Guidelines Section 15168. A Program EIR is one that may be prepared on a series of actions that can be characterized as one large project, and that are related: (1) geographically; (2) as logical parts in the chain of contemplated actions; (3) in connection with the issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program; or (4) as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar effects that can be mitigated in similar ways.

The Draft General Plan satisfies each of these criteria. The Draft General Plan governs land use and development within the entire City of Albany. The Draft General Plan includes maps, goals, policies, and actions that are logical parts of a chain of contemplated actions governing future land uses and allowed development. The policies and actions either directly establish, or will govern future plans that will establish, rules, regulations, plans, or other general criteria governing implementation of the Draft General Plan. The Draft General Plan will be carried out under the authority and approval of the City of Albany. Many of the specific projects and actions carried out pursuant to the Draft General Plan would have similar environmental impacts which could be mitigated in similar ways.

c. Assembly Bill 32: Global Warming Solutions Act. The 2006 Global Warming Solutions Act (AB 32) requires specific actions for California to reduce greenhouse gas (GHG) emissions to 1990 levels by the year 2020, a reduction of approximately 25 percent statewide. A key focus of the measures is the reduction of total vehicle miles travelled (VMT) and a potential corresponding shift to alternative travel modes, including transit and bicycling. The Draft General Plan is consistent with AB 32 and encourages a transit-oriented development pattern which would reduce VMT.

d. Senate Bill 375: Sustainable Communities Act. SB 375 implements the goals of AB 32 by directly linking land use planning with greenhouse gas emission reduction targets. The California Air Resources Board (ARB) is required to set specific emissions reduction goals for metropolitan planning organizations, which in the Bay Area is the Metropolitan Transportation Commission (MTC). The GHG reduction targets for the Bay Area include a 7 percent reduction in per capita emissions by 2020 and a 15 percent reduction by 2035. SB 375 requires regional planning agencies to create a Sustainable Communities Strategy (SCS) that includes a land use and transportation plan to meet the GHG targets. AB 32 and SB 375 have a direct influence on the future of public and multi-modal transportation and land use planning through State and regional mandates and funding programs. The Draft General Plan supports SB 375 implementation at the local level.

e. Senate Bill 18: Local and Tribal Intergovernmental Consultation. Governor Schwarzenegger signed Senate Bill 18 (SB 18) into law in September 2004. The purpose of SB 18 is to preserve and protect the cultural resources of California Native Americans and provide California Native American tribes the opportunity to participate in local land use decisions early in the planning process. SB 18 requires local jurisdictions to engage and consult with California Native American tribes prior to the adoption or amendment of a General Plan or Specific Plan. Local jurisdictions must notify appropriate California Native American tribes (found on the Native American Heritage Commission's contact list) of changes in land use policy and allow 90 days for the tribes to request a consultation. Consultations are required to be made if a tribe submits a request or before a local

jurisdiction can designate land as open space if the affected land contains a cultural place and if the tribe has requested public notice. In addition, SB 18 allows for the protection of cultural places in the open space element of the General Plan and enables California Native American tribes to acquire and hold conservation easements.

f. Assembly Bill 1358: California Complete Streets Act. General plans are required to include a circulation element consisting of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other transportation related facilities. AB 1358 requires that upon any substantive revision of the circulation element of a general plan, jurisdictions modify the circulation element to plan for a balanced, multi-modal transportation network that meets the needs of all users of streets, roads, and highways, including motorists, pedestrians, bicyclists, children, persons with disabilities, seniors, and users of public transportation.

2. Regional Initiatives

The following provides a summary of regional initiatives that relate to the development of the Draft General Plan or the Draft EIR.

a. Sustainable Communities Strategy/Plan Bay Area. Pursuant to SB 375, the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC), in partnership with the Bay Area Air Quality Management District (BAAQMD) and the Bay Conservation and Development Commission (BCDC), have prepared the Bay Area's Sustainable Communities Strategy (SCS). The SCS titled "Plan Bay Area," adopted in July 2013,[1] will serve as the regional blueprint for transportation, housing and land use focused on reducing driving and associated GHG emissions.

Plan Bay Area is a long-range plan that specifies the strategies and investments to maintain, manage, and improve the region's transportation network – which includes bicycle and pedestrian facilities, local streets and roads, public transit systems, and highways. Plan Bay Area also calls for focused housing and job growth around high-quality transit corridors, particularly within areas identified by local jurisdictions as Priority Development Areas. Priority Development Areas in Albany are identified along San Pablo and Solano Avenues. This land use strategy is anticipated to enhance mobility and economic growth by linking the location of housing and jobs with transit, thus offering a more efficient land use pattern around transit and a greater return on existing and planned transit investments.

b. Eastshore State Park General Plan. The Eastshore State Park extends 8.5 miles along the East Bay shoreline from the Bay Bridge to Richmond. Eastshore State Park was acquired from the State by the East Bay Regional Park District, which manages and operates its facilities. The Eastshore State Park General Plan[2] identifies the future preservation, conservation, and recreation uses and improvements for the park and establishes goals and Guidelines for the Albany Area Management

[1] Association of Bay Area Governments, 2013. Metropolitan Transportation Commission, *Draft Plan Bay Area, Strategy for a Sustainable Region*. March. Adopted with revisions July 18, 2013.

[2] East Bay Regional Parks District and California State Coastal Conservancy, 2002. *Eastshore State Park General Plan.*

Zone. Guidelines are specific to the areas in the Albany Area Management Zone and include Albany Beach, Albany Plateau, Albany Neck/Bulb and Albany State Marine Reserve.

c. Bay Trail Plan. ABAG prepared the Bay Trail Plan, pursuant to Senate Bill 100, which was adopted in July 1989.[3] The Bay Trail Plan proposes the development of a 500-mile network of recreational hiking and biking trails that would wrap around the edge of the San Francisco Bay. Policies and design guidelines are established to guide the implementation of the trail system in order to reflect the goals of the Bay Trail program, provide accessibility to a variety of users, protect the Bay's natural environment, and create access on Bay Area toll bridges for cyclists and hikers. Portions of the Bay Trail are located along the Albany waterfront.

d. Regional Housing Needs. As required by State law, Albany's General Plan Housing Element[4] discusses the ABAG regional housing needs (RHNA) plan. ABAG's determination of the local share of RHNA takes into consideration the following factors: market demand for housing, employment opportunities, availability of suitable sites and public facilities, loss of existing affordable units, transportation, and special housing needs. Albany's Regional Housing Needs Allocation for 2014-2022 totals 335 housing units including 80 very low income units; 53 low income units; 57 moderate income units; and 145 above moderate income units. The Albany General Plan Housing Element demonstrates sufficient capacity to accommodate this quantity of housing and was adopted February 2, 2015. A Mitigated Negative Declaration (MND) was prepared for the Housing Element and adopted on February 2, 2015 as well. CEQA documentation for the complete Albany General Plan includes this MND, by reference, as well as this DEIR.

3. City of Albany

The City of Albany initiatives that relate to the Draft General Plan update process are described below.

a. Albany Active Transportation Plan. Adopted in April 2012, the Albany Active Transportation Plan[5] assesses the unmet needs for bicycle and pedestrian access in the City and prioritizes future projects. This Plan ensures that active transportation is both accommodated and encouraged. The Plan sets forth key goals and policy objectives that apply to walking and bicycling facilities directly and also seeks to institutionalize the accommodation for these modes through City policies and practices. Key goals identified in the Plan include:

- Goal 1: Safety. Improve safety for those that choose to walk and bike.
- Goal 2: Accessibility. Provide the citizens of Albany with a citywide network of trails and routes that are accessible to a wide variety of users including pedestrians, bicyclists, and the physically disabled.
- Goal 3: Connectivity. Develop bicycling and walking networks that meet the needs of all bicyclists and pedestrians, help reduce vehicle trips, link residential neighborhoods with

[3] Association of Bay Area Governments, 1989. *Bay Trail Plan.*

[4] Albany, City of, 2015. *Albany General Plan Housing Element. February 2.*

[5] Fehr & Peers, Bicycle Solutions, and Questa Engineering, 2012. *Albany Active Transportation Plan.* April.

regional destinations, and make walking and biking realistic ways to travel throughout the City and region.

- Goal 4: Public Health. Increase frequency and types of walking and bicycling trips in Albany to promote public health and improve the environment.
- Goal 5: Other. Maximize funding available to multi-modal projects, plans, and programs that support this Plan.

b. Albany Hill Creekside Master Plan. The Albany Hill Creekside Master Plan[6] was adopted March 5, 2012. This Plan identifies and describes options and techniques for vegetation management, as well as access and circulation improvements for Albany Hill and Creekside Park. The vision for vegetation management is to address high-risk issues related to fire, declining trees, flooding and other physical hazards throughout the park. The Plan includes techniques to manage the hilltop eucalyptus forest to slowly remove eucalyptus as the trees age and decline resulting in the dominance of the existing understory vegetation (grassland, toyon, oak, north coastal scrub).

The access and circulation portion of this plan aims to maintain the existing trails (with no additional trails recommended), improve circulation with relatively minor improvements to existing trails, and develop a maintenance plan that includes an annual inspection of the trails and trail amenities such as benches, steps, and signs. Nearly all of the recommendations from the 1991 Albany Hill Creekside Master Plan remain in the 2012 Plan with the addition of more detailed trail maintenance and erosion control recommendations.

c. Parks, Recreation and Open Space Master Plan. The City of Albany Parks, Recreation and Open Space Master Plan[7] provides policies for improving and maintaining the existing park system; acquiring additional properties for future park, recreation and open space areas; a strategy for meeting the need for managing and maintaining sport fields; and an approach for financing future improvements and long term maintenance requirements. Goals identified in this Master Plan include:

- Goal 1: Preserve, enhance and, where possible, expand park and open space areas in Albany. Make Albany a green environment that integrates nature with neighborhoods, protects and supports native habitat and educates residents about local vegetation and wildlife.
- Goal 2: Make Albany a center for cultural and arts activities, with open space for art displays and musical performances. Beautify public space through public arts programs, landscaped boulevards and community gardens. Promote arts related activities.
- Goal 3: Provide high quality sports and recreation facilities that accommodate children, youth, families and seniors year-round and at all times of day. Increase the range of City sponsored programs for all age groups, including childcare and senior citizen programs.
- Goal 4: Promote public uses of the waterfront, providing for maximum natural open space and recreation.

[6] Albany, City of, 2012. *Albany Hill Creekside Master Plan.* January 31.

[7] MIG, 2004. *City of Albany Parks, Recreation and Open Space Master Plan.* October 18.

- Goal 5: Establish an integrated, comprehensive system of pedestrian and bike routes linking all neighborhoods and schools to recreational facilities throughout the City, including the waterfront.
- Goal 6: Make Albany a City that provides high quality services and inviting, well-kept facilities that foster public enjoyment.

d. City of Albany Climate Action Plan. The City of Albany Climate Action Plan[8] (CAP) was adopted in 2010 and is intended to reduce GHG emissions generated in municipal and community-wide activities. GHG reductions will be achieved in the areas of building and community energy use, transportation and land use, waste reduction and diversion, water conservation, and green infrastructure enhancement. The CAP contains strategies, objectives, measures, and actions that will direct the City's reduction efforts. The timeframe for the CAP extends from the date of adoption through December 31, 2020.

The CAP outlines a course of action for the City and the Albany community to reduce greenhouse gas (GHG) emissions and combat global climate change. The CAP has been designed to support three primary functions:

- Provide clear guidance to City staff regarding when and how to implement key provisions of the plan;
- Inspire residents and businesses to participate in community efforts to reduce GHG emissions; and
- Demonstrate Albany's commitment to comply with State GHG reduction efforts.

e. Public Arts Master Plan. The Public Arts Master Plan[9] was prepared in 2010 to assist in the implementation of Albany Art Committee's (AAC) goals. The preparation of this Plan was a result of the need to prepare a vision for public art in the City in accordance with the Public Art Ordinance. Adopted by City Council in 2007, the Public Art Ordinance requires that private development include a public art element in their design (1.75 percent of construction cost for projects of $300,000 or more) or provide an in-lieu fee for public art. The fee is calculated based on rates in the City's Master Fee Schedule. The Plan describes public art opportunity sites and prioritizes them based on the AAC's recommendations. Programs pursued or managed by the ACC including the Community Art Gallery and Mural Program are also discussed in the Master Plan.

f. Complete Streets Conceptual Design and Plan for San Pablo Avenue and Buchanan Street. The Complete Streets Plan provides conceptual designs for San Pablo Avenue and Buchanan Street, the gateways into Albany. The goal of the Plan is to help create a safer, more comfortable, and aesthetically pleasing environment to accommodate all users and all abilities. This Plan describes existing conditions at the two identified streets and the extensive public outreach conducted which informed the designs. The Plan provides detailed designs and visioning graphics for San Pablo Avenue and Buchanan Street including landscaping, traffic calming elements, bike lanes, and

[8] AECOM, 2010. *City of Albany Climate Action Plan.* April.

[9] Albany, City of, 2010. *City of Albany Public Arts Master Plan.*

pedestrian crosswalks. Potential funding sources to implement the Plan are also identified. The Plan and a Complete Streets policy was adopted by City Council in January 2013.[10]

g. Albany Sewer Master Plan. Adopted in April 2014, the Sewer Master Plan[11] evaluates the capacity and existing conditions of the City's sanitary sewer system. The Sewer Master Plan is used as the basis for the City's 10-year sewer system Capital Improvement Program (CIP). The primary objectives of the Plan are to:

- Confirm that the system has adequate capacity to handle peak wet weather flows, as required for the System Evaluation and Capacity Assurance Plan Element of the Sewer System Management Plan (SSMP);
- Satisfy the Rehabilitation and Replacement Plan requirements of the SSMP;
- Provide for capital improvements as required to satisfy the work requirements of the anticipated Consent Decree; and
- Establish a firm basis for project priorities and budgets in the City's 10-year CIP.

h. Albany Capital Improvement Plan. The Capital Improvement Project Plan provides an outline of upcoming capital improvement projects. An update to the CIP was adopted on September 21, 2015 and will cover improvements through the end of FY 2020. Prior to the recent update, the CIP identified 32 capital improvement projects that were being planned or implemented through the end of the 2017-18 fiscal year with an estimated cost that exceeds $57 million. The following major projects have been completed over the past two years: the Albany Hill Creekside Master Plan; the Buchanan Jackson Signal and Intersection Improvements; the Codornices Creek Restoration and Trail Project– Phase 3; the Pierce Street Paving Rehabilitation and Trail; the Marin Santa Fe Signal and Pedestrian Improvements; and the purchase of the Pierce Street parcel.

i. Voices to Vision. In March of 2008, the City of Albany began a public engagement process to learn more about the residents' vision for the future of the Albany waterfront. The findings within the Voices to Vision[12] document were the culmination of over 40 community meetings and responses to an online questionnaire. While not adopted as official City policy with regards to the future of the waterfront, the document does summarize the general opinion and vision of those who participated in the process. The document was considered during preparation of the Draft General Plan update.

j. Residential Design Guidelines. The City of Albany Design Guidelines for Residential Homes and New Additions[13] was adopted by the City Council in 2009. The design guidelines were created to assist applicants, neighbors, staff and commissioners in understanding and applying Albany's Planning and Zoning Code while also communicating the City's design goals through explanations and examples of solutions to high quality design. The intent of the guidelines is to provide specific

[10] Albany, City of, 2012. *City of Albany San Pablo and Buchanan Complete Streets Report.*

[11] RMC Water and Environment, 2014. *City of Albany Sewer Master Plan Final Report.* May.

[12] Fern Tiger Associates, 2010. *Albany Waterfront Voices to Vision, A Community Vision for Albany's Waterfront.* April 5.

[13] Albany, City of, 2009. *City of Albany Design Guidelines for Residential Homes and New Additions.* April 20.

design elements that encourage thoughtful development, interaction between neighbors and a sense of community in an urban environment.

k. San Pablo Avenue Urban Design Concept Plan. The San Pablo Avenue Urban Design Concept Plan[14] published in 1989 establishes a vision for San Pablo Avenue as a "Retail Boulevard." It provides an urban design and revitalization strategy, design guidelines for private development, and recommendations for street design. The Plan recommends designing buildings along San Pablo Avenue in a way that is more pedestrian oriented, and that creates a stronger sense of place.

l. San Pablo Avenue Streetscape Master Plan. The San Pablo Avenue Streetscape Master Plan[15] adopted in 2001 establishes a schematic design plan for the San Pablo Avenue Corridor within the City of Albany.

m. San Pablo Avenue Design Guidelines. The Design Guidelines[16] provide recommendations for private property development along San Pablo Avenue, based on the Urban Design Concept Plan adopted in 1989. The major objectives of the Design Guidelines include:

- Objective 1: Create a "retail boulevard" that reflects the quality of Albany.
- Objective 2: Define the Solano Avenue intersection as the center of an identifiable commercial district.
- Objective 3: Encourage private development to create special locations and features along the street.

4. Other Local Initiatives

The following describes other local initiatives.

a. Measure C. Approved by the citizens of Albany in 1989, Measure C mandated a majority vote of Albany residents for any future change to the existing land use and zoning regulations for all land west of I-80/580 (e.g., the Albany Waterfront). As a result, the approval of Albany voters is required for any plan that differs from the area's current zoning which includes: park and recreation facilities; utilities; commercial recreation; restaurants and bars; marinas; boat-launching ramps; non-residential parking; and waterfront- and sports-related commercial sales and services. Amendments to the Waterfront Master Plan, or any development agreement related to waterfront land, would also require voter approval.

b. Measure D. The Measure D ballot initiative was approved by the City of Albany voters on November 7, 1978. Among its provisions were new residential parking requirements for the City. The Measure amended the City's Zoning Ordinance to require two (2) parking spaces per residential dwelling unit. The Planning and Zoning Commission may reduce the parking requirement by conditional use permit on a case by case basis. A parking reduction may not be less than one and one-

[14] Freedman, Tung & Bottomley, 1989. *City of Albany Urban Design Concept Plan.* December.

[15] Design, Community & Environment, 2001. *San Pablo Avenue Streetscape Master Plan.* February 26.

[16] Albany, City of, 1993. *San Pablo Avenue Design Guidelines (adopted by City Council Resolution No. 93-4).* January 19.

half (1.5) spaces per unit, should the Commission find that existing on-street parking is sufficient to justify a reduction.

c. Measure K. In April, 1994, Albany voters approved Measure K, which revised the Hillside Zoning District requirements and standards. The purpose of this action was to revise development requirements for Albany Hill to fit better with the environmental constraints and visual importance of the area. The allowable residential density range on most of Albany Hill was reduced from 12-18 dwelling units per acre to 6-9 dwelling units per acre. Approximately 19 acres of land were affected.

d. Albany Unified School District (AUSD) Facilities Master Plan. The Facilities Master Plan[17] was published in March 2014 and includes a summary of the planning process, demographic and capacity information for the District, anticipated costs, and potential State funding sources. Each of the nine AUSD facilities is individually analyzed and site specific priorities are defined. The District's 16 largest projects were identified and prioritized on a schedule through 2024. The District staff and consultants note the Facilities Master Plan is a *living document* that will continue to evolve and adapt to the inevitable changes that will occur in the District's future.

e. University Village Master Plan. The University Village Master Plan[18] was approved by the UC Regents in 2004. It amended the 1998 Master Plan for the 77-acre University Village project in the southwest area of Albany. University Village is owned and operated by the University of California and provides housing for students at UC Berkeley. The amended Master Plan proposed new land use designations on the site, demolition of the 1940s and 1960s units, and their replacement with new student family housing. A community center, child care center, little league fields, and retail are incorporated into the design of the site. Many of the improvements identified in the Master Plan have been implemented.

f. Codornices Creek Improvement Plan. The Codornices Creek Improvement Plan was prepared in 2004 as a joint project between Albany, Berkeley, and the University of California. The Plan includes restoration of the Codornices Creek between San Pablo Avenue and the Union Pacific Railroad tracks, and the construction of a pedestrian/bicycle path linking to Berkeley, Albany, and regional trail networks. Many of the improvements in this plan have been implemented.[19]

g. Albany City Council Strategic Plan. The City Council conducted a strategic planning process in 2013 to help affirm, revise, and refine its vision, identify strategic issues, and develop new strategic direction, goals, and objectives for the City. Some of the outcomes of this process have informed policy and action recommendations in the Draft General Plan. These include implementation of the Active Transportation Plan and Climate Action Plan, development of the Pierce Street Park, traffic calming solutions for areas such as North Albany, and parking studies in support of a future ballot measure to revise City parking standards.

[17] WLC Architects, 2014. *Albany Unified School District Facilities Master Plan.* March 25.

[18] University of California, Berkeley, Facilities Services, 2004. *University Village Master Plan.*

[19] Design, Community & Environment, 2004. *Codornices Creek Improvements Plan Draft Initial Study and Proposed Mitigated Negative Declaration.* March 4.

h. Albany Neck and Bulb Transition Plan. The City is currently working with the East Bay Regional Park District (EBRPD) on a transition plan for improving the Albany Neck and Bulb to enable this area to become part of McLaughlin Eastshore State Park, The plan will be used by the City and EBRPD to create an agreement on what improvements/modifications will be made to the area. It will help form the basis for subsequent agreements to transfer property and will facilitate budgeting and applications for funding to abate hazards and complete planned improvements. The plan will also establish a phasing schedule for construction. Work on the plan began in November 2014, and a community engagement process is underway. The plan is scheduled for 2016 completion.

E. PROJECT OBJECTIVES FOR EIR ANALYSIS

The primary purpose of the Draft General Plan is to establish the policy direction for future development and preservation within the City of Albany. The following are the primary objectives of the Draft General Plan:

- Preserve and enhance the high quality of life enjoyed by Albany residents.
- Create new housing opportunities for persons of all incomes and physical abilities.
- Direct future growth to appropriate locations, including the San Pablo Avenue and Solano Avenue corridors and key opportunity sites.
- Ensure that infill development, including major residential alternations and additions, is sensitive to its surroundings and mitigates its impacts.
- Reduce vehicle miles traveled by enhancing opportunities for pedestrians, bicyclists, and transit users.
- Improve transportation safety and reduce the adverse effects of vehicle traffic on neighborhoods.
- Grow more sustainably, and in a manner that reduces non-renewable resource consumption and greenhouse gas emissions.
- Continue to provide high quality parks and recreational facilities.
- Reduce the potential for loss of life and property due to a natural or man-made disaster.
- Promote public health and safety.
- Create a positive environment for local business, and foster business retention and improvement.
- Improve access to the shoreline while protecting and restoring the waterfront environment.
- Provide outstanding public services.

F. DRAFT GENERAL PLAN

This section provides a description of the planning process, a summary of the Draft General Plan elements and goals, and the 2035 growth projections analyzed in this Draft EIR. The Draft General Plan is hereby incorporated by reference into this Project Description and should be referred to for more detailed description. It is available through the City's website (www.albanyca.org).

1. The Draft General Plan Update Process

In 2012, City staff initiated discussions about the General Plan Update with the City Council and Planning and Zoning Commission. Several study sessions were convened to identify the scope of the project and the primary objectives. A Request for Proposals was issued in Fall 2012. In February 2013, a consultant was retained to manage the project, including drafting the updated Draft General Plan. The Planning and Zoning Commission (Commission) served as the steering committee and provided opportunities for public input. The Commission convened more than 20 study sessions on the Draft General Plan update over a 28-month period. Each study session included a topical presentation by the consultant followed by a discussion with the Commission. The public was invited to attend and actively participate in these study sessions. In April 2013, a project website was established (www.albany2035.org) and a video was made to announce the start of the project. The website was regularly updated throughout the project, with agendas and staff reports posted prior to Commission and City Council meetings.

The Draft General Plan update process prioritized completion of the City's Housing Element for the 2007-2014 planning period, since it is the only chapter subject to State-mandated deadlines. In 2013, several study sessions were specifically dedicated to the Housing Element, and a community meeting was held in October 2013. Public hearings before the Commission and City Council occurred as the Housing Element was adopted on March 3, 2014.

Shortly after the 2007-2014 Housing Element was certified in June 2014, the City engaged the public in the preparation of the 2015-2023 Housing Element. Another community meeting was held on July 22, 2014, and a symposium on Affordable Housing was convened in September 2014. Study sessions with the Commission continued during this period, and the City worked collaboratively with housing advocacy groups to develop new solutions to housing challenges. Additional public hearings on the Housing Element took place on January 14, 2015 and February 2, 2015.

While the two Housing Elements were being prepared, work on other elements of the Draft General Plan continued. A Land Use Map was prepared in 2013 and refined through 2014 and early 2015. Policies for each element of the Draft General Plan were prepared and vetted through the Commission. Study sessions with other City Commissions also took place, including the Traffic and Safety Commission, the Waterfront Committee, the Parks and Recreation Commission, and the Sustainability Committee. Several briefings to the City Council also took place.

2. Draft General Plan Elements

The Draft General Plan includes eight separate "elements" or chapters that set goals, policies and actions for a given subject. As previously described, the chapters cover the following topics required by Government Code Section 65302: land use, circulation, housing, open space, conservation, noise and safety. The additional topics of Community Services and Facilities and Waterfront are also included to address local needs and concerns.

Each Draft General Plan Element provides goals, policies, and actions to address key City issues. Some of these goals, policies and actions are related to the review of new development; others are directed to the City's own activities. In the Draft General Plan, a "goal" is a description of the general desired result that the City seeks to create through the implementation of its General Plan. A "policy" is a specific statement that guides decision-making when working toward achieving a goal. Such policies, once adopted, represent statements of City regulation and require no further implementation.

An "action" is a program, implementation measure, procedure, or technique intended to help achieve a specified objective.

The goals, policies, and actions in each Element are based on background information, key findings, the 1992 General Plan, more recently adopted plans, and input from the public, the City Council, the Planning and Zoning Commission, City Boards and Commissions, State law, and the technical expertise of City staff and the consultant team. In general, the philosophy underpinning the Draft General Plan was to build upon the numerous policy documents that have been adopted since the last General Plan – particularly those documents completed between 2000 and 2014. Rather than creating new policies, the Draft General Plan provides an overarching framework for existing city policies on a variety of topics, from parks to transportation to the waterfront.

The Housing Element and its associated Mitigated Negative Declaration was adopted in February 2015 and is a stand-alone document that is not included in the Draft General Plan. It is hereby incorporated by reference. It can be viewed in an on-line format, and is available through the City's website (www.albanyca.org).

A summary of the Draft General Plan Elements are provided below.

a. Land Use Element. The Land Use Element encourages new high density transit-oriented mixed use development along commercial corridors, and seeks to sustain walkable neighborhoods and shopping districts, improve access to the waterfront, and maintain thriving parks and open spaces. The Land Use Element also includes policies that provide guidance for maintaining the character of single-family neighborhoods, including the regulation of home-based businesses, limits on non-residential uses in residential areas, guidance for second story additions, and development on non-conforming small lots.

Most growth in the City is anticipated to occur in mixed use projects along San Pablo Avenue (and secondarily along Solano Avenue). The Solano Avenue/San Pablo Avenue intersection is identified as a "node" where more intense development may be appropriate. Policies address the transition between commercial uses and nearby residential areas, and seek to improve the quality of commercial architecture. Policies also support lot consolidation (to create more viable development sites), improved parking management, improved urban open spaces, and the development of additional local-serving office space.

Special attention is given to the Albany Bowl site, recognizing its location at the City's northern gateway and the fact that it is the largest development opportunity on San Pablo Avenue (excluding University Village).

Policies support working with major institutional uses in the City to reduce their off-site impacts and to collaboratively address long-term facility planning. There is a focus on working with the University of California to ensure that University Village remains an integral part of the community.

The Draft General Plan encourages the sensitive development of the remaining 11-acre vacant parcel on the west side of Albany Hill, consistent with the existing 1992 General Plan. It also encourages protection of creeks across the City.

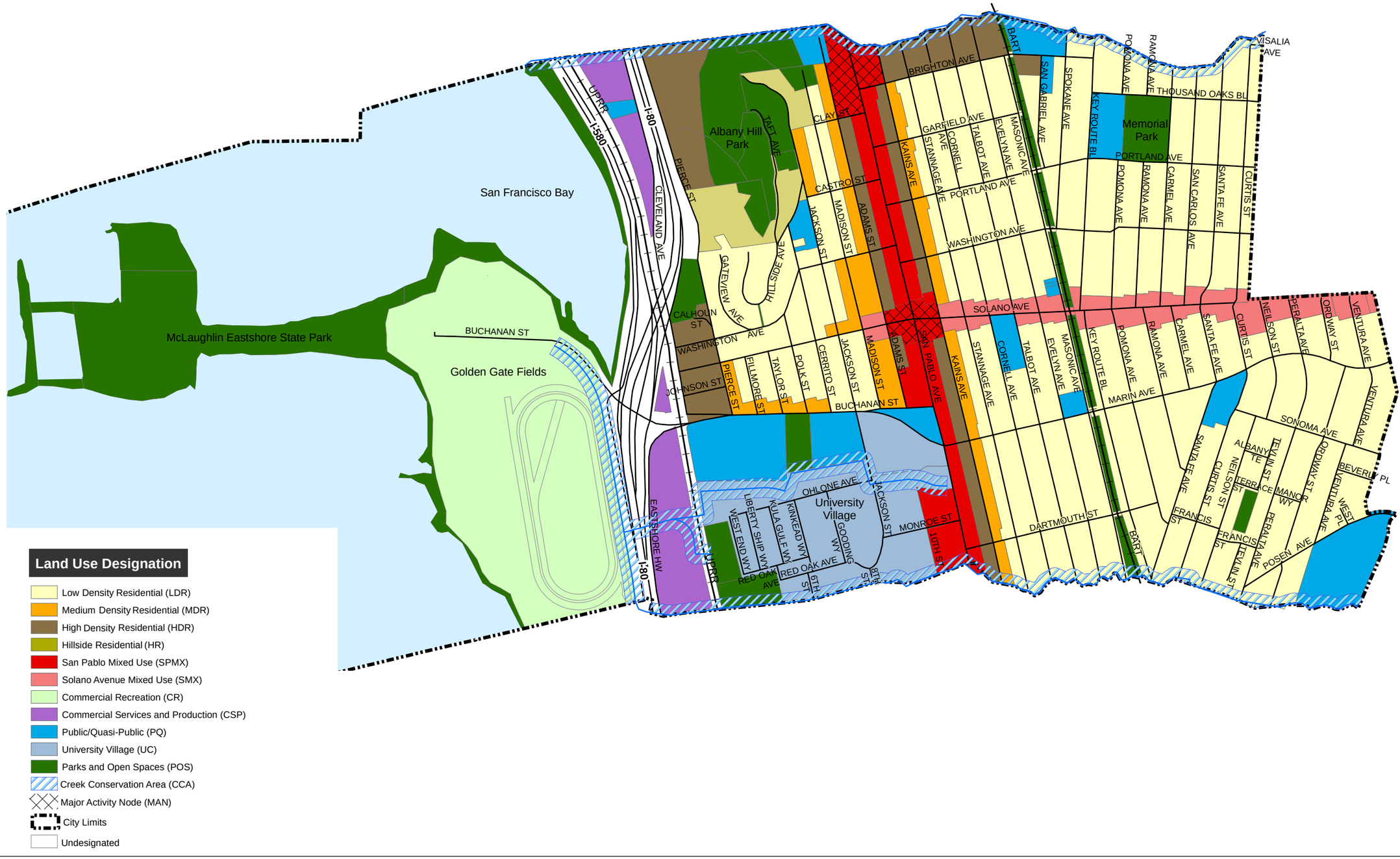
A Draft General Plan goal addresses Community Character and includes policies encouraging historic preservation, the enhancement of City gateways, protection of views and vistas, and improvements to streetscapes and commercial properties. A new policy under this goal provides guidance on the siting of wireless communication facilities.

Notable future actions recommended by this chapter include the development of multi-family design guidelines, special standards for small lots, an update to the San Pablo Avenue Design Guidelines, a comprehensive street tree program, a feasibility study for a historic preservation program, future consideration to allow construction of four-story buildings in the Solano Avenue/San Pablo Avenue commercial node, changes to the PRC zoning district, and market studies of the Solano Avenue/San Pablo Avenue business districts.

(1) New Land Use Designations and Policy and Map Changes. The Land Use Element identifies General Plan land use designations for the entire City based on policies of the Draft General Plan. The land use designations generally relate to the designations shown in the 1992 General Plan; however, some land use categories have been refined. Key changes to land use designations and the General Plan land use map are summarized below. Figure III-2 shows the Draft General Plan land use map.

Residential. The 1992 General Plan identified three residential land use designations (Low, Medium, High), plus two "Planned Development" land use designations on Albany Hill. A 2004 General Plan Amendment added a "Tower Residential" land use designation which applied to only one parcel (the Gateview condominiums), since the existing density on that site exceeded the "high density" range.

- The Draft General Plan identifies four residential land use designations: Low Density Residential; Medium Density Residential; High Density Residential; and Hillside Residential.
- The Low Density Residential category is equivalent to the existing low density category (0-17 units/acre).
- The Medium Density Residential category is equivalent to the existing medium density category (17-35 units/acre).
- The High Density category (35-87 units/acre) merges the "High" and "Tower" categories included in the 1992 General Plan, but the definition notes that the top (Tower) end of the density range is only permitted on the Gateview site; everywhere else, the high end of the range is 63 units/acre, which is consistent with the existing high density category.
- The Hillside Residential category merges the two "Planned Development" categories included in the 1992 General Plan. The definition notes that two zoning districts apply in this General Plan designation, with one applying to the west side of Albany Hill and the other applying to the east side.



Land Use Designation

- Low Density Residential (LDR)
- Medium Density Residential (MDR)
- High Density Residential (HDR)
- Hillside Residential (HR)
- San Pablo Mixed Use (SPMX)
- Solano Avenue Mixed Use (SMX)
- Commercial Recreation (CR)
- Commercial Services and Production (CSP)
- Public/Quasi-Public (PQ)
- University Village (UC)
- Parks and Open Spaces (POS)
- Creek Conservation Area (CCA)
- Major Activity Node (MAN)
- City Limits
- Undesignated

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FIGURE III-2

City of Albany General Plan EIR

Proposed 2035 General Plan Land Use Designations

SOURCE: CITY OF ALBANY, 2015.

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Mixed Use. The 1992 General Plan identifies two commercial land use designations (San Pablo Avenue General and Solano Avenue Community), one Planned Residential/Commercial land use designations, and a Commercial Node overlay. The Draft General Plan identifies two mixed use land use designations and eliminates the Planned Residential/Commercial category. It retains the Commercial Node overlay.

The General Commercial land use designation in the 1992 General Plan has been retitled the "San Pablo Avenue Mixed Use" designation in the Draft General Plan. The floor area ratio (FAR) and density ranges for this category in the 1992 General Plan have been carried forward to the Draft General Plan with a minimum density of 20 units/acre added.

The Community Commercial land use designation in the 1992 General Plan has been retitled the "Solano Avenue Mixed Use" designation in the Draft General Plan. The FAR and density ranges for this category in the 1992 General Plan have been carried forward to the Draft General Plan with a minimum density of 20 units/acre added.

The Planned Residential/Commercial (PRC) category included in the 1992 General Plan was eliminated because it was not substantively different than the General Commercial designation and was being used only to convey the City's preference for housing at a handful of sites. These sites continue to be candidate sites for housing, but that is communicated in a different way in the Draft General Plan (through their designation as "Housing Opportunity Sites" in the Housing Element and the continued higher floor area ratio allowance for projects incorporating housing in mixed use zoning districts).

The Commercial Node overlay (which is applied "on top" of other mixed use designations) continues to apply to areas where more ground floor intensity is desired.

Commercial Recreation. The 1992 General Plan included a Commercial Recreation category which applied to Golden Gate Fields. The Draft General Plan carries this category forward without any changes. Any changes to this category (or to the map designation) would require voter approval under Measure C.

Light Industrial. The 1992 General Plan included a Commercial Service Light Industrial land use designation. The Draft General Plan renames this category Commercial Services and Production. The allowed uses and intensities remain the same.

Public and Open Space. The 1992 General Plan included a Public/Quasi-Public land use designation. It further labeled each site with this designation with a symbol indicating whether the use was City Property, a Church, or an "Other" public land use. The Draft General Plan includes the same Public/Quasi-Public designation but drops the convention of specifying the nature of the use. Moreover, the designation no longer includes churches.

The 1992 General Plan identified the University Village/United States Department of Agriculture (USDA) site into four sub-categories. The USDA site was identified as "Research," and the Village was identified as "Residential/Recreational/Commercial," "Residential/Commercial," and "Residential/Recreational." The Draft General Plan designates the University Village site as its own land use category and does not break the site down into these sub-categories. The USDA site is treated separately as a Public/Quasi-Public use.

The 1992 General Plan includes a Parks and Recreation designation. The Draft General Plan includes a Parks and Open Space designation. The definitions are similar, although the new Parks and Open Space designation is defined so that private open space (such as conservation easements on Albany Hill) and University Village open space (community garden) may be included.

(2) General Plan Map Changes. The following discussion briefly describes changes reflected in the Draft General Plan Map.

- *Albany Middle School Site*. The 1992 General Plan identified the Albany Middle School site as High Density Residential. The Draft General Plan map changes the designation to Public/Quasi-Public to reflect the current use.
- *University Village Mixed Use Site.* The San Pablo Avenue frontage of the University Village (from Village Creek to Codornices Creek) has been changed from Institutional: Residential/Commercial to San Pablo Avenue Mixed Use to reflect the approved and anticipated use.
- *Churches*. The 1992 General Plan identified church uses as Public/Quasi-Public: Churches. The Draft General Plan map now identifies current or former church sites (including St. Albans, Albany Methodist, Mosaic Bay Church, and Bright Star Montessori) as Low Density Residential, which is consistent with their zoning and the common convention of mapping such parcels based on the surrounding prevailing uses.
- *AT&T Facility*. The 1992 General Plan mapped the AT&T Facility at Solano Avenue/ Ventura Boulevard as Public/Quasi-Public. The Draft General Plan identifies this facility as Solano Avenue Mixed Use.
- *Albany Hill*. The 1992 General Plan included property near Taft Avenue and Jackson Street as Planned Development. These areas are now part of the City-owned park on Albany Hill and have been re-designated as Parks and Open Space
- *University Village Community Garden*. The community garden at University Village was mapped as Commercial Services/Light Industrial in the 1992 General Plan and has been re-designated as Parks and Open Space in the Draft General Plan.
- *University Village Southwest Corner Fields.* The sports fields in the southwest corner of University Village were mapped as Commercial Services/Light Industrial in the 1992 General Plan and have been mapped as Parks and Open Space in the Draft General Plan to reflect the current use and the plans for future use.
- *Village Creek - Creek Conservation Overlay.* The Conservation Overlay on Village Creek has been realigned to reflect the realignment of the creek that took place when the University Village student family housing was reconstructed from 1999-2008.
- *Corporation Yard.* The Corporation Yard at 540 Cleveland Avenue was mapped as Commercial Services/Light Industrial in the 1992 General Plan and has been mapped as Public/Quasi-Public to reflect the planned construction of this facility.
- *Union Pacific Railroad Right-of-Way.* The Draft General Plan Map does not assign a land use designation to the UPRR Right-of-Way (ROW). This is consistent with freeway uses, which are undesignated in the 1992 General Plan and the Draft General Plan.

- *Light Industrial.* The Light Industrial (Commercial Services and Production) category has been updated to reflect the realignment of the I-80 freeway in the 1990s.
- *Pierce Street Park.* Pierce Street Park was mapped as I-80 freeway ROW in the 1992 General Plan and has been mapped as Parks and Open Space to reflect the planned use of the property.
- *Southwest Pierce Street Surplus Property.* Approximately half of the block bounded by Pierce Street, Washington Street, Calhoun Street, and Cleveland Avenue, was designated as part of the I-80 ROW on the 1992 General Plan. The Draft General Plan maps this area as High Density Residential to be consistent with the remainder of the block.
- *Major Activity Node Overlay.* The Major Activity Node designation has been mapped in the Draft General Plan on the west side of San Pablo Avenue from Clay Street extending north to El Cerrito. This change is a reflection of the City's desire for active ground floor uses facing San Pablo Avenue and a pedestrian-oriented environment that is conducive to transit use given the proximity to the El Cerrito BART station.
- *Town Center, Albany Bowl, and Creekside Village.* The Albany Town Center shopping plaza, Albany Bowl, and the Creekside Village sites were mapped as Planned Residential/ Commercial in the 1992 General Plan and are mapped as San Pablo Avenue Mixed Use in the Draft General Plan.

(3) Summary of Acreage Changes. Table III-1 shows the acreage in each land use category in the 1992 General Plan (as amended through 2004) and the acreage in each land use category in the Draft General Plan. A number of footnotes are provided to further elaborate on the differences.

b. Transportation Element. The Transportation Element is based on the principles of Complete Streets and the City's existing Complete Street policy. It incorporates the adopted Albany Active Transportation Plan and focuses on the link between transportation and land use. The Transportation Element seeks to balance the mobility needs of all users of the transportation system including: pedestrians, bicyclists, transit users, motorists, and persons with different mobility levels. It establishes Complete Streets operating procedures and design standards. Sustainability is emphasized though policies which seek to reduce vehicle miles traveled and improve connectivity. Examples of these policies include improvements to public transit and supporting infrastructure for car sharing, bike sharing, and low emission vehicles.

The Transportation Element emphasizes the concept of transportation choice including improvements to the bikeway systems consistent with previously adopted plans, maintenance of bike routes, improvements to sidewalks and paths, and more reliable public transit.

Transportation safety has been prioritized through policies that include enforcement, preventative maintenance, traffic safety education, improved street lighting, the development of cross-walks, the collection of better data on accidents, and improved school safety and security.

Policies are included to minimize the effects of vehicular traffic on the City's neighborhoods including reductions in cut-through traffic, traffic calming, ongoing pavement maintenance, and streetscape improvements. Vehicle flow is also addressed, including the continued designation of a network of local, collector, and arterial streets, regular monitoring of traffic conditions, ongoing pavement maintenance, and improvements which keep the road system operating safely and efficiently.

Table III-1: Acreage Comparison Between 1992 General Plan and Draft General Plan

Land Use Category	1992 General Plan Acreage	Draft General Plan Acreage	Difference
Low Density Residential [a]	466	467	+1
Medium Density Residential	37	37	0
High Density Residential (including "Tower") [b]	65	63	-2
Hillside Residential (formerly Planned Development 1 and 2) [c]	26	19	-7
San Pablo Avenue Mixed Use [d]	33	44	+11
Planned Residential-Commercial	6		-6
Solano Avenue Mixed Use [e]	29	30	+1
Commercial Recreation	137	137	0
Commercial Services and Production (formerly Commercial Service/ Light Industrial) [f]	35	30	-5
Public/Quasi-Public [g]	62	65	+3
Parks/Open Space [h]	132	150	+18
University Village (formerly three different categories)	75	80	+5
Undesignated (Freeway/Railroad ROW)	72	53	-19
TOTAL	**1,175**	**1,175**	**0**

[a] Increase due to the addition of several churches to this category
[b] Decrease partially due to removal of Albany Middle School from the High Density Residential category, offset by increase of 1.0 acre at Pierce Street parcel
[c] Decrease due to acquisition of parcels on the east side of Albany Hill as parkland
[d] Increase due to University Village mixed use development
[e] Increase due to designation of AT&T facility as Solano Mixed Use
[f] Decrease due to freeway realignment, Corporation Yard addition, removal of University Village ball field
[g] Increase due to Albany Middle School and Corporation Yard addition
[h] Increase due to Albany Hill, Pierce Street, University Village area addition

Notes:
– 1992 General Plan column includes General Plan Map Amendments made through 2004.
– Total excludes the Creek Conservation Overlay and the Major Activity Node overlay, to avoid double counting.

Source: Barry Miller, Planning Consultant to the City of Albany, 2015.

A new goal addresses parking management, with policies supporting shared parking, mechanical lifts, more attractive parking lots, un-bundling of multi-family residential units from their parking spaces, car-share spaces, and parking standards which are more compatible with other Draft General Plan goals. The Draft Plan also updates an existing action from the 1992 General Plan which called for a ballot measure to modify the Measure D parking standards. The revised action calls for such a ballot measure in 2016, with the aim of providing context-sensitive parking standards that consider factors such as zoning district, the number of bedrooms in each dwelling unit and proximity to transit.

Other follow-up actions also are identified in the Element, including revisions to the street standards, an update of the Trip Reduction Ordinance, consideration of a Transportation Management Association, a Bike Parking Ordinance, additional bikeway signage, sidewalk improvements, a transit gap study, improvement of bus shelters, preparation of an annual safety report, improvements to school pick-up and drop-off areas, a safe routes to school program, adoption of multi-modal levels of service, and a traffic calming program for the streets near El Cerrito Plaza.

c. Parks, Recreation and Open Space Element. Previously part of the Conservation Element, Parks and Recreation topics are treated in a separate Draft General Plan Element. The new Element builds on the adopted Parks, Recreation, and Open Space Master Plan, as well as policies carried forward from the 1992 General Plan.

A broad goal is included that advocates open space protection with a focus on the waterfront, Albany Hill, and the City's creeks. The Element supports the use of other types of open space in the City, such as courtyards, rooftops, yards, community gardens, and "public realm" areas such as plazas and streetscapes.

The Element advances a recommendation from the adopted Albany Hill Creekside Master Plan that the majority of the 11-acre private parcel on the west side of Albany Hill (the largest developable site in the City) be set aside in a conservation easement, with the allowable density transferred to the least sensitive part of the site. A park "hierarchy" is defined in the Element, including mini-parks, neighborhood parks, and community parks and a per capita service standard is established for parkland.

Policies in the Element support maintenance of existing parks, and the development of new types of parks to meet increased demand, such as linear parks, regional open spaces, and improvements to school yards. Policies also address the siting of new facilities in parks, the preservation of natural resources in parks, and the compatibility of park activities with surrounding uses, these topics were not included in the 1992 General Plan. The pending development of the Pierce Street Park on former Caltrans ROW is specifically mentioned.

Policies also address park management and maintenance, including the modernization of existing facilities, planning for diverse user groups, renovation of sports fields, and the provision of outdoor cultural space.

The Element calls for an update of the 2004 Parks, Recreation, and Open Space Maser Plan, and an update to the 1998 Memorial Park Master Plan. Policies on recreational programming are included, with an emphasis on responding to demographic change and meeting the needs of persons in different age groups. Policies on joint use are included, addressing public access to recreational facilities operated by the school district, the University of California, and adjacent cities. Most of the content is carried forward from the 2004 Parks, Recreation, and Open Space Master Plan. A new goal on trails has been added to the Draft General Plan, with policies emphasizing connectivity, better signage, user safety, and improved connections to the shoreline

d. Conservation and Sustainability Element. The scope of the 1992 Conservation Element has been expanded. While the 1992 General Plan included just a few policies on natural features, street trees, the waterfront, and Albany Hill, the Draft General Plan systematically addresses the City's uplands, wetlands, "urban forest," biological resources, and air and water quality conditions. It also addresses energy and water conservation, climate change, and waste reduction topics that were not addressed in the prior plan. There is a broader focus on sustainability, a planning concept that was still emerging when the 1992 General Plan was adopted.

Policies address soil management and erosion control, protection of Albany Hill, preservation of the waterfront, creek conservation, and respect for natural features in the development process. Several policies and actions also address the restoration of Cerrito and Codornices Creeks, although no specific projects are referenced.

A strong emphasis is placed on expanding the City's tree canopy, including tree preservation, tree planting, and improved tree maintenance programs. Bay-friendly landscaping is supported. The Draft General Plan also incorporates vegetation management recommendations for Albany Hill from the adopted Albany Hill Creekside Master Plan.

Policies to reduce air pollution are principally focused on reducing vehicle emissions and implementation of the Bay Area Clean Air Plan. The Element also addresses reduction of construction-related air pollution.

The Conservation and Sustainability Element provides a framework for ongoing stormwater management programs and water quality improvements, including elimination of stormwater discharges to the sanitary sewer system, elimination of sewer discharges to the storm drainage system, water quality education, low impact development, and implementation of best management practices to reduce runoff. The Element builds on existing General Plan policies to protect habitat and enhance wildlife diversity, and adds new policies to reduce light intrusion.

New policies are included that call for greener construction methods, measures to improve energy efficiency and maximize the use of renewable energy, and efforts to reduce potable water use and increase reclaimed water use. The use of cool roofs and photovoltaic energy systems is supported, and a number of energy-related action measures are included, such as a zero-emissions target for City buildings, consideration of Community Choice Aggregation, consideration of energy efficiency assessment and upgrade requirements, and an update to the Climate Action Plan (CAP).

Policies which are consistent with the adopted CAP acknowledge climate change and outline strategies to reduce greenhouse gas emissions. The greenhouse gas reduction target in the CAP is proposed to be updated to 2035 and 2050, although a CAP update will be required to identify the strategies needed to achieve that target. The Element sets the goal of eventually eliminating the landfilled disposal of solid waste, with a 90 percent diversion target by 2030.

e. Environmental Hazards Element. The Environmental Hazards Element carries forward policies from the 1992 General Plan to a greater extent than the other elements, as conditions have not changed substantially for this topic area. The policies continue to focus on hazard reduction, emergency preparedness, and noise. New policies address topics such as wildfire prevention, sea level rise, resilience of utilities, and hazardous building materials.

Policies in the Environmental Hazards Element support the siting, design and retrofitting of structures to reduce damage and the potential for casualties during an earthquake. Policies also recommend using soil properties as a design factor. A program to inventory and retrofit soft-story buildings is included.

The Element addresses flood hazards, including sound management of flood plain areas, and environmentally sensitive flood control projects. The vegetation management initiatives from the Albany Hill Creekside Master Plan are highlighted, with an emphasis on wildfire prevention. Defensible space and peak load water supply policies are included.

The Element seeks to reduce exposure of residents and employees to hazardous materials. This includes policies to consider past uses on commercial and industrial sites as part of the development review process, to design hazardous materials handling areas to minimize the risk of accidents, to support transportation safety, and to coordinate with appropriate regional, State and federal agencies to reduce risk levels.

An active and effective emergency response program is supported. This program would include maintenance of an Emergency Operations Center (EOC), citizen training programs (CERT), and a disaster recovery program. The Element suggests that the City update its Standard Emergency Management Systems Plan and its Local Hazard Mitigation Plan.

The Noise Goal from the 1992 Plan has been carried forward and updated. Policies call for noise-sensitive design, maintenance of a noise ordinance to address domestic noise, and measures to reduce noise exposure associated with freeways, the railroad, and BART. A noise compatibility table that indicates which land uses are acceptable, conditionally acceptable, and unacceptable based on ambient noise levels is included in the Element.

f. Community Services and Facilities Element. This is a new Element of the Draft General Plan, although some of the topics are addressed in the 1992 General Plan.

A new Draft General Plan goal related to schools has been added that focuses on coordination with the Albany Unified School District (AUSD) to maintain exceptional schools and high-quality facilities, and address physical planning issues, such as parking and student pick-up/drop-off. The policies in the Community Services and Facilities Element support joint use agreements for public access to school facilities during non-school hours, and further support the role of schools as neighborhood centers. Action programs call for additional discussions with the AUSD on the future of Albany Children's Center and the now vacant San Gabriel site. Action programs also call for working with AUSD as Marin School and Ocean View School are reconstructed to meet current seismic standards and technology needs.

Policies address provision of high quality police, fire, and emergency medical services (EMS). Some of these policies are carried forward from the 1992 General Plan Safety Element; however, most of the content, including policies on community policing, youth relations, crime prevention through environmental design, traffic safety, and mutual aid, are new.

A new goal addressing civic facilities has been added. Policies cover City-owned buildings such as the senior center, the community center, and City Hall. The intent is to promote coordinated facility planning and anticipate physical needs based on expected growth forecasts.

The co-location of different services in the same facilities is supported for efficiency and economies of scale. The Element also supports pursuit of new funding sources, periodic facility assessments, and coordination with the University of California on facility development. Policies specifically highlight the need for services for children, youth, and seniors. Existing 1992 General Plan policies on child care and senior care are carried forward.

A new goal related to Arts and Culture has been developed. Policies to increase the visibility of the arts, provide programmed outdoor space for arts, recognize art as an economic development tool, and sustain support for public art have been adapted from the Public Arts Master Plan for this Element. A new goal related to Infrastructure has been added. Policies address the adequacy of the water, sewer, drainage, and telecommunication systems, and the need to maintain, and in some cases expand, these systems as development takes place. Reclaimed water and green infrastructure are also addressed. The Element supports development of the approved City maintenance center at the Corporation Yard (540 Cleveland Avenue).

g. Waterfront Element. This new Element is based largely on the 2002 Eastshore State Park Plan and the 1992 Albany General Plan. Other policies affecting the waterfront are included and referenced in this Element. Under the provisions of voter-approved Measure C, the City cannot change land use designations at the waterfront without a citywide vote. Thus, the Waterfront Element is largely a summary of existing policies governing the area. No changes to existing policies are proposed, although some policies are articulated in slightly different language for clarification.

Consistent with existing planning documents, a goal has been included to transform the waterfront, including the Albany Bulb, Neck, and Plateau areas, into a State park. The policies in the Waterfront Element emphasize environmental sensitivity, environmental education, view protection, and hazard remediation and support the transition planning activities that are now underway. Another goal, also drawn from existing planning documents, focuses on enhanced recreational opportunities at the waterfront. Land uses and activities that are envisioned by the State Park Plan are addressed in the Element and include hiking, picnicking, and swimming.

Other existing goals and policies have been carried forward in this Element, including the improvement of access to and along the shoreline, and the protection of shoreline natural resources. Policies address the development of new trails and water access points, and better connections between Albany's neighborhoods and the shoreline.

Natural resource policies focus on the unique plant and animal communities in the waterfront area. Marine habitat protection also is addressed and policies that cover the buffering of sensitive habitat areas from recreational improvements are included.

A related goal calls for sustainable park planning and includes acknowledgment of the area's limited carrying capacity, consideration of sea level rise, and the application of green building principles to any future structural improvements that may be considered.

Goal and policies related to Golden Gate Fields are drawn from the 1992 General Plan. The policies propose no changes to the existing racetrack. The Element notes that in the event such changes are proposed, a citywide planning process and vote will be required.

3. Housing, Employment and Population Projections

For the purposes of evaluating in this Draft EIR the potential effects of the proposed Draft General Plan land use designations, goals, policies and actions, the City has prepared estimated 2035 growth projections for new housing units, jobs, and population and likely levels of development of the proposed Draft General Plan. The future projections were identified by the City based on a combination of sources, including approved development plans, the inventory of housing sites in the 2015-2023 Housing Element, and the most current Association of Bay Area Governments (ABAG) projections for jobs and households.

a. Citywide Growth Projections. The following describes the process and assumptions concerning Citywide growth that are included in Table III-2. The process of preparing the year 2035 projections included an understanding and accounting of existing development and land utilization patterns. The 2015-2023 Housing Element included an extensive analysis of vacant and underutilized land, taking into consideration such factors as zoning, structure coverage, and land to improvement value ratio. Twenty sites zoned for either high density mixed use or high density residential development were identified, with an expected yield of 406 housing units. It should be noted that the "expected yield" is based on recent projects in the City (roughly 32 units/acre) rather than the maximum allowable yield (63 units/acre). The Housing Element also identified the capacity for 10 single-family units on vacant lots, and 32 second units (assuming four per year for the next eight years).

Table III-2: Population, Housing and Jobs Baseline (2014) and 2035 Draft General Plan Summary

Unit	2014 Existing	2035 Draft General Plan	Net Difference
Population	18,585	20,385	1,800
Housing Units	7,845	8,660	815
Jobs	5,070	5,920	850

Note: Housing units include vacant and occupied units.

Source: City of Albany, 2015; Barry Miller, Planning Consultant to the City of Albany, 2015; LSA Associates, Inc., 2015.

Assumptions were made about likely housing opportunities during 2023-2035. Approximately 365 additional housing units beyond those identified on Housing Element sites were added to the projections. These units were assigned to various sub-areas of the City based on land utilization patterns and Draft General Plan policies.

For employment, ABAG's Projections 2040 was used to establish a control total for the incremental job growth expected between 2010 and 2035.[20] This job growth was distributed to sites in the City based on known plans (for instance the approved retail center at the University Village Mixed Use project), assumptions about ground floor commercial space in future mixed use projects along San

[20] The Draft General Plan horizon year is 2035, but the Alameda County Transportation Commission traffic model is based on a horizon year of 2040. Accordingly, the traffic projections in this Draft EIR extrapolate the 2035 job and household forecasts to the year 2040 for traffic forecasting purposes, resulting in slightly higher trip generation forecasts and traffic volumes, as local and regional growth in 2035-2040 has been included.

Pablo and Solano Avenues, and Draft General Plan policies supporting additional employment growth in the industrial/commercial service area along the Union Pacific Railroad.

The projections assume no change from the existing conditions at Golden Gate Fields, consistent with Measure C.

The Citywide projections are the basis for measuring the environmental effects of the Draft General Plan. As shown in Table III-2, the City has determined that proposed land use designations in the Draft General Plan would theoretically allow for the development of 850 new jobs and 815 new housing units, for a total of 5,920 jobs and 8,660 housing units in the City by 2035. These housing projections include Albany's Regional Housing Needs Allocation prepared by ABAG of 335 units for the City's current Housing Element planning cycle of 2014-2022. Table III-3 summarizes the projected 2015-2035 development potential in Albany by subarea.

Table III-3: Estimated Development Potential by Subarea

Subarea	Housing Units	Jobs
University Village	275	270
San Pablo Avenue frontage	*(175)*	*(190)*
Interior areas	*(100)*	*(80)*
San Pablo Avenue corridor	300	250
Solano Avenue corridor	50	100
Albany Hill west side/Pierce Street	100	0
North of Brighton	30	0
Cleveland/Eastshore	0	150
Waterfront	0	0
Scattered infill, including second units	60	80
Totals	**815**	**850**

Source: Barry Miller Consulting, 2014.

b. Comparison of General Plan Projections to Plan Bay Area Projections. The official demographic forecasts for the San Francisco Bay Area are the Plan Bay Area projections (also called Projections 2013) developed by ABAG. The focus of the projections is the 30-year growth increment from 2010-2040. However, the projections include five-year intervals, allowing a comparison of growth assumptions for 2015-2035 between Plan Bay Area and the Albany Draft General Plan.

The Draft General Plan growth projections are slightly lower than the Plan Bay Area population and households projections, but match the employment projections (850 new jobs). Plan Bay Area shows 890 new households in Albany between 2015 and 2035 (with another 230 households between 2035 and 2040), compared to the Draft General Plan total of 775 households (assuming a 5 percent vacancy rate, the 815 additional housing units equates to approximately 775 new households). The City's projections are believed to be more accurate than Plan Bay Area projections and are used for the purposes of this CEQA analysis, as they consider detailed site-specific information on land availability and constraints.

G. ANTICIPATED ADOPTION AND IMPLEMENTATION

The Albany Planning and Zoning Commission and City Council will review this Draft EIR along with the accompanying draft version of the General Plan. The Planning and Zoning Commission will first review the Final EIR and consider whether to recommend certification to the City Council. The Planning and Zoning Commission will then provide a recommendation on the Final EIR and the Draft General Plan to the City Council, who will consider certification of the Final EIR and adoption of the Draft General Plan. The City will be responsible for implementing the General Plan through the development review process and the monitoring and issuance of permits.

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IV. SETTING, IMPACTS, AND MITIGATION MEASURES

This chapter contains an analysis of each environmental topic that has been identified as posing potentially significant impacts. As such, this chapter constitutes the major portion of this Draft EIR. Sections A through N of this chapter describe the environmental setting of the City of Albany as it relates to each specific environmental topic. The impacts resulting from implementation of the Draft General Plan and mitigation measures that would reduce impacts of the project, as appropriate, are also presented in each of the sections.

DETERMINATION OF SIGNIFICANCE

Under CEQA, a significant effect is defined as a substantial, or potentially substantial, adverse change in the environment.[1] The CEQA Guidelines direct that this determination be based on scientific and factual data. Each impact and mitigation measure section of this chapter is prefaced by a summary of criteria of significance. Staff from the City of Albany and the consulting firm of LSA Associates, Inc., have developed these criteria in a cooperative process using the CEQA Guidelines.

ISSUES ADDRESSED IN THE DRAFT EIR

The following environmental issues are addressed in this chapter:

A. Land Use, Planning Policy, and Agricultural Resources
B. Population and Housing
C. Transportation and Circulation
D. Air Quality
E. Greenhouse Gas Emissions
F. Noise and Vibration
G. Geology, Seismicity, and Mineral Resources
H. Hydrology and Water Quality
I. Hazards and Hazardous Materials
J. Biological Resources
K. Cultural Resources
L. Public Services and Recreation
M. Utilities and Infrastructure
N. Visual Resources

[1] CEQA Section 21068

FORMAT OF ENVIRONMENTAL TOPIC SECTIONS

Each environmental topical section comprises two primary parts: (1) Setting, and (2) Impacts and Mitigation Measures. An overview of information included in these two parts is provided below:

- *Setting*. The setting section for each environmental topic generally provides a description of the applicable physical setting (e.g., existing land uses, existing soil conditions, existing traffic conditions) for the City of Albany at the beginning of the environmental review process. An overview of regulatory considerations applicable to each specific environmental topic is also provided.
- *Impacts and Mitigation Measures*. The impacts and mitigation measures section for each environmental topic presents a discussion of the impacts that could result from implementation of the Draft General Plan. The section begins with the criteria of significance, which establish the thresholds to determine whether an impact is significant. With thresholds established, this section then presents the impacts from the proposed project and mitigation measures, as appropriate. The potential impacts of the proposed project are identified as either less-than-significant impacts (which do not require mitigation measures) or significant impacts (which do require mitigation measures).

Impacts are numbered and shown in bold type, and the corresponding mitigation measures are numbered and indented. Impacts and mitigation measures are numbered consecutively within each topical analysis and begin with an acronym or abbreviated reference to the impact section (e.g., LAND). The following symbols are used for individual topics:

LAND	Land Use, Planning Policy, and Agricultural Resources
POP	Population and Housing
TRANS	Transportation and Circulation
AIR	Air Quality
GHG	Greenhouse Gas Emissions
NOI	Noise and Vibration
GEO	Geology, Seismicity, and Mineral Resources
HYD	Hydrology and Water Quality
HAZ	Hazards and Hazardous Materials
BIO	Biological Resources
CULT	Cultural Resources
PS	Public Services and Recreation
UTL	Utilities and Infrastructure
VIS	Visual Resources

CUMULATIVE IMPACT ANALYSES

CEQA defines cumulative impacts as “two or more individual effects which, when considered together, are considerable, or which can compound or increase other environmental impacts.” Section 15130 of the CEQA Guidelines requires that an EIR evaluate potential environmental impacts that are individually limited, but cumulatively significant. These impacts can result from the proposed project alone or together with other projects. For the evaluation of cumulative impacts, CEQA allows the use of either a list of past, present, or reasonably anticipated relevant projects, including projects outside

the control of the lead agency, a summary of the projections in an adopted planning document or a thoughtful combination of the two. The cumulative impacts analysis is included in each environmental topical section. For this Draft EIR, the cumulative analysis is based on Draft 2035 General Plan land use for Albany and the Association of Bay Area Governments (ABAG) land use projections for adjacent jurisdictions. In the case of transportation (and the air quality, greenhouse gas, and noise analyses, which rely on forecasts of Vehicle Miles Traveled and traffic volumes), the projections reflect a more conservative (i.e., higher) impact that incorporates ABAG's 2040 projections for communities outside Albany. This approach was necessary to align EIR traffic modeling with the Alameda County Transportation Commission model (which uses Year 2040 as its horizon).

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A. LAND USE, PLANNING POLICY, AND AGRICULTURAL RESOURCES

This section describes existing land uses within the City of Albany (City), defines the existing regulatory context, identifies potential land use, policy, and agricultural resources impacts, and recommends mitigation measures, where appropriate.

1. Setting

The following section describes the existing land uses and regulatory context within the City of Albany and vicinity.

a. Existing Land Use. Albany is the northernmost city in Alameda County and is located on the east shore of the San Francisco Bay. The city borders the Contra Costa County cities of Richmond on the northwest and El Cerrito on the north, and the Alameda County City of Berkeley on the east and south. A small portion of the northern boundary abuts the unincorporated community of Kensington. The western side of Albany fronts the San Francisco Bay. Land uses, building types, and densities are similar to those in the adjacent cities. The city is generally flat except for Albany Hill, which rises to approximately 330 feet in the western part of the city.

Albany's incorporated area is 5.5 square miles. However, 3.7 square miles (67.2 percent) of this total is water, and 1.8 square miles (32.8 percent) is land. Albany's population density is almost 10,400 persons per square mile. Of the 1.8 square miles (1,144 acres), 36.6 percent comprises residential uses, 9.8 percent comprises open space and recreation uses, 4.3 percent comprises office/commercial/ mixed uses, 11.6 percent comprises institutional/public/governmental uses, 1.0 percent comprises industrial uses, and 1.7 percent comprises vacant land. Approximately 291 acres, 25.4 percent of total land, consists of transportation related uses including freeway, rail, and local street right-of-ways. Table IV.A-1 provides additional details of existing land uses within the City.

Despite its small geographic area, Albany has a diverse land use pattern. The western portion of the city, consisting of approximately 180 acres west of the Interstate 80 (I-80) and Interstate 580 (I-580) freeways, consists of waterfront open space and the Golden Gate Fields racetrack. I-80 itself is a significant land use and physical presence in the city, cutting a wide swath across Albany's west side and effectively separating neighborhoods from the waterfront. A relatively narrow "belt" of industrial land uses sits alongside the freeway, running north-south and parallel to the Union Pacific railroad. Beyond this belt, Albany Hill rises in the northwest quadrant, while the southwest quadrant includes large-scale public land uses. The lower slopes of Albany Hill include high- and medium-density development, while the ridgeline itself is protected as open space. The eastern two-thirds of the city contains residential neighborhoods of varying densities, with single-family uses predominating. Two major commercial corridors cross through this area: San Pablo Avenue runs north-south through the City, while the Solano Avenue commercial district runs perpendicular from San Pablo Avenue eastward into the City of Berkeley.

Table IV.A-1: Existing Land Use within the City of Albany

Land Use	Acres	Percent of Total Area
Single-Family Detached Residential	343	30.0
Single-Family Attached/2-4 Unit Buildings	35	3.1
Multi-Family Residential	41	3.6
Mixed Use (residential above retail)	3	0.3
Commercial and Office	47	4.1
Industrial	12	1.0
University Village	77	6.7
State and Federal Facilities	19	1.7
Commercial Recreation (Golden Gate Fields)	107	9.4
Schools and City Buildings	23	2.0
Institutional/Churches	14	1.2
Vacant Land	20	1.7
Active Open Space	21	1.8
Passive Open Space	91	8.0
Freeway and Rail	86	7.5
Local Streets	205	17.9
TOTAL	**1,144**	**100.0**

Source: Alameda County Parcel Data, 2014. Barry Miller Consulting, 2014.

b. Regulatory Context. This subsection describes the State, regional, and local plans and regulations that address land use and development within and adjacent to the City of Albany. A brief description of these regulatory documents is provided.

(1) State. Relevant State planning documents and regulations are described below.

California Farmland Mapping and Monitoring Program. The California Department of Conservation's Division of Land Resource Protection established the State Farmland Mapping and Monitoring Program (FMMP) in 1982. The FMMP conducts comprehensive mapping of State farmland. The intent of the FMMP is to provide decision-makers with information regarding State agricultural resources, including data on existing farmland, and farmland development trends. The FMMP compiles maps depicting important farmland, based on United State Department of Agriculture (USDA) soil surveys and other physical data, such as climate, growing season, and water supply.

The FMMP divides land into seven categories, including: 1) Prime Farmland; 2) Farmland of State-wide Importance; 3) Unique Farmland; 4) Farmland of Local Importance; 5) Grazing Land; 6) Urban and Built-Up Land; and 7) Other Land. The majority of City of Albany is designated Urban and Built-Up Land with the exception of the Albany Neck and Bulb designated as Other Land.[1] These designations apply to developed areas that are not suitable for agriculture or livestock grazing. Figure IV.A-1 depicts Important Farmland Map for the City of Albany as designated by the California Department of Conservation's Division of Land Resource Protection. As shown, no areas of farmland have been identified in the City of Albany.

[1] California, State of, 2012. Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program. Alameda County Important Farmland 2012 (map). July.

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FIGURE IV.A-1

Albany City Limit

Urban and Built Up Land

Other Land

N

NOT TO SCALE

SOURCES: STATE OF CALIFORNIA DEPARTMENT OF CONSERVATION, 2012; LSA ASSOCIATES, INC., 2015.

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City of Albany General Plan EIR

Important Farmland Map

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(2) Regional. Relevant regional planning documents and regulations are described below.

Eastshore State Park General Plan. The Eastshore State Park (Park) extends 8.5 miles along the East Bay shoreline from the Bay Bridge in Oakland to Richmond. The East Bay Regional Park District (EBRPD) manages and operates the Park land and facilities. The Park includes 1,854 acres of uplands and tidelands along the waterfronts of Oakland, Emeryville, Berkeley, Albany and Richmond. The Eastshore State Park General Plan identifies the future preservation, conservation, and recreation uses and improvements for the Park. The Eastshore State Park General Plan establishes goals and guidelines for the Albany Area Management Zone that includes Albany Beach, Albany Plateau, Albany Neck/Bulb and Albany State Marine Reserve. See Table IV.A-2 for the acres of land within the Albany Management Zone designated for preservation, conservation, and recreation uses.[2]

Table IV.A-2: Eastshore State Park General Plan: Albany Area Land Use Summary

Land Use Designation	Upland Area	Tideland Area	Total Area
Preservation Area	11 acres	179 acres	190 acres
Conservation Area	57 acres	18 acres	75 acres
Recreation Area	20 acres	394 acres	414 acres

Source: California Department of Parks and Recreation, *Eastshore State Park General Plan*, 2004.

San Francisco Bay Plan. The San Francisco Bay Plan (Bay Plan) is a policy tool that, under the provision of the McAteer-Petris Act, allows the San Francisco Bay Conservation and Development Commission (BCDC) to "exercise its authority to issue or deny permit applications for placing fill, extracting materials, or changing the use of any land, water, or structure within the area of its jurisdictions." BCDC's area of jurisdiction includes all the San Francisco Bay, a shoreline band extending 100 feet from the water, and salt ponds, managed wetlands, and certain waterways associated with the Bay. The Bay Plan stipulates: "Any public agency or private owner holding shoreline land is required to obtain a permit from the Commission before proceeding with (shoreline) development."

The City's shoreline is within the jurisdiction of BCDC and associated development activities are regulated by the Bay Plan. The Bay Plan Map 4 policies that pertain to Albany and its immediate surroundings include the following:

- **Policy 16. Eastshore State Park.** Develop Park from Bay Bridge to Marina Bay in Richmond for multiple uses, including recreation, wildlife and aquatic life protection. Protect wildlife and aquatic life values at sites such as Emeryville Crescent, Hoffman Marsh and Albany Mudflats. Provide signage regarding fish consumption advisories for anglers.
- **Policy 42. Regional Restoration Goal for Central Bay.** Protect and restore tidal marsh, seasonal wetlands, beaches, dunes and islands. Natural salt ponds should be restored on the East Bay shoreline. Shallow subtidal areas (including eelgrass beds) should be conserved and enhanced. Wherever possible tidal marsh habitats should be restored, particularly at the mouths of streams

[2] California Department of Parks and Recreation, 2002. *Eastshore State Park General Plan.* Available online at: www.ebparks.org/Assets/files/ebrpd_eastshore_state_park_general_plan_revised_10-2004.pdf (accessed June 16, 2015). December 6. Revised October 2004.

where they enter the Bay and at the upper reach of dead-end sloughs. Encourage tidal marsh restoration in urban areas. See the Baylands Ecosystem Habitat Goals report for more information.

Sustainable Communities Strategy/Plan Bay Area. Pursuant to SB 375, the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC), in partnership with the Bay Area Air Quality Management District (BAAQMD) and the Bay Conservation and Development Commission (BCDC), have prepared the Bay Area's Sustainable Communities Strategy (SCS). The SCS titled "Plan Bay Area," adopted in July 2013,[3] will serve as the regional blueprint for transportation, housing and land use focused on reducing driving and associated GHG emissions.

Plan Bay Area is a long-range plan that specifies the strategies and investments to maintain, manage, and improve the region's transportation network – which includes bicycle and pedestrian facilities, local streets and roads, public transit systems, and highways. Plan Bay Area also calls for focused housing and job growth around high-quality transit corridors, particularly within areas identified by local jurisdictions as Priority Development Areas (PDAs). PDAs in Albany are identified along San Pablo and Solano Avenues. This land use strategy is anticipated to enhance mobility and economic growth by linking the location of housing and jobs with transit, thus offering a more efficient land use pattern around transit and greater return on existing and planned transit investments.

(3) Local. Relevant local planning documents include the 1992 General Plan and Zoning Ordinance.

1992 General Plan. The 1992 General Plan includes a Land Use Map that identifies the desired patterns of land use in Albany by the Plan's horizon year of 2010. Figure IV.A-2 shows the 1992 General Plan Land Use Map. The categories provide the foundation for Albany's zoning map and regulations and have helped shape development decisions for the last 23 years. In most cases, the General Plan Map matches existing land uses; however, in a few locations (e.g., the 11-acre parcel south of Gateview Towers), the map designations reflect desired changes to existing use. In 2004, the General Plan was amended to add a new category for Residential Towers, and to modify a number of the category definitions.

The following categories are listed in the 2014 Albany Land Use Baseline Report[4] and will be superseded once the new General Plan is adopted:

- Low Density Residential. Consists of single-family residences at densities up to 17 dwelling units per net acre.
- Planned Development (6 dwelling units/acre) & Planned Development (9 dwelling units/acre). This category has been applied to Albany Hill to allow for creative residential design which responds to the natural landform and the desire to retain open space on the ridgeline. Residential density was reduced from 12-18 dwelling units per acre to 6-9 units per acre through a voter initiative in 1994.

[3] Association of Bay Area Governments, 2013. Metropolitan Transportation Commission, *Draft Plan Bay Area, Strategy for a Sustainable Region.* March. Adopted with revisions July 18.

[4] Albany, City of, 2014. *2014 Albany Land Use Baseline Report.*

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FIGURE IV.A-2

City of Albany General Plan EIR

1992 General Plan Land Use Map, As Amended

SOURCE: CITY OF ALBANY, 2015.

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- Medium-Density Residential. Multi-Family Housing that includes duplexes, and 3-6 unit apartment buildings. Ranges from 17-34 dwelling units per acre, with an average of 27 units per acre.
- High-Density Residential. Multi-Family Housing Density range is 17 to 63 units per net acre, with an average of 39 dwelling units per acre.
- Residential Towers. This category was added through a 2004 General Plan Amendment to recognize that the existing densities at Gateview (555 Pierce) are 87 dwelling units per acre. It applies only to the 466-unit Gateview development.
- General Commercial. Region-serving commercial land uses. Improvement to visual appearance and intensification of uses are both desired. Allowable Floor Area Ratio (FAR) is 0.95, with a 38-foot height limit. In 2004, this category was amended to specifically note that residential and mixed-use development is allowed, with an FAR of 2.25 (and bonuses allowing up to 3.0), provided the commercial portion does not exceed 0.95.
- Community Commercial. Main Street character, with a variety of local-serving retail, service, and office uses, interspersed with apartments. Recommended maximum FAR is 1.25, with a 35-foot height limit. In 2004, this category was amended to allow mixed-use development with an FAR up to 2.0 and to allow projects that are mostly residential up to a FAR of 1.25, with a note that "housing on the ground floor of the Solano Avenue frontage is not encouraged."
- General Commercial/Community Node. This designation was created through a 2004 amendment to the General Plan Nodes which were identified around the intersections of Solano Avenue with San Pablo Avenue, Masonic Avenue, and Santa Fe Avenue. There are areas where more intense pedestrian-oriented retail and mixed-use development could be considered.
- Planned Residential Commercial (PRC). This category encourages redevelopment of existing commercial uses on the San Pablo corridor with mixed-use developments comprised of street-level retail with high-density residential uses on rear street frontages and second floors. These areas are seen as suitable for high-density housing given the proximity to services and transit. In addition, PRC areas provide a transition from commercial uses on San Pablo to medium-density residential uses on adjacent streets. No density range is given in the 1992 Plan.
- Commercial/Service/Light Industrial. Permits a variety of retail, repair, manufacturing, and live-work uses. Generally located along the railroad tracks.
- Commercial Recreation. This designation applies to Golden Gate Fields and its environs. A maximum FAR of 0.5 applies.
- Public/Institutional Research. This designation applies specifically to the USDA Research facility located on Buchanan Street.
- Public/Institutional/Residential-Commercial. Medium residential densities up to 34 units/ acre, plus retail and office development at a maximum FAR of 0.95.
- Public/Institutional/Residential-Recreational. Medium residential densities up to 34 units/ acre, including recreational facilities and community centers, with FAR up to 0.95 for recreational buildings.

- Public/Institutional/Residential-Recreational-Commercial. Medium residential densities up to 34 units/acre, including recreational facilities and community centers, with FAR up to 0.95 for recreational buildings, retail, and office development.
- Public/Quasi-Public/Church & Public/Quasi-Public/City Property (PQ). Includes schools, churches, utilities, and City property with a maximum FAR of 0.95. The General Plan Map further calls out which PQ parcels are City properties (City Hall, library) and churches. A 2004 amendment added Caltrans, Union Pacific, and BART lands to this category, although Caltrans properties still appear "undesignated" on the General Plan Map.
- Parks. This category includes City parks, including portions of Albany Hill and the waterfront. Buildings up to 35 feet in height are permitted, with a maximum coverage of 25 percent, on a case-by-case basis.
- Private Open Space. This category applies to permanent private open space set aside when the Gateview, Bridgewater, and Bayside Commons developments were approved. It also includes two parcels owned by the University of California including the 9.5 acre Natural Resource Research land and Dowling Park.

The General Plan Map shows a "Watercourse Overlay District" which runs along Codornices and Cerrito Creeks and a portion of Village Creek. A Creek Conservation zoning overlay has been applied and has been mapped along Codornices and Cerrito Creek, corresponding to the Watercourse Overlay District.

Table IV.A-3 shows the acreage in each of these categories as of 2014, reflecting the 1992 General Plan as amended. The total acreage exceeds the land area shown in Table IV.A-1 by about 30 acres since it designates partially submerged wetlands to the west of I-580 as "parks and recreation." The principal difference between the totals shown in Table IV.A-3 and Table IV.A-1 is that streets are included in each category in Table IV.A-3. Thus, the planned "Low-Density Residential" acreage in Table IV.A-3 is about one-third greater than the existing "Single-Family Residential" acreage in Table IV.A-1. There are also several unique categories in Table IV.A-3 not identified in Table IV.A-1. For instance, University Village is divided into three separate sub-categories in the 1992 General Plan, and churches and City properties are identified as specific land uses. The 1992 General Plan also identifies a "Planned Residential-Commercial" designation on the Albany Town Center Shopping Center and the Albany Bowl/Alta Bates Medical Center sites (along San Pablo Avenue) and a "Commercial Node" around the San Pablo Avenue/Solano Avenue intersection.

Just over half of Albany's land area (50.2 percent) has a residential General Plan designation. Of this total, about three-quarters is "Low-Density" (less than 17 dwelling units per acre), while the remainder is either in higher density categories or in special categories for Albany Hill. Approximately 6 percent of the city is designated with commercial categories, while 3 percent is designated with commercial-light industrial. The "Commercial Recreation" designation is applied to 11.7 percent of the City's land area, encompassing not only Golden Gate Fields but much of the plateau area now owned by EBRPD. Changing the designation on the EBRPD land to Parks and Open Space could potentially require a citywide vote under Measure C.

Table IV.A-3: Acreage in 1992 General Plan Land Use Categories (as Amended through 2014)

1992 General Plan Land Use Category	Acres	Percent of Total
Low-Density Residential	467.8	39.8
Medium-Density Residential	37.0	3.1
High-Density Residential [a]	60.1	5.1
Tower Residential	4.7	0.4
Planned Development (6 dwelling units/acre)	8.7	0.7
Planned Development (9 dwelling units/acre)	15.3	1.3
General Commercial	28.0	2.4
Community Commercial	29.3	2.5
Planned Res/Commercial	7.1	0.6
Commercial Node [a]	4.8	0.4
Commercial Recreation	137.4	11.7
Commercial Service/Lt Industrial	34.5	2.9
Institutional Uses		
Public/Quasi-Public (General)	39.3	3.3
Research	17.1	1.5
Residential/Recreational/Commercial	11.5	1.0
Residential/Commercial	18.9	1.6
Residential/Recreational	44.3	3.8
City Property	4.2	0.4
Churches	1.5	0.1
Parks and Recreation	131.0	11.1
Watercourse Overlay District [b]	–	–
Undesignated (Freeway)	72.4	6.2
Total [c]	1,174.9 [d]	99.9 [e]

Notes:
[a] General Plan Amendments in 2004 added the "Residential Towers" category and the "Commercial Node" category.
[b] Watercourse Overlay District is an "overlay" category and the area with this designation is counted in other rows in this table.
[c] Most of the differences between acreages in Table IV.A-1 and in Table IV.A-3 are attributable to the inclusion of street right-of-ways within the total for each category Table IV.A-3. Streets are not a 1992 General Plan land use category.
[d] Total shown here exceeds total in Table IV.A-3 due to assignment of "Parks and Recreation" designation to approximately 30 acres of partially submerged wetlands on the perimeter of Hoffman Marsh (west of I-580).
[e] Please note column does not total 100 percent due to rounding.

Source: Barry Miller Consulting, City of Albany, 2014.

Public and institutional uses also represent 11.7 percent of the land on the 1992 General Plan Map. This land use includes most of University Village, the USDA Lab, the Orientation Center for the Blind, public and private school properties, City-owned facilities, and churches. Another 11 percent of the City is designated for Parks and Recreation, including the Albany Hill ridgeline, Eastshore State Park, and City-owned parks. Just over 6 percent of the City, corresponding to the I-80 and I-580 right-of-ways, appears to be "undesignated" on the 1992 General Plan Map. However, a 2004 amendment clarified that this area had a "Public" designation.

Zoning Ordinance. The City's Zoning Ordinance acts as an implementation tool for the General Plan's Land Use Element. The Zoning Ordinance is located in Chapter XX, Section 20.04 of the Albany Municipal Code and regulates development type, density, and land use through development standards. Development standards found in the Albany Zoning Ordinance include

setbacks, lot area, lot width, density, floor area ratio, site coverage, landscaping and open area requirements, height limits, storage, and parking. The Zoning Ordinance organizes zoning districts into four categories: residential; commercial; other; and overlay.

2. Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to land use and planning policy that could result from implementation of the Draft General Plan. The section begins with the criteria of significance, which establish the thresholds to determine if an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and the recommended mitigation measures, if required. Cumulative impacts are also addressed.

a. Criteria of Significance. Development of the proposed project would result in a significant impact related to land use, planning policy, or agricultural resources if it would:

- Disrupt or physically divide an established community;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect;
- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
- Conflict with existing zoning for agricultural use, or a Williamson Act contract; or
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

b. Project Impacts. The following section provides an evaluation and analysis of the potential impacts of the Draft General Plan for each of the criteria of significance listed above.

(1) Divide an Established Community. The physical disruption or division of an established community typically refers to the construction of a physical feature (such as an interstate highway or railroad tracks) or removal of a means of access (such as a local road or bridge) that would impair mobility within an existing community, or between a community and outlying areas. For example, the construction of an interstate highway through an existing community could constrain travel from one side of the community to another. Such a feature could also impair travel to areas outside of the community.

In the context of a general plan, physical divisions within a community could also result from large-scale land use changes. For instance, the conversion of a large swath of a residential district into an industrial area could isolate residential uses from other nearby residential neighborhoods. No major land use changes are proposed as part of the Draft General Plan. Changes to the land uses categories in the Draft General Plan primarily consist of commercial corridor designation changes, renaming land use designations, or changing designation based on existing use.

The Draft General Plan includes no large-scale infrastructure projects such as new freeways or rail lines that would divide an established community. Likewise, critical transportation infrastructure linking one neighborhood to another would not be removed as part of implementation of the Draft General Plan. The Draft General Plan focuses on the link between land use and transportation and seeks to balance the mobility needs of all users of the transportation system. Policies seek to reduce vehicle miles traveled and improve connectivity. Complete streets and sustainable transportation policies are included within the Draft General Plan. These changes to the physical environment would not divide an established community, and would enhance multi-modal mobility within the City.

(2) Conflict With Any Applicable Land Use Plans, Policy, or Regulation. This section includes a discussion of potential conflicts between the Draft General Plan and the applicable planning documents described in the setting section. Please note that planning documents that pertain to specific technical topics (e.g., Transportation and Circulation) are discussed in those topical sections of this Draft EIR. Figure III-2 in Chapter III, Project Description identifies the proposed Draft General Plan Land Use Map.

San Francisco Bay Plan. Individual development projects that could occur within San Francisco Bay shoreline areas under the jurisdiction of BCDC would be subject to BCDC's review and approval process. However, at a programmatic level, the Draft General Plan would support the key objectives in the Bay Plan of preserving open space adjacent to San Francisco Bay, protecting the water quality of the Bay, and increasing public access to the Bay and associated shoreline. All lands within the City that are immediately adjacent to the San Francisco Bay are currently designated as parks or open space; there would be no change to these designations under the Draft General Plan.

The following Draft General Plan policies would support objectives of the San Francisco Bay Plan.

- **Policy LU-1.5 Open Spaces**. Provide a diverse range of open spaces to complement the urbanized areas of the City, including improved parks and playing fields, conservation areas on Albany Hill and along the shoreline, a publically accessible waterfront, natural areas along creeks, areas for community gardens and urban agriculture, and private open spaces.
- **Policy LU-1.6: Albany Waterfront**. Support an inclusive, transparent dialogue on all issues relating to the future of the Albany waterfront, including Golden Gate Fields. Decisions relating to the future of the waterfront shall abide by the provisions of voter-approved Measure "C."
- **Policy LU-5.2: Albany Shoreline**. Work collaboratively with federal, state, and regional agencies, key interest groups and shoreline open space advocates, and Albany residents to enhance the recreational ecological, and open space value of the Albany waterfront.
- **Policy W-1.1 Preservation, Conservation, and Recreation Areas.** Utilize the Eastshore State Park General Plan designations of *Preservation Areas, Conservation Areas, and Recreation Areas* as framework for the planning and design of Albany portion of the proposed McLaughlin Eastshore State Park.

  Pursuant to the Eastshore State Park General Plan, these designations are applied as follows:

  - The Albany State Marine Reserve (Albany mudflats) is designated as a Preservation Area. This area has unique habitat resource values that require protection and preservation. Public access to the mudflats is restricted to safety, scientific, maintenance and controlled interpretive and educational activities.

  - Albany Beach, Albany Neck and Bulb, and part of the Albany Plateau are designated as Conservation Areas. These are areas where natural habitat values will be protected and enhanced while accommodating lower intensity recreation that is compatible with and dependent on those values.
  - The remainder of the Albany Plateau was designated as a Recreation Area in the Eastshore State Park Plan. Subsequent decisions resulted in the development of the Tom Bates Regional Sports Complex in Berkeley and the dedication of a large portion of the Plateau as Burrowing Owl Habitat. Future assessments of the Burrowing Owl Habitat may be used to determine if the area should retain its Recreation Area designation or should be re-designated as a Conservation Area.

- **Policy W-1.2: Site Planning Principles.** Locate visitor-serving facilities in areas that have convenient access, lower habitat value, and more suitability for higher intensity uses.

Therefore, the Draft General Plan would not conflict with the Bay Plan and no impacts would result from implementation of the Draft General Plan.

1992 General Plan. The Draft General Plan is a comprehensive update of the existing 1992 General Plan and as such would replace the 1992 General Plan. After adoption, the Draft General Plan would function as the main guiding document for land use and planning in Albany. Table IV.A-4 shows the land use designations in the 1992 General Plan and equivalent land use designations in the Draft General Plan.

Although the Draft General Plan would replace the 1992 General Plan, it builds on the over-arching principles and objectives established under the existing 1992 General Plan. The majority of proposed land use designations are equivalent to those in the 1992 General Plan. Proposed Draft General Plan policies that promote the following 1992 General Plan goals are shown in parentheses:

- **Goal LU 1:** Preserve and enhance the residential character of Albany. (Policy LU-2.1 through Policy LU-2.12)
- **Goal LU 2:** Encourage and upgrade commercial development along San Pablo Avenue in order to expand the City's economic base. (Policy LU-1.3, Policy LU-3.1, Policy LU-3.2, Policy LU-3.4)
- **Goal LU 3:** Restrict conversion of residential uses to commercial uses along specific blocks of Kains and Adams Streets where residential uses predominate and permit such conversions where commercial uses predominate. (Policy LU-2.7)
- **Goal LU 4:** Maintain and promote a mix of commercial uses on Solano Avenue that serves the community. (Policy LU-3.1, Policy LU-3.3, Policy LU-3.4)
- **Goal LU 5:** Protect residential neighborhoods from the adverse impacts of adjacent commercial uses through the creation of a transition area along Solano Avenue cross streets. (Policy LU-3.7)
- **Goal LU 6:** Increase the economic vitality of the City's industrial use areas. (Policy LU-3.5)
- **Goal LU 7:** Ensure that future redevelopment of the University of California lands is compatible with the City's long-term land use, public services, and public facilities goals. (Policy LU-4.5, Policy LU-4.6, Policy LU-4.7, Policy LU-4.8)
- **Goal LU 8:** Maintain and improve Albany's high quality educational system and other public services. (Policy LU-4.1, Policy LU-4.4)
- **Goal LU 9:** The positive elements of Albany's physical character: common architectural styles, significant views, and remaining natural features should be protected and enhanced. (Policy LU-6.1 through LU-6.7)

The Draft General Plan would promote the major goals established in the 1992 General Plan and would carry them forward rather than create policy conflicts.

Table IV.A-4: Acreage Comparison Between 1992 General Plan and Draft General Plan

Land Use Category	1992 General Plan Acreage	Draft General Plan Acreage	Difference
Low Density Residential [a]	466	467	+1
Medium Density Residential	37	37	0
High Density Residential (including "Tower") [b]	65	63	-2
Hillside Residential (formerly Planned Development 1 and 2) [c]	26	19	-7
San Pablo Avenue Mixed Use [d]	33	44	+5
Planned Residential-Commercial	6		
Solano Avenue Mixed Use [e]	29	30	+1
Commercial Recreation	137	137	0
Commercial Services and Production (formerly Commercial Service/ Light Industrial) [f]	35	30	-5
Public/Quasi-Public [g]	62	65	+3
Parks/Open Space [h]	132	150	+18
University Village (formerly three different categories)	75	80	+5
Undesignated (Freeway/Railroad ROW)	72	53	-19
TOTAL	**1,175**	**1,175**	**0**

[a] Increase due to the addition of several churches to this category
[b] Decrease partially due to removal of Albany Middle School from the High Density Residential category, offset by increase of 1.0 acre at Pierce Street parcel
[c] Decrease due to acquisition of parcels on the east side of Albany Hill as parkland
[d] Increase due to University Village mixed-use development
[e] Increase due to designation of AT&T facility as Solano Mixed Use
[f] Decrease due to I-80 freeway realignment, Corporation Yard and adjustments to reflect the University Village Master Plan
[g] Increase due to Albany Middle School and Corporation Yard addition
[h] Increase due to Albany Hill, Pierce Street, University Village area addition

Notes:
– 1992 General Plan column includes General Plan Map Amendments made through 2004.
– Total excludes the Watercourse Protection Overlay and the Major Activity Node overlay, to avoid double counting.

Source: Barry Miller, Planning Consultant to the City of Albany, 2015.

Zoning Ordinance. The City's Zoning Ordinance establishes land use regulations that, in most instances, coordinate with the General Plan designations. The State requirement that a jurisdiction's General Plan be consistent with its Zoning Ordinance does not apply to California's charter cities (of which Albany is one), but in practice charter cities typically follow the same policy. Policies in the Draft General Plan would require updates to the Zoning Ordinance so that the Zoning Ordinance would be consistent with the Draft General Plan and allow for land use patterns envisioned in the Draft General Plan (such as designating new mixed-use zones along commercial corridors, adjusting lot size standards, etc.). Several implementation action items (Action LU-2.A, Action LU-3.D, and Action LU-3.F) in the Draft General Plan include updating the Zoning Ordinance. Therefore, after implementation of these policies in the Draft General Plan, the Draft General Plan would not conflict with the Zoning Ordinance, or vice versa.

(3) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. As described in the setting section, Albany is designated on the FFMP as Urban and Built Up land and Other Land. No areas of the City are mapped as "Prime Farmland" "Unique Farmland" and "Farmland of Statewide Importance." There is no land within Albany that is zoned for agricultural purposes. The Draft General Plan would not convert existing farmland, designated as "Prime Farmland" Unique Farmland" or "Farmland of Statewide Importance" because there is no farmland designated within the City of Albany. Therefore, no impact would occur and no additional mitigation measures are required.

(4) Conflict with Existing Zoning for Agriculture or a Williamson Act Contract. Albany's zoning ordinance does not include an agricultural designation and no land in Albany is zoned for agriculture. No land within the City is currently under an existing Williamson Act Contract. Implementation of the Draft General Plan would not result in an impact related to conflicts with zoning for Agriculture or a Williamson Act contract.

(5) Convert Farmland to Non-Agricultural Use. The Gill Tract, which is part of University Village, currently includes a community garden and U.C. Berkeley research fields. The Gill Tract is designated as Public/Institutional Residential Commercial on the 1992 General Plan Land Use Map. The Draft General Plan has combined the 1992 General Plan Land Use Designations for University Village (Public/Institutional Research, Public/Institutional/Residential-Commercial, Public/Institutional/Residential-Recreational, Public/Institutional/Residential-Recreational-Commercial) into its own designation (University Village). The Draft General Plan designates the Gill Tract as an area within the University Village land use designation. The Draft General Plan proposes no changes in use to the Gill Tract. Furthermore, the University of California has prepared and adopted the 2004 University Village Master Plan[5] to govern uses at University Village.

The Draft General Plan includes the following policies related to the Gill Tract:

- **Policy LU-4.6: Gill Tract.** Support future uses of the Gill Tract (San Pablo Avenue at Buchanan Street) that are consistent with the University's academic objectives while also responding to the community's desire to retain a substantial portion of the property for open space and recreational uses.
- **Policy PROS-5.3: Gill Tract.** Coordinate with the University of California for mutually beneficial uses of the Gill Tract. Such plans should protect and enhance Village Creek and other natural environmental features, including significant trees.

The Gill Tract is regulated by the 2004 University Village Master Plan. The Draft General Plan includes an implementation action (Action LU-4.A) to encourage the University to update is Master Plan for University Village.

- **Action LU-4.A: University Village Master Plan Update.** Encourage the University to update its Master Plan for University Village to reflect the completion of the family student housing redevelopment project, the approval of the retail and senior housing project along San Pablo Avenue, and the remaining opportunities for infill development and open space protection on the balance of the site.

[5] University of California, 2004. *2004 University Village Master Plan.* June 30.

The Draft General Plan does not include specific land use regulations for the University Village or change to the uses at University Village. Implementation of the Draft General Plan would not convert existing agricultural uses to a nonagricultural use and there would be no impact to existing agricultural uses and no mitigation measures are required.

c. Cumulative Impacts. CEQA defines cumulative impacts as "two or more individual effects, which, when considered together, are considerable, or which can compound or increase other environmental impacts." Section 15130 of the *CEQA Guidelines* requires that an EIR evaluate potential environmental impacts that are individually limited but cumulatively significant. These impacts can result from the proposed project alone, or together with other projects. Section 15355 of the *CEQA Guidelines* states: "The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects." Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

When evaluating cumulative impacts, CEQA allows the use of either a list of past, present, and probable future projects, including projects outside the control of the lead agency, or a summary of projections in an adopted planning document. This cumulative analysis for potential land use impacts uses adopted General Plans in cities around Albany and the regional population and employment projections developed by ABAG.[6]

Expected population growth in the region would result in extensive land use changes at the regional level, which is a potentially significant cumulative impact. ABAG expects that the population of the Bay Area region will grow from 7,341,700 residents in 2010 to 9,073,700 residents in 2035. ABAG, as part of the Sustainable Communities Strategy called Plan Bay Area, has identified alternative growth strategies for the region to accommodate this growth. The preferred strategy calls for population and employment growth to be directed to urban areas close to regional transportation nodes and job centers. Increased growth is projected primarily for cities within the South Bay and Peninsula. Oakland, Fremont, Hayward, and Richmond are included in the top 15 cities for housing unit growth.

Urban growth that would occur in Albany as a result of the Draft General Plan would be consistent with the Focused Future strategy identified by ABAG. San Pablo Avenue and Solano Avenue are identified as potential Priority Development Areas.[7] These are areas that require more local planning, review, and action before they become Planned PDAs. Per Draft General Plan policies, the majority of growth in the City would occur in mixed-use projects along San Pablo Avenue and Solano Avenue. Because the Draft General Plan would be consistent with the Sustainable Communities Strategy and encourage transit-oriented development along commercial corridors, it would result in less-than-significant cumulative impacts related to land use.

[6] Association of Bay Area Governments, 2013. Metropolitan Transportation Commission, *Draft Plan Bay Area, Strategy for a Sustainable Region.* March. Adopted with revisions July 18.

[7] Association of Bay Area Governments, 2013. *Plan Bay Area: Map 6: Change in Households per Acre 2010- 2040* (page 51). July.

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B. POPULATION AND HOUSING

This section describes population and housing characteristics in the City of Albany (City) and Alameda County (County) and evaluates potential impacts associated with changes in population and housing that could result from implementation of the Draft General Plan.

1. Setting

The following section includes a description of the population characteristics of the City and County and relevant regulatory documents. This section uses data from the U.S. Census Bureau (Census), California Department of Finance, and Association of Bay Area Governments (ABAG).[1] Information from the Housing Element[2] is also included.

a. Demographics. This section describes existing demographics of Albany and Alameda County.

(1) Population. The City has grown during the last 20 years from 16,327 residents in 1990 to 18,539 residents in 2010, a 13.5 percent increase. The City experienced accelerated growth during 2000-2010, which is attributed to the reconstruction of University Village and an increase in average household size. As a City with few vacant lots for residential development, the City grew at a slower rate than Alameda County. As shown in Table IV.B-1, between 1990 and 2010 the population of Alameda County grew by 18.1 percent.

Table IV.B-1: Population Trends 1990-2000

Area/Jurisdiction	1990	2000	2010	Percent Change 1990-2010
Albany	16,327	16,444	18,539	13.5
Alameda County	1,279,182	1,443,741	1,510,271	18.1

Source: U.S. Census, 2010.

ABAG forecasts changes in population, housing, and other demographic characteristics in the nine county Bay Area region. The latest adopted forecast was published in 2013. Table IV.B-2 shows the ABAG projections for Albany and Alameda County. According to ABAG, Albany's population is expected to increase by 17.6 percent with an additional 1,109 households between 2010 and 2035.

[1] Association of Bay Area Governments, 2013. Projections 2013.

[2] Albany, City of, 2015. General Plan 2015-2023 Housing Element, February 2, 2015.

Table IV.B-2: ABAG 2013 Projections, 2010-2035

	2010	2015	2020	2025	2030	2035	Total Change 2010-2035	Percent Change 2010-2035
City of Albany								
Population	18,539	19,100	19,700	20,400	21,000	21,800	3,261	17.6%
Households	7,401	7,620	7,840	8,060	8,290	8,510	1,109	15.0%
Persons Per Household	2.49	2.50	2.51	2.53	2.53	2.56	0.07	2.88%
Alameda County								
Population	1,510,271	1,580,800	1,654,200	1,730,100	1,810,300	1,897,200	386,929	25.6%
Households	545,138	571,370	598,430	624,300	651,720	678,080	132,942	24.4%
Persons Per Household	2.70	2.70	2.70	2.70	2.71	2.73	0.03	1.11%

Source Association of Bay Area Governments, 2013. Projections 2013.

(2) Age. As shown in Table IV.B-3, the City's proportion of children under age nine (15 percent) is greater than Alameda County (12.8 percent). The City's 25-44 age cohort also exceeds Alameda County. This reflects the City's popularity among young families with school-aged children. Senior citizens represent about 10 percent of Albany's population which is consistent with the County's population.

Table IV.B-3: Age Distribution by Percentage

Age Cohort	Albany	Alameda County	Bay Area
0-9 years	14.8%	12.8%	12.5%
10-19 years	11.7%	12.6%	12.3%
20-24 years	4.0%	7.1%	6.4%
25-34 years	16.0%	15.1%	14.7%
35-44 years	17.2%	15.0%	14.9%
45-54 years	14.2%	14.8%	15.0%
55-59 years	6.3%	6.3%	6.4%
60-64 years	5.9%	5.2%	5.5%
65-74 years	5.2%	6.0%	6.5%
75-84 years	3.1%	3.4%	3.9%
85+ years	1.6%	1.1%	1.8%

Source U.S. Census 2010.

b. Housing. This section describes existing housing conditions in Albany and Alameda County.

(1) Households. According to the Census, 7,401 households existed in Albany in 2010. Between 1990 and 2010, households in Albany increased by 2.7 percent; while Alameda County households grew by 13.6 percent. ABAG projects an additional 890 households in Albany between 2015 and 2035.

Average household size is a function of the number of people living in households divided by the number of occupied housing units in a given area. The average household size for Albany was 2.49 persons in 2010, an increase from 2.34 in 2000. Albany's average household size remains lower than

Alameda County's average at 2.70. Higher household size results from a higher percentage of family households in both Albany (67.3 percent) and Alameda County (64.6 percent). However, Albany's percentage of family households with children under 18 (37.9 percent) is greater than Alameda County (31.1 percent). These trends also suggest the City's popularity among young families with school-aged children, as identified in the 2010 age distribution data.

(2) Housing Stock and Tenure. Albany consists primarily of older housing stock with 66.6 percent of all units built before 1960. According to the Housing Element, City staff's field survey estimated that 99 percent of Albany's housing stock was in excellent condition while less than one percent of housing units have serious or persistent code enforcement issues.

As shown in Table IV.B-4, over half of the housing units in the City are single-family detached homes.

Table IV.B-4: Housing Units by Type, 2010

Unit Type	Percent
Single-Family, Detached	51.9
Single Family, Attached	3.0
2 Units	5.7
3-4 Units	5.7
5-9 Units	9.4
10-19 Units	7.8
20+ Units	16.2
Mobile Home & Other	0.3
Total	**100.0**

Source: City of Albany, General Plan Housing Element, 2015.

(3) Housing Market. Home values in Albany rose through the 1990s, accelerated between 2000 and 2006, dropped between 2007 and 2009, and have generally trended upward since 2010. There was a rapid increase during 2012 and 2013, followed by a leveling out in 2014. Zillow.com reported the median home value in Albany was $533,000 in January 2012, $602,000 in January 2013 and $726,000 in January 2014, an increase of 36 percent in two years. Home values had previously peaked at $672,000 in 2006. As of September 2015, the median home value reached 819,000.

The Zillow data are generally consistent with data on home values provided by the Census. The Census reported a median home value of $626,000 in 2012, which was an increase of 87 percent over the 2000 Census figure of $334,800. Between 2010 and 2014, home prices in Albany increased faster than in Berkeley and El Cerrito, posting a 31 percent gain, and faster still than in Richmond.

Median rent also rose during the 1990-2010 period, reaching $1,535 in 2012, based on American Community Survey data. However, the Census data do not reflect the run-up in rental rates since 2012. Zillow.com indicates rents in Albany increased 25 percent between January 2012 and July 2014. A search of Craigslist ads in September 2014 found nine listings in Albany, with a median rent of $2,425. Rents were $1,350 for a studio, $1,650 for a one bedroom apartment, and $2,100 to $2,900 for a two bedroom apartment. Two three-bedroom two bath homes were listed, for $3,850 and $4,000 respectively.

Vacancy. According to the Census, Albany had 237 vacant units in 2000 and 488 vacant units in 2010. As a percentage of total housing stock, the vacancy rate was 3.4 percent in 2000 and 6.2 percent in 2010. The increase was primarily due to economic conditions in 2010, although the recent completion of University Village at the time of the 2010 Census may have also been a factor. Tract level data indicate that 48 units in University Village were vacant at the time of the 2010 Census. The vacancy rate has decreased since 2010, although current Census data on vacancy are not available.

Regional Housing Needs. As required by State law, Albany's General Plan Housing Element discusses ABAG's regional housing needs (RHNA) plan. ABAG's determination of the local share of RHNA takes into consideration the following factors: market demand for housing, employment opportunities, availability of suitable sites and public facilities, loss of existing affordable units, transportation, and special housing needs. Albany adopted its General Plan Housing Element on February 2, 2015.

As shown in Table IV.B-5, Albany's Regional Housing Needs Allocation for 2014-2022 totals 335 housing units including 80 very low income units; 53 low income units; 57 moderate income units; and 145 above moderate income units. The City has demonstrated sufficient capacity to accommodate this quantity of housing in its Housing Element. It has also adopted plans and programs to facilitate housing construction and conservation for all income groups.

Table IV.B-5: 2014-2022 Regional Housing Needs Allocation, City of Albany

Income Category	Housing Units	Percent
Very Low	80	24
Low	53	16
Moderate	57	17
Above Moderate	145	43
Total	**335**	**100**

Source: City of Albany, General Plan Housing Element, 2015.

c. Employment. Two metrics for measuring employment are described below: (1) total jobs – which is the number of jobs within the community; and (2) employed residents – which is the number of residents of working age in the community who actively participate in the civilian labor force. A comparison of these data can provide an indication of commute patterns in a community (i.e., whether significant out-commuting or in-commuting occurs), although the comparison is more useful on a sub-regional basis in regards to regional commuting patterns.

The civilian labor force includes: (1) those who are employed (except in the armed forces); and (2) those who are unemployed but actively seeking employment. Those who have never held a job, who have stopped looking for work, or who have been unemployed for a long period of time are not considered in the labor force. According to the California Employment Development Department, as of June 2014 an estimated 9,800 residents[3] (52 percent of the total 2014 City population) in Albany were in the labor force.[4]

(1) Jobs. As shown in Table IV.B-6, the number of jobs in Albany grew approximately 8.4 percent between 1990 and 2010. In 2010, Albany had approximately 5,075 jobs. Jobs are concentrated in the retail and service sectors with approximately 45 percent of jobs designated as services and 24 percent of jobs designated as retail.

[3] Data are not seasonally adjusted.

[4] California, State of, 2011. Employment Development Department, Labor Market Information Division. *Monthly Labor Force Data for Cities and Census Designated Places (CDP)*, March 2014. Website: (accessed August 18, 2015).

Table IV.B-6: Employment by Industry

Industry Type	Year			% Change
	1990	2000	2010	
Agriculture & Natural Resources	40	80	25	-37.5%
Manufacturing, Wholesale & Transportation	410	380	600	46.3%
Retail	860	710	1,200	39.5%
Financial & Professional Services	2,420	970	2,280	-5.8%
Health, Educational, & Recreation		2,270		
Other	950	780	970	2.1%
Total	**4,680**	**5,190**	**5,075**	**8.4%**

Note: 2010 Figure is from ABAG SCS Preferred Scenario. Categories shifted between 2000 and 2010. 2010 employment categories are Agriculture, Manufacturing, Wholesale Trade, Retail, Services, and Other.
Source: City of Albany, General Plan Housing Element, 2015

(2) Employment and Unemployment. Employment and unemployment data for 2010 and 2014 are shown in Table IV.B-7. According to data from the California Employment Development Department, Albany's labor force has increased by approximately 10 percent since 2010, while the labor force in the County experienced a 6.6 percent increase. In 2014, the data from the California Employment Development Department reported 9,400 employed Albany residents, 400 unemployed residents, and an unemployment rate of 3.8 percent, which is the lowest in the County. For the same time period, the County had a total of 764,300 employed residents and a total of 47,700 unemployed residents and an unemployment rate of 5.9 percent.[5]

Table IV.B-7: Employment and Unemployment

Labor Force Data [a]	2010	2014	% Change
Albany			
Civilian Labor Force	8,900	9,800	10.1%
Civilian Employment	8,500	9,400	10.6%
Civilian Unemployment	400	400	–
Civilian Unemployment Rate	4.9%	3.8%	-22.4%
Alameda County			
Civilian Labor Force	762,000	812,000	6.6%
Civilian Employment	676,000	764,300	13.1%
Civilian Unemployment	85,900	47,700	-44.5%
Civilian Unemployment Rate	11.9%	5.9%	-50.4%

Notes:
[a] Civilian Labor Force is the sum of civilian employment and civilian unemployment. It refers to workers based upon place of residence – where people live regardless of where they work.

Source: California Employment Development Department; LSA Associates, Inc., 2015.

[5] Ibid.

(3) Employment Projections. Job growth is expected to continue to grow similarly to housing units. As shown in Table IV.B-8, ABAG projects that Albany will add approximately: (1) 1,180 jobs between 2010 and 2035, resulting in a 27.9 percent increase in jobs, and (2) 850 jobs between 2015 and 2035. Total jobs are projected to increase from 4,230 in 2010 to 5,410 in 2035. Total jobs in Alameda County are projected to increase by 31.1 percent between the period of 2010 and 2035.[6]

Table IV.B-8: Employment Projections, 2010-2035

	2010	2015	2020	2025	2030	2035	Total Change 2010-2035	% Change 2010-2035
Albany	4,230	4,560	4,930	5,070	5,220	5,410	1,180	27.9%
Alameda County	694,460	757,010	826,790	850,610	875,390	910,650	216,190	31.1%

Source: Association of Bay Area Governments, 2013. *Projections 2013.*

(4) Employed Residents. In 2010 there were 8,430 employed residents in Albany. Unemployed residents are not counted as employed residents, even if they are actively seeking employment.

2. Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to population and housing that could result from build out of the Draft General Plan. The section begins with the criteria of significance, which establish the thresholds to determine if an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and the recommended mitigation measures, if required.

a. Criteria of Significance. Development of the proposed project would result in a significant impact related to population and housing if it would:

- Displace substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere;
- Induce substantial population growth in an area, either directly (for example, by proposing new homes or businesses) or indirectly (for example, through extension of roads or other infrastructure); or

b. Project Impacts. The following discussion describes the potential impacts related to population and housing that would result from implementation of the proposed project.

[6] Association of Bay Area Governments, 2015. It may be noted that the City is using the increment of growth in these forecast as the basis for its own forecasts of job growth between 2015 and 2035. However, the City is using a different baseline figure, based on Table IV.B-6, since it believes the ABAG figures for 2010 and 2015 are too low.

(1) Displace Existing Housing or People. The projected increase in housing units within the City is 815 housing units, an approximate 10 percent increase from the existing 7,845 units to 8,660 units. New housing units would be generally located along San Pablo Avenue and Solano Avenue. The City has assumed a 5 percent vacancy rate for new development, yielding a projected increase of 775 households between 2015 and 2035. This is slightly lower than the ABAG projection of 890 additional households between 2015 and 2035, reflecting market trends and development conditions as of 2015.

Albany consists primarily of developed land; therefore the Draft General Plan focuses on redeveloping existing land through infill and increased density. Housing development in Albany during the Draft General Plan period would include primarily high density mixed-use development along commercial corridors (Housing Element Policy 2.7) and a limited number of single-family units and second-units (Housing Element Policy 2.5). Although the primary focus of housing development would be mixed-use, a diversity of housing types would be supported under policies in the Draft General Plan (Policy LU-1.1 and Policy LU-1.9) and Housing Element (Policy 2.1). Additionally, the Housing Element promotes the preservation and improvement of Albany's existing housing stock through policies 1.1 and 1.2, which focus on reinvestment and rehabilitation of the existing housing stock in Albany. As such, implementation of the Draft General Plan would not directly impact the existing housing stock and the impact to housing would be less than significant.

The projected increase in residential units under the Draft General Plan (815 units) would more than offset potential impacts related to the minimal amount of potential displacement of housing units or people that might result from implementation of the Draft General Plan. While the potential loss of existing units and the construction of new units may not occur within the same time period, the existing supply of units (for rent or purchase) is expected to be adequate to accommodate the temporary increase in demand for housing resulting from any short-term loss of units. The Housing Element has policies to protect the rental housing stock and limit short-term rentals (Policy 1.3 and 1.8). Therefore, the Draft General Plan would have a less-than-significant impact and would not displace a substantial number of existing housing units or people, and would not necessitate the construction of replace housing elsewhere.

Implementation of the Draft General Plan policies would also not hinder achieving the City's RHNA goal of 335 units for the 2014-2022 period. Housing Element Program 2.L ensures the City will monitor development to maintain sufficient land to accommodate RHNA. The RHNA for the 2014-2022 period income categories include the following: 80 units for very-low income households, 53 units for low income households, 57 units for moderate income households, 145 units for above moderate income. The City has a variety of programs and policies to promote affordable housing including Policies 2.3, 2.12, 2.14, 3.6, and Programs 2.A, 2.B, 2.C, 2.D, 2.G, 2.K, and 3.E.

The Draft General Plan policies identified above are listed below:

- **Policy LU-1.1 New Housing Opportunities.** Create opportunities to meet the housing needs of current and future Albany residents by zoning land for a variety of housing types particularly on underutilized commercial property.
- **Policy LU-1.9 Income Diversity.** Recognize economic and income diversity as one of Albany's greatest strengths. Ensure that future land use decisions contribute to this diversity by creating housing and employment opportunities for persons of all incomes and backgrounds.

- **Policy LU-2.5: Second Units.** Encourage development of attached and detached secondary dwelling units, taking into consideration the need to provide parking and protect existing neighborhood character.

The Housing Element policies identified above are listed below:

- **Policy 1.1: Housing Re-Investment.** Support continued maintenance and improvement of Albany's existing housing stock. City zoning regulations, permitting practices, and code enforcement procedures shall support reinvestment in the housing stock.
- **Policy 1.2: Housing Rehabilitation.** Continue to participate in housing rehabilitation programs and pursue funding to rehabilitate older housing units. Albany's supply of low and moderate income market-rate housing units shall be conserved to the greatest extent feasible.
- **Policy 2.7: Mixed Use.** Encourage development of rental housing above commercial development along Solano and San Pablo Avenues.
- **Policy 1.3: Protecting the Rental Housing Stock.** Continue to conserve affordable rental housing by limiting the conversion of existing multi-family rental units to condominiums.
- **Policy 1.8: Short Term Rentals.** Conserve rental housing opportunities by limiting the use of existing or potential rental properties, such as second units, for short-term stays.
- **Policy 2.3: Housing Affordability.** Continue to encourage the construction of housing affordable to very low, low, and moderate income households, in addition to market rate housing. Projects which combine market rate and affordable housing, using mechanisms such as the City's inclusionary ordinance, are encouraged.
- **Policy 2.12: Scattered Site Affordable Housing.** Encourage small affordable housing developments consisting of 1-4 unit buildings located on scattered sites, in addition to encouraging traditional affordable housing developments on larger, higher-density mixed use sites.
- **Policy 2.14: Tax Credit Projects.** Encourage the use of state and federal low income housing tax credits by developers as a way to improve the financial feasibility of affordable housing development and affordable housing acquisition and rehabilitation projects in Albany.
- **Program 2.A: Inclusionary Zoning.** Continue implementation of an inclusionary housing program which requires 15% of proposed units in for-sale projects with seven units or more to be made affordable to low income households, and which requires payment of an in-lieu fee for 5-6 unit projects. Explore revisions to the program to ensure that it is achieving desired outcomes, is compliant with inclusionary zoning case law and statutes, and is responsive to changes in the housing market.
- **Program 2.B: Affordable Housing Nexus Study and Potential Impact Fee**. Complete a nexus study, either independently or collaboratively with one or more other jurisdictions in the East Bay, to determine the cost and feasibility of an affordable housing impact fee.
- **Program 2.C: Density Bonuses.** Maintain a density bonus ordinance consistent with state requirements. Encourage applicants to apply for density bonuses as a tool to produce affordable housing and to promote new housing which is subject to parking standards defined by state law rather than the requirements set by Albany Measure D.
- **Program 2.D: Affordable Housing Incentive Program.** Evaluate, and if feasible implement, an Affordable Housing Incentive Program (AHIP) focused on the SC and SPC zoning districts.
- **Program 2.G: Technical Assistance.** Work with local non-profit developers to identify potential housing sites, and to pursue available funding, including CDBG and HOME funds, for the construction of affordable housing.

- **Program 2.K: Affordable Housing Fund.** Create a City of Albany Affordable Housing Fund which becomes a repository for funds that will be used to help support affordable housing development in the City
- **Program 2.L: No Net Loss of Housing Capacity.** Monitor development activity on the Housing Opportunity Sites to ensure that the City maintains sufficient land to accommodate the Regional Housing Needs Allocation (RHNA) during the planning period. In the event a housing site listed in Chapter 4 is redeveloped with a non-residential use or at a lower density than shown in Chapter 4, ensure that the City has adequate capacity to meet the RHNA by making the findings required by Government Code Section 65863 and identifying alternative site(s) within the City if needed.
- **Policy 3.6: Extremely Low Income Households. Facilitate a variety of programs, partnerships, and activities which** meet the housing needs of Albany households earning 30 percent or less of area-wide median income. The City will pursue funding opportunities for affordable housing, with a priority on meeting the needs of extremely low income households.
- **Program 3.E: CDBG Funds.** Continue to prioritize programs which benefit extremely low income households in the disbursement of funds through the annual CDBG program.

The Housing Element identifies a series of sites that would accommodate the Regional Housing Needs Allocation (RHNA) numbers for 2015 to 2023. Therefore, the City would meet its RHNA requirement (with the support of policies in the Draft General Plan) and no significant impact in regards to displacement of housing or people would result.

(2) Induce Substantial Population Growth. The Draft General Plan is projected to directly increase the population of the City by approximately 1,800 persons, from 18,585 to 20,385 persons by 2035. This population growth would occur primarily due to the construction of new housing in the City. The development of new housing units throughout the City would be supported and promoted by Draft General Plan policies, which encourage the development of mixed uses, affordable housing, and transit-oriented development. In particular, Housing Element Policies 2.1 and Land Use Element Policy LU-1.1 encourages housing type diversity for diverse household and incomes. Land Use Element Policies LU-1.2, and LU-1.8 promote balanced, transit-oriented mixed-use development by linking housing, employment, and transportation.

The improvement and expansion of utilities and services associated with aging infrastructure and new developments would occur under the Draft General Plan. Because new development would occur within the City limits, the development of new utility and transportation infrastructure would not indirectly induce unanticipated population growth. Therefore, implementation of the Draft General Plan would not substantially and indirectly induce population growth and this impact would be less than significant. No additional mitigation is required. The policies and actions not previously identified above are listed below:

- **Policy LU-1.2: Balanced Growth.** Promote a balanced mix of housing and employment growth so that more Albany residents have the opportunity to live, work, and shop in their community.
- **Policy LU-1.8: Transit-Oriented Development.** Encourage land use patterns which support transit use, including additional mixed use (commercial and higher-density residential) development along the San Pablo and Solano Avenue corridors.

- **Policy 2.1: Housing Diversity.** Encourage a mix of unit types, including attached and detached single family homes, second units, large and small multifamily developments, live-work units, and mixed use development, to respond to the diverse needs of Albany's households and to provide housing for residents of all incomes and ages.

The projected 2035 population of 20,385 residents indicates an estimated 6.7 percent increase in population from 2014 levels. This population growth is lower than ABAG's 2013 projection of 21,800 residents in 2035. The ABAG forecast assumed a slightly higher number of housing units and a slightly higher average household size. However, the margin between the two figures is small (about 115 households, or just over 1 percent of the total). Implementation of the Draft General Plan would not substantially and directly induce population growth, resulting in a less-than-significant impact.

In addition, the direct population growth that could occur as a result of the Draft General Plan would not be considered substantial or adverse, based on the developed nature of the City. The Draft General Plan anticipates the majority of growth to occur in commercial and transit corridors along San Pablo Avenue and Solano Avenue. As described in Section IV.A Land Use, Planning Policy, and Agricultural Resources these areas are identified as potential priority development areas in ABAG's Sustainable Communities Strategies. The Draft General Plan promotes mixed-use infill development along these transit corridors through policies and action items.

The improvement and expansion of utilities and services associated with aging infrastructure and new developments would occur under the Draft General Plan. Policies within the Draft General Plan address the adequacy of the water, sewer, drainage, and telecommunication systems, and the need to maintain, and in some cases expand these systems as development takes place. New development would occur mainly along commercial corridors and within City limits; therefore the development of new utility and transportation infrastructure would not indirectly induce unanticipated population growth. Implementation of the Draft General Plan would not induce population growth through the provision of new or expanded utilities and the impact would be less than significant. No additional mitigation is required.

c. Cumulative Impacts. As shown in Table IV.B-2, Alameda County's population is expected to increase from 1,510,271 residents in 2010 to 1,897,200 residents in 2035. As shown in Table IV.B-8 employment growth in Alameda County is expected to increase from 694,460 jobs in 2010 to 910,650 jobs in 2035.

This anticipated growth is expected to substantially increase demand for housing in the region, thereby constituting a potentially significant cumulative impact. Because of a limited supply of undeveloped land in the County, and policies that promote housing growth in already-developed areas, much of this anticipated demand for housing is expected to be met through development in urbanized areas, especially areas in close proximity to transit hubs and employment centers per the goals of SB 375. New housing in such areas is considered an environmentally preferred strategy to accommodate expected regional growth. Draft General Plan policies and action items listed previously would encourage the development of housing along transit routes, near commercial centers, and in already-urbanized locations that can accommodate growth, and therefore would not make a cumulatively considerable contribution to the expected regional increase in housing demand.

Because growth would be focused in urbanized areas, some displacement of existing housing and people is possible. However, adverse impacts associated with displacement would be minimized by an overall increase in the region's housing stock (including the supply of affordable housing), and planning policies that relate to the protection of established residential neighborhoods (Policy LU-2.1 and LU-2.8). Therefore, displacement would occur only under limited circumstances, and the Draft General Plan would not make a cumulatively considerable contribution to such an impact. The policies identified above follow:

- **Policy LU-2.1: Context-Sensitive Design.** Ensure that infill development in residential areas is compatible in density, scale and character with the established neighborhood context.
- **Policy LU-2.8: Kains Avenue and Adams Street.** Maintain Kains Avenue and Adams Street as predominantly residential streets. Land use regulations should limit the encroachment of commercial uses onto parcels that are currently developed with housing. Residential uses along these streets and in adjacent areas should be protected from the potential adverse impacts of commercial uses through special setback requirements. The use of these two streets for primary access to non-residential uses shall be discouraged or prohibited as appropriate.

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C. TRANSPORTATION AND CIRCULATION

This section describes transportation and circulation conditions, including transit service and pedestrian and bicycle facilities in and around the City of Albany. This section also describes the regulatory setting relevant to transportation and circulation issues and discusses and evaluates the potential impacts of the policies proposed and development facilitated by the Draft General Plan on transportation and circulation.

The analysis evaluates the traffic-related impacts of the proposed Draft General Plan under typical weekday conditions and during the weekday morning (AM) and evening (PM) peak hours. The analysis was conducted in compliance with Alameda County Transportation Commission (Alameda CTC) guidelines. Traffic conditions are assessed for the following scenarios:

- **Existing** – Represents existing conditions with volumes obtained from recent traffic counts and the existing roadway system.
- **2040 No Growth in Albany**– Future conditions with planned population and employment growth outside the City of Albany, and planned transportation system improvements, for the year 2040. This scenario assumes no growth within the City of Albany. Traffic projections were developed using the Alameda CTC Travel Demand Model.
- **2040 Plus Project** – 2040 No Growth in Albany conditions plus traffic generated by development facilitated by the proposed General Plan.[1]

In addition to traffic conditions, this section also evaluates the impacts of the proposed Draft General Plan on transit service, pedestrian and bicycle facilities, emergency access, transportation safety, and vehicle miles travelled (VMT). Although not expressly required by CEQA, this section also includes a discussion of automobile parking.

1. Setting

This subsection describes the existing transportation-related context in the City of Albany, beginning with a description of travel characteristics and the street network in the City of Albany. Existing transit service, bicycle network, and pedestrian facilities are also described. Roadway segment levels of service are then defined and current conditions for roadways in the City of Albany are summarized.

a. Travel Characteristics. The City of Albany primarily comprises of residential neighborhoods with an estimated population of nearly 19,000 residents. There are many key activity generators within the City, including schools, commercial districts along San Pablo and Solano Avenues, parks, a racetrack, the Albany Village student family housing complex, and the nearby El Cerrito Plaza Shopping Center, Pacific East Mall and El Cerrito Plaza Bay Area Rapid Transit (BART) station.

[1] As noted in the Project Description, the General Plan horizon is 2035. The traffic analysis is completed for 2040 to align with the latest Alameda CTC model. Thus, this EIR traffic analysis is somewhat conservative and assumes slightly higher volumes than would be expected in 2035. This is primarily due to growth beyond Albany.

Table IV.C-1 compares the commute characteristics of Albany residents to those of Alameda County, the State of California, and the United States (US) as a whole based on 2008-2012 Census data. Approximately 59 percent of Albany residents commute by automobile, which is significantly lower compared to Alameda County (76 percent) and even lower than the State and national trends of 85 and 86 percent, respectively. Albany commuters tend to carpool less and take transit or walk more compared to the rest of the County, the State, and the nation as whole.

Table IV.C-1: Albany Residents Journey to Work Travel Characteristics

Travel Characteristics	Albany	Alameda County	California	United States
Commute Mode Choice				
Single-Occupant Automobile	51%	66%	73%	76%
Carpool	8%	10%	12%	10%
Subtotal Commute by Automobile	***59%***	***76%***	***85%***	***86%***
Public Transit	22%	12%	5%	5%
Bike	6%	2%	1%	<1%
Walk	5%	4%	3%	3%
Other Means	8%	6%	6%	5%
Other Commute Related Data				
Work outside county of residence	35%	33%	17%	24%
Leave for work between midnight and 7:00 a.m.	13%	23%	31%	31%
Leave for work between 7:00 a.m. and 9:00 a.m.	54%	50%	43%	44%
Average Travel Time to Work (minutes)	28.5	28.4	27.1	25.4
Average Auto Ownership Per Household (vehicles)	1.41	1.66	1.76	1.69

Notes: Commute by Automobile is subtotal including Single-Occupant Automobile and Carpool mode choice.

Source: 2008-2012 American Community Survey 5-Year Estimates.

Albany transit usage is double that of Alameda County and four times as much as the State and national averages. Approximately 5 percent of Albany residents walk to work, which is greater than the 3 percent of walk commuters for the County, State and nation. The percentage of Albany residents that ride their bike to work is even greater (6 percent) as compared to the other regions. Compared to State and national data, Albany and the County's data show higher percentages of residents working outside their county of residence. Albany's average commute time (28.5 minutes) is also slightly greater than the average commute time of 27 and 25 minutes for the State and nation. Generally, a larger percentage of Albany workers leave for work during the typical morning commute period (7:00 a.m. to 9:00 a.m.) compared to the County, State and nation for the same time period. Household vehicle ownership is less in Albany than the other three geographic areas, with the State (California) having the highest average by a slight margin.

Table IV.C-2 shows mode share for both work and non-work trips in Albany. Similar to work trips, the majority of non-work trips are also by automobile modes. However, a very small number of non-work trips are by public transit, and almost one-third of non-work trips are bike and walk trips.

Table IV.C-2: Mode Share for Work and Non-Work Trips

	Work Trips [a]	Non-Work Trips [b]	Total Trips [c]
Automobile (Single Occupant and Carpool	64%	69%	68%
Public Transit	24%	2%	7%
Bike/Walk	12%	30%	25%

[a] Source: 2006-2010 American Community Survey 5-Year Estimates
[b] Source: 2012 California Household Transportation Survey
[c] Based on 2012 California Household Transportation Survey, about 25 percent of all trips are work trips and 75 percent are non-work trips.

Table IV.C-3 shows the changes in commuter mode characteristics for Albany residents between 1990 and 2012 data. During this period, the single occupant automobile remained the highest mode share, although it declined slightly. The carpool share decreased as well, while the public transit, biking, and working from home shares have increased.

Table IV.C-3: Changes in Albany Resident Commute Patterns

	1990 [a]	2000 [a]	2010 [b]	2012 [c]
Single-Occupant Automobile	54%	54%	53%	51%
Carpool	14%	12%	8%	8%
Public Transit	16%	19%	22%	22%
Bike	5%	4%	5%	6%
Walk	5%	4%	5%	5%
Other Means	1%	2%	1%	1%
Worked at Home	5%	5%	6%	7%

[a] Source: 1990 and 2000 Census
[b] Source: 2006-2010 American Community Survey 5-Year Estimates
[c] Source: 2008-2012 American Community Survey 5-Year Estimates

b. Existing Street Network. Roadways are classified into categories depending upon the service they provide. Categories included in the Draft General Plan are: freeways, major arterials, minor arterials, collectors, and local streets. Freeways are designed for high mobility and low accessibility, with limited connections to other roadway facilities provided by grade-separated interchanges. Conversely, local streets are designed for high accessibility (access to adjacent properties) and lower mobility (slower traffic movement). This section describes the roadway system serving the City and its current operating conditions.

(1) Freeways. Freeways are facilities designed to carry large traffic volumes over long distances, and separate all conflicting traffic movements through the use of grade-separated interchanges. Freeways providing access to Albany consist of:

- **Interstate 80 (I-80)** is a major east-west freeway between Highway 101 in San Francisco and New Jersey in the east. In Alameda County, where I-80 has a north-south orientation, it is a major commute route connecting residents in the northeast Bay Area to employment centers in the region. I-80 is also designated Interstate 580 (I-580) through Albany, Berkeley, and Emeryville. I-80 provides between three to six mixed-flow lanes and one high occupancy vehicle (HOV) lane in each direction. Direct access between City of Albany and I-80 is provided via the Buchanan Street interchange. Based on 2015 Caltrans

traffic data, I-80 has an average daily traffic (ADT) volume of 193,000 vehicles per day near the Buchanan Street interchange.

- **I-580** is a major east-west freeway between Highway 101 in Marin County and Interstate 5 in San Joaquin County, passing through Alameda and Contra Costa Counties. I-580 is also designated I-80 through Albany, Berkeley, and Emeryville. West of the junction with I-80, I-580 provides three westbound and two eastbound mixed-flow lanes. Direct access between City of Albany and I-580 is provided via ramps at Buchanan Street. According to 2015 Caltrans traffic data, I-580 has an ADT of 77,000 vehicles per day west of the junction with I-80.

(2) Arterials, Collectors, and Local Streets. Streets in Albany are assigned a classification based on the following descriptions:

- **Major Arterials**: These are designed to carry heavy traffic volumes and serve crosstown circulation as well as access needs for specific development
- **Minor Arterials**: These serve large segments of the City but do not involve citywide crosstown circulation.
- **Collectors**: These are designed to channel traffic from local streets into the arterial street system and to handle short trips within neighborhoods.
- **Local Streets**: These carry low traffic volumes associated with providing access to individual residences.

Key arterial and collector streets in the City, which are shown on Figure IV-C.1, are described below:

- **San Pablo Avenue** is also known as State Route 123 (SR 123). It is a north-south major arterial, located to the east of I-80/I-580, with four lanes and left-turn pockets at major intersections. San Pablo Avenue connects the cities of Oakland, Emeryville, Berkeley, Albany, and Richmond. Based on 2014 data, San Pablo Avenue has an approximate ADT of 24,000 vehicles.
- **Buchanan Street/Marin Avenue** is an east-west major arterial that begins at I-80 and travels east to towards Berkeley, where it terminates in the Berkeley Hills. West of San Pablo Avenue, Buchanan Street is a four-lane facility with a center median, providing ramp connections to I-80 and I-580. East of San Pablo Avenue, Marin Avenue is a two-lane facility with a center turn-lane. Based on 2014 data, Marin Avenue and Buchanan Street have approximate ADTs of 18,000 to 30,000 vehicles, respectively.
- **Solano Avenue** is an east-west undivided arterial between Cleveland Avenue in the east and the Albany/Berkeley city limits in the west. It is a two-lane major arterial east of San Pablo Avenue, a minor arterial between San Pablo Avenue and Jackson Street, and a collector between Jackson Street and Cleveland Avenue. It provides a major corridor connection through Albany and to Berkeley. Based on 2014 data, Solano Avenue has an approximate ADT of 10,000 vehicles.

LSA

LEGEND

- Albany City Limit
- Freeway
- Local Street
- Railroad Tracks
- BART Tracks
- Major Arterial
- Minor Arterial
- Collector

0 0.125 0.25
MILES

SOURCE: Fehr & Peers, 2015.

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FIGURE IV.C-1

City of Albany General Plan EIR

Existing Roadway Classifications

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- **Key Route Boulevard** begins at Albany's southern city limits and travels north where it turns in to Ashbury Avenue in the City of El Cerrito. It is a two-lane residential street and has a median north of Solano Avenue. It is designated a minor arterial between Solano Avenue and El Cerrito city limits. Key Route Boulevard has an approximate ADT of 5,000 vehicles.
- **Masonic Avenue** extends north from Berkeley city limits to Brighton Avenue, just south of El Cerrito. The street is a minor arterial between the Berkeley city limits and Solano Avenue. Masonic Avenue has an approximate ADT of 4,000 vehicles.
- **Pierce Street** is a north-south minor arterial parallel to I-80 between Buchanan Street and the Richmond city limits, and continues to Central Avenue in Richmond. Pierce Street has an approximate ADT of 4,000 vehicles.
- **Cleveland Avenue** is a north-south two-lane minor arterial parallel to I-80 and I-580 north of Buchanan Street. It provides direct connections from the I-80 off-ramps to Albany. Cleveland Avenue has an approximate ADT of 7,000 vehicles.
- **Jackson Street** is a north-south two-lane minor arterial south of Solano Avenue and a two-lane collector street north of Solano between Buchanan Street and Washington Avenue. Jackson Street has an approximate ADT of 4,000 vehicles.
- **Eastshore Highway** is a north-south two-lane collector parallel to and east of I-80 beginning south of Buchanan Street connecting to Berkeley. Eastshore Highway has an approximate ADT of 6,000 vehicles.
- **Brighton Avenue** is an east-west two-lane collector between San Pablo Avenue and Key Route Boulevard. It provides a direct connection to Albany Middle School. Brighton has an approximate ADT of 4,000 vehicles.

Other collectors in the City include Santa Fe Street, Portland Avenue, Thousand Oaks Boulevard, Peralta Avenue, and Washington Avenue between Jackson Street and San Pablo Avenue.

c. Study Locations. This analysis evaluates the potential impacts of the proposed General Plan on traffic operations for the following roadway segments:

1. Cleveland Avenue north of Washington Avenue
2. Pierce Street north of Washington Avenue
3. Eastshore Highway south of Buchanan Street
4. Buchanan Street between Fillmore and Taylor Streets
5. Jackson Street between Portland Avenue and Castro Street
6. San Pablo Avenue between Portland and Garfield Avenues
7. San Pablo Avenue between Buchanan Street and Solano Avenue
8. San Pablo Avenue between Monroe and Dartmouth Streets
9. Brighton Avenue between Stannage and Cornell Avenues
10. Solano Avenue between Stannage and Cornell Avenues
11. Marin Avenue between Stannage and Cornell Avenues

12. Masonic Avenue between Dartmouth Street and Marin Avenue
13. Key Route Boulevard between Portland Avenue and Thousand Oaks Boulevard
14. Solano Avenue between Santa Fe Avenue and Curtis Street
15. I-80 south of the I-580 interchange
16. I-80 north of the I-580 interchange
17. I-580 north of the I-80 interchange

d. Transit. This subsection provides an overview of existing transit service in Albany. Figure IV.C-2 shows the existing transit services and facilities in and around Albany. While there is no BART Station in Albany, various AC Transit routes link with both the El Cerrito Plaza and North Berkeley BART stations. In addition, the Solano Avenue and San Pablo Avenue corridors are transit rich areas that provide accessibility to local and regional destinations, including shopping districts and employment centers, such as Berkeley, Emeryville, Oakland, and San Francisco.

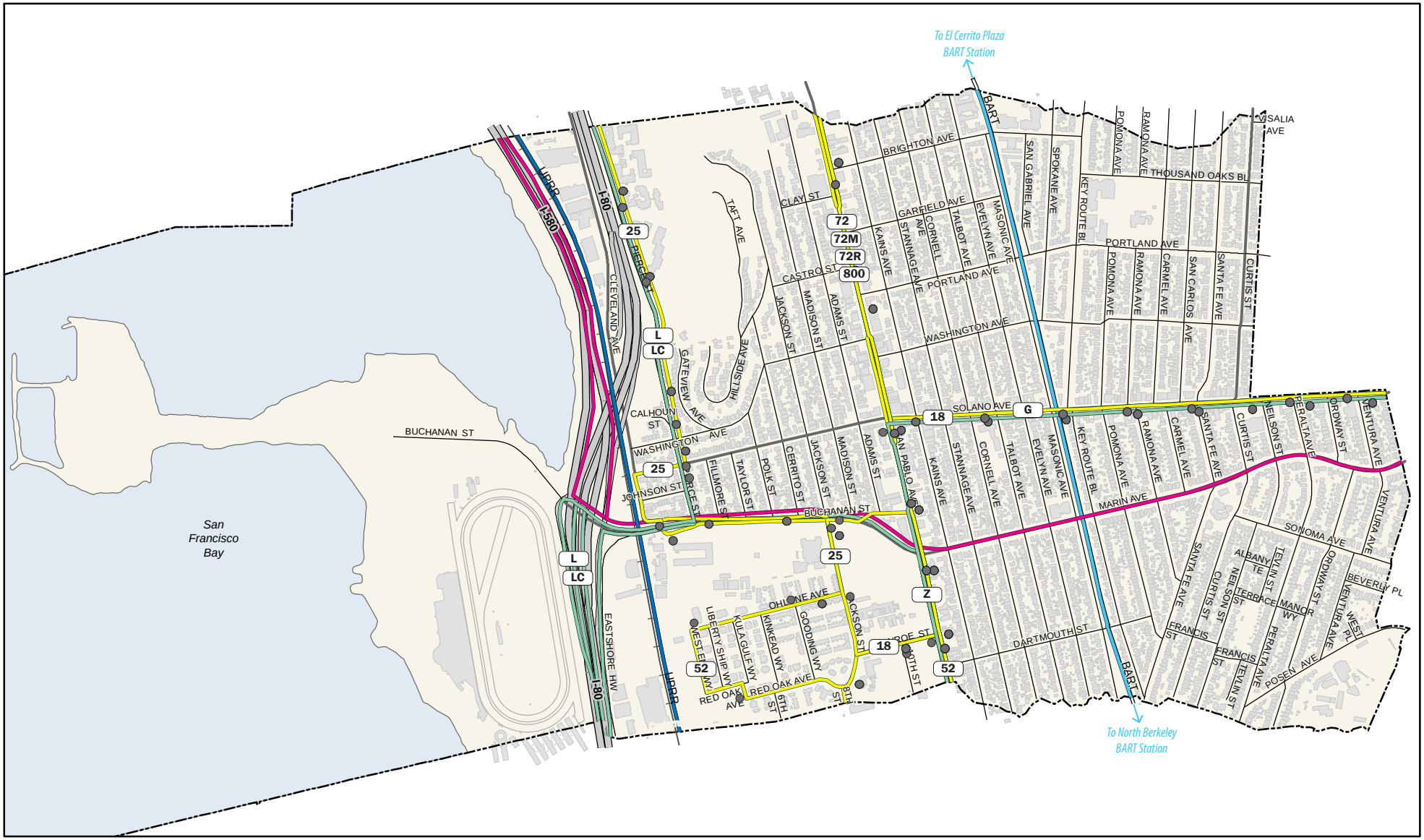
(1) Alameda-Contra Costa Transit District. The Alameda-Contra Costa Transit District (AC Transit) is the primary bus service provider in Albany. AC Transit serves 13 cities and adjacent unincorporated communities in the East Bay. Several AC Transit bus routes provide service to the City (see Table IV.C-4). Most bus routes typically operate along major arterial corridors, such as San Pablo Avenue and Solano Avenue. These are relatively straight, evenly spaced routes that operate from early morning into the late evening. All residential areas in the City of Albany are within 0.5 miles from a bus stop.

AC Transit also operates limited stop services such as Route 800 which operates late nights, and the Transbay Routes (Routes G, L, and Z), which serve the Transbay Terminal in San Francisco during peak commute periods. Table IV.C-4 summarizes the hours of operation, headways and average weekday ridership for each route serving Albany.

San Pablo Avenue in Albany is a major transit corridor. It is served by the 72 trunklines, which include the 72 Rapid (72R), a limited stop line between Jack London Square in Oakland and Contra Costa College in Richmond. This particular route provides significant time advantage to commuters and transit riders in general.

The bus stops at the San Pablo Avenue/Solano Avenue intersection show the highest activity in boarding and alightings within Albany. The most active bus stop is the northbound near-side stop on San Pablo Avenue at Solano Avenue with approximately 425 boarding and alightings per day. AC Transit provides 3,900 person trips per day in the City and every day, approximately 4,300 transit riders pass through Albany via San Pablo Avenue.

(2) BART. BART provides regional rail service throughout the East Bay and across the Bay to San Francisco and the Peninsula. BART does not provide direct service within the City of Albany. However, the Ohlone Greenway provides bicycle and pedestrian access to both BART stations, connecting the Albany community to regional transit.



LSA

FIGURE IV.C-2

LEGEND

- Albany City Limit
- Freeway
- AC Transit Route
- AC Transit Transbay Route
- AC Transit Route Number (#)
- Bus Stop
- University of California Shuttle
- AMTRAK
- BART

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SOURCE: Fehr & Peers, 2015.

City of Albany General Plan EIR

Existing Transit Routes

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Table IV.C-4: Existing AC Transit Service

Route	From	To	Weekdays			Weekends			Total Daily Boardings [b]	Total Daily Boardings in Albany [b]
			Operating Hours	Headway [a] (minutes) Peak	Headway [a] (minutes) Non-Peak	Operating Hours	Headway [a] (minutes) Peak			
Local Service										
18	Mountain Boulevard & Moraga Avenue in Oakland	San Pablo & Marin Avenues	5:20 a.m.-12:40 a.m.	15	30	6:15 a.m.-1:00 a.m.	20		8,300	940
25	El Cerrito Plaza BART Station	Downtown Berkeley BART Station	7:00 a.m.-8:30 p.m.	40		8:00 a.m.-7:00 p.m.	60		900	71
52	Bancroft Way & Telegraph Avenue in Berkeley	Monroe Street & San Pablo Avenue	6:00 a.m.-12:00 a.m.	15	30	8:40 a.m.-7:45 p.m.	35		3,000	604
72	2nd & Harrison Streets in Oakland	Hilltop Mall in Richmond	5:00 a.m.-1:00 a.m.	30	40	5:00 a.m.-12:30 a.m.	30	40	4,500	124
72M	2nd & Harrison Streets in Oakland	Tewksbury Avenue & Castro Street in Richmond	5:00 a.m.-12:00 a.m.	20	40	6:00 a.m.-1:00 a.m.	30	40	4,200	122
72R	2nd & Clay Streets in Oakland	Contra Costa College in San Pablo	6:00 a.m.-8:10 p.m.	12		No Weekend Service			7,000	174
Night Service										
800	Market Street & Van Ness South in San Francisco	Richmond BART	12:40 a.m.-6:20 a.m.	60		12:30 a.m.-7:20 a.m.	30		400	3
TransBay Service										
G	Transbay Terminal in San Francisco	Potrero Avenue & Richmond Street in El Cerrito	4:40 p.m.-8:10 p.m.	30	60	No Weekend Service			350	75
L	Transbay Terminal in San Francisco	San Pablo Dam Road & Princeton Plaza in San Pablo	3:10 p.m.-10:20 p.m.	15	60	No Weekend Service			700	93
Z	Transbay Terminal in San Francisco	Buchanan & Pierce Streets in Albany	7:20 a.m.-9:00 a.m.	60		No Weekend Service			100	2

[a] Headways are defined as the time interval between two transit vehicles traveling in the same direction over the same route.
[b] Weekday boardings from AC Transit, received March 2014.

Note: Table excludes University of California Shuttle.

Source: AC Transit, March 2014.

The nearest BART stations include:

- **The El Cerrito Plaza Station.** This station is located at 6699 Fairmount Avenue in El Cerrito, approximately 0.5 miles north of the City of Albany. The station has monthly reserved, daily fee, extended weekend, carpool, and airport/long term parking. It also has bike racks and 72 electronic bike lockers. The average daily weekday boardings in April 2015 were 5,000 riders at this station.
- **The North Berkeley Station.** This station is located at 1750 Sacramento Street in Berkeley, approximately one mile south of Albany. The station offers easy access to the Ohlone Greenway for bicyclists and pedestrians. The station has daily fee, monthly reserved, single day reserved, extended weekend, and airport/long term parking. Bike racks and 60 shared use electronic bike lockers are also provided. The average daily weekday boardings in April 2015 were about 4,800 riders at this station.

(3) Other Transit Service. In addition to AC Transit and BART, the following transit services are also available:

- **University of California Shuttle (Richmond Field Station Shuttle).** UC Berkeley operates a shuttle connecting the main University campus and the Richmond Field Station (RFS) with a stop in Albany on Buchanan Street at Jackson Street to serve the University Village. The UC Shuttle operates from 6:45 a.m. to 6:10 p.m. with 60 minutes headways for most of the day at the Albany stop.
- **Capitol Corridor.** Capitol Corridor, a commuter rail service operated by Amtrak between San Jose and Sacramento on the Union Pacific right-of-way runs through Albany. Nearest stations to Albany are in Berkeley, about one mile to the south, and Richmond, about four miles to the northwest.

e. Pedestrians. In 2013, the City adopted a Complete Streets Policy which formalized the City's vision of a community in which adults and children could walk or bike to meet their travel needs and improve their health and the environment. The 2012 Albany Active Transportation Plan[2] (ATP) lays out a detailed plan to encourage pedestrian travel as a viable mode of transportation between residential and commercial areas throughout the City and near activity areas such as schools, parks, transit stations, and the Downtown and neighborhood business districts by providing safe and convenient pedestrian facilities.

(1) Existing Pedestrian Network. The overall citywide street network is essentially built out. Most streets include at least a 4-foot-wide sidewalk on one or both sides. Curb ramps exist at many intersections within the City, but many areas have no ramps or are in need of an upgrade to comply with the 2010 Americans with Disabilities Act (ADA) standards. Figure IV.C-3 illustrates the existing and proposed pedestrian facilities in Albany, including the location of signalized intersections. Major intersections along San Pablo Avenue have ADA compliant ramps. Solano Avenue intersection ramps are compliant in some locations, but many of the ramps require some level of improvement, and many intersections are unsignalized or uncontrolled. Neighborhood streets are in need of the most ADA accessibility improvements due to very few compliant ramps.

[2] Fehr & Peers, et al., 2012. *Albany Active Transportation Plan.* April.

There are two major pedestrian and bicycle trails in the City. The Ohlone Greenway, along the BART tracks, connects to El Cerrito and Richmond in the north and Berkeley in the south. The Bay Trail, along the Bay (parallel to both I-80 and I-580), connects to trails in Berkeley and Richmond, as well as the Albany Bulb and Point Isabel in Richmond.

(2) Planned Pedestrian Improvements. The ATP proposes a network of walking-priority streets. While most City streets have sidewalks, the priority corridors, as shown on Figure IV.C-3, would include additional enhancements for pedestrians. The streets within the pedestrian priority network would be targeted for off-street paths, signage, traffic calming, or sidewalk improvements. Criteria for determining pedestrian priority and enhanced treatment include connection to activity centers, comfort and access, purpose, and connection to regional networks.

The City also has a Safe Routes to School Program (SR2S) that emphasizes pedestrian and bicycle safety around schools. The program conducts walking audits around schools in order to inventory safety hazards. These safety hazards are evaluated in more detail to identify countermeasures around each school. Many of these studies have become the subject of successful grant applications for pedestrian or bicycle infrastructure projects.

f. Bicycles. The ATP plans for the development of a safe, direct, well-maintained and connected bicycle network that links residences, employment centers, schools, parks and transit facilities with a goal of 90 percent bicycling network implementation by 2020. The ATP also plans for improved bicycle parking in the City.

A description of the existing bicycle facilities in Albany follows. Figure IV.C-4 shows the location of existing and planned bicycle facilities and the City's trail network.

(1) Existing Bikeways. The 2012 ATP describes the three bikeway classifications in the City, which all meet the design guidelines of the *Caltrans Highway Design Manual* (HDM), Chapter 1000: Bikeway Planning and Design for multi-use trails.

- **Class I: Shared-Use Paths.** These facilities provide completely separate right-of-way and are designated for the exclusive use of bicyclists and pedestrians with vehicle cross-flow minimized. Paths are an important component of Albany's bicycle network as they provide a safe environment for younger or less experienced bicyclists who do not want to ride alongside traffic or do not want to travel at a fast pace. More experienced riders may find high-speed travel difficult on paths due to the volume of casual users, while casual recreational users find the speed of experienced riders intimidating. Existing Class I facilities include San Francisco Bay Trail, Ohlone Greenway, Buchanan Bikeway, and the Codornices and Cerrito Creek Trails.
- **Class II: Bicycling Lane.** Bicycling lanes provide a restricted right-of-way and are designated for the use of bicyclists with a striped lane on a street or highway. Bicycling lanes are generally five feet wide. Vehicle parking and vehicle/pedestrian cross-flow are permitted. For instance, right-turning vehicles must merge into the lane before turning. Existing Class II facilities in Albany include the bike lanes on Marin Avenue and Buchanan Street, and the recently implemented bike lanes on Washington Avenue between Pomona Avenue and the Berkeley city limit.
- **Class III: Bicycling Route.** Bicycling routes provide a right-of-way designated by signs or pavement markings for shared use with pedestrians or motor vehicles. While a base Class

III route may simply have signs and markings, a Bicycling Boulevard is a special type of shared route that optimizes bicycle travel. Bicycling Boulevards can have a variety of traffic calming elements to improve safety and comfort of bicyclists. Class III routes also may be marked by shared lane pavement markings (also known as "sharrows"), which indicate that bicycles may use the vehicle travel lanes. Although some streets with high volumes of traffic have been designated as bike routes, most official bike routes in Albany are on low-volume streets. Existing bike routes include Pierce Street, Buchanan Street, Masonic Avenue, and Santa Fe Avenue.

(2) Planned Bikeway Improvements. The ATP proposes a variety of new bicycle facilities that will create a more complete bicycle network. As shown on Figure IV.C-4, many bike boulevards and routes are proposed for local Albany streets such as Kains Avenue, Adams Street, Brighton Avenue, Dartmouth Street, Sonoma Avenue, Talbot Street, Peralta Avenue, Posen Avenue, Francis Street, and Portland Avenue. Bicycle paths are proposed for some segments of Jackson Street within the University of California's jurisdiction. A new bicycle path is also proposed along the east side of I-80.

g. Existing Traffic Conditions. Current traffic conditions in the City of Albany are described below.

(1) Level of Service Methodology. Traffic operations are described using the term "Level of Service" (LOS). The level of service (LOS) system qualitatively characterizes conditions associated with varying levels of vehicle traffic, ranging from LOS A (indicating free flow conditions with little or no delay experienced by motorists) to LOS F (indicating congested conditions where traffic demand exceeds design capacity and results in long queues and delays). LOS E generally represents "at-capacity" operations. Currently, the City of Albany does not have adopted standards for roadway and intersection operations.

Table IV.C-5 lists the LOS thresholds based on daily and peak hour volumes and used in this analysis. The data in this table reflect the total traffic volume in both directions corresponding to various levels of service for different roadway facility types based on 2010 Highway Capacity Manual (HCM) calculations

Roadway segment LOS based on two-way peak hour volumes provides a general representation of traffic operations and flow along a specific roadway segment. Since volumes in both directions are accounted for, the reported LOS represents the overall conditions in both directions of traffic combined, which is standard practice for general plan-level transportation analyses. It is acknowledged that operations in the peak direction of travel or at intersections may be temporarily worse than reported.

(1) Traffic Volumes. Automatic traffic tube counts were conducted at 15 locations throughout the City in April 2014 for a one-day (24-hour) period. Freeway daily traffic and peak hour volumes were obtained from the Caltrans Performance Measurement System (PeMS) data averaged for January through March 2015. This study also evaluated the highest hour within each peak period (defined as from 7:00 a.m. to 9:00 a.m. for the AM peak period and 4:00 p.m. to 6:00 p.m. for the PM peak period) for each roadway segment.

LSA

LEGEND

- Albany City Limit
- Freeway
- ATP Proposed Pedestrian Priority Network
- Class I Shared Use Path (Pedestrians and Bikes Permitted)
- Proposed Class I Shared Use Path (Pedestrians and Bikes Permitted)
- Pedestrian-Only Path
- Proposed Pedestrian-Only Path
- Existing Signal
- Proposed Signal
- Proposed Pedestrian Hybrid Beacon
- Existing Pedestrian/ Bicycle Bridge
- Proposed Pedestrian/ Bicycle Bridge

N

0 0.125 0.25
MILES

SOURCE: Active Transportation Plan, 2012, updated 2015.

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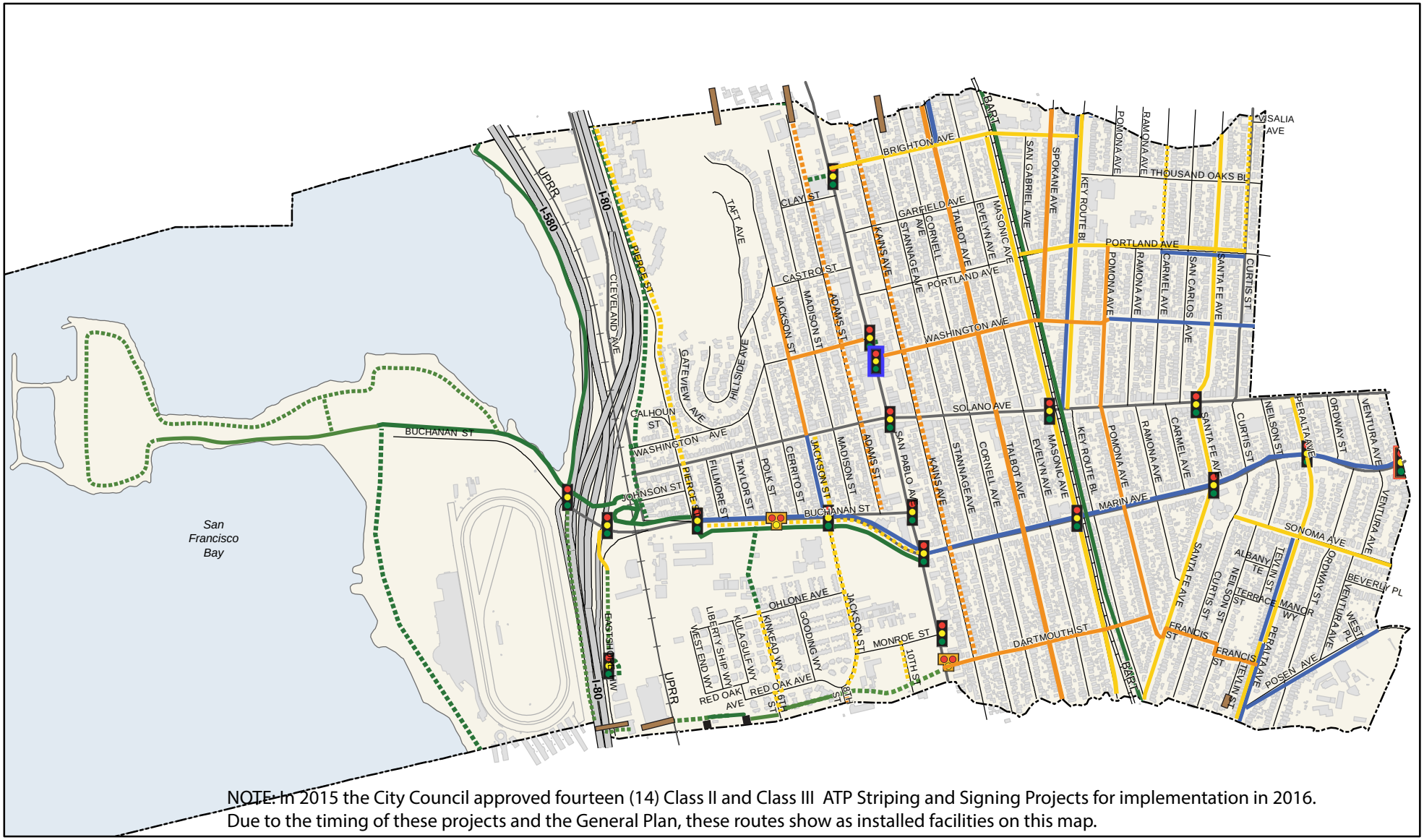
FIGURE IV.C-3

City of Albany General Plan EIR

Existing and Proposed Pedestrian Facilities



NOTE: In 2015 the City Council approved fourteen (14) Class II and Class III ATP Striping and Signing Projects for implementation in 2016. Due to the timing of these projects and the General Plan, these routes show as installed facilities on this map.

LSA

FIGURE IV.C-4

LEGEND

Albany City Limit

Freeway

Existing: Class I Path | Class II Lane | Class III Boulevard | Class III Route

Proposed: Class I Path | Class II Lane | Class III Boulevard | Class III Route

Existing Signal

Proposed Signal

Proposed Pedestrian Hybrid Beacon

Existing Pedestrian/ Bicycle Bridge

Proposed Pedestrian/ Bicycle Bridge

0 0.125 0.25 MILES

SOURCE: Fehr & Peers, 2015.

City of Albany General Plan EIR

Existing and Proposed Bicycle and Trail Facilities

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Table IV.C-5: Two-Way Roadway Segment Level of Service Definitions

	Maximum Volume [a,b] (both directions except freeway segments)				
Roadway Type	**LOS A**	**LOS B**	**LOS C**	**LOS D**	**LOS E**
Daily Thresholds					
2-Lane Undivided Arterial[c]			9,100	16,700	17,700
2-Lane Divided Arterial[c]			9,700	17,600	18,700
3-Lane Arterial (TWLTL[c,d])			11,380	20,880	22,130
4-Lane Undivided Arterial[c]			17,500	27,400	28,900
4-Lane Divided Arterial[c]			19,200	35,400	37,400
2-Lane Collector[e]	2,600	5,200	7,800	11,000	12,900
4-Lane Freeway	22,200	40,200	57,600	71,400	80,200
6-Lane Freeway	34,000	61,600	88,000	108,200	121,200
8-Lane Freeway	46,400	84,000	119,000	145,600	162,800
Peak Hour Thresholds					
2-Lane Undivided Arterial[c]			910	1,670	1,770
2-Lane Divided Arterial[c]			970	1,760	1,870
3-Lane Arterial (TWLTL[c,d])			1,138	2,088	2,213
4-Lane Undivided Arterial[c]			1,750	2,740	2,890
4-Lane Divided Arterial[c]			1,920	3,540	3,740
2-Lane Collector[e]	260	520	780	1,100	1,290
4-Lane Freeway	2,220	4,020	5,760	7,140	8,020
6-Lane Freeway	3,400	6,160	8,800	10,820	12,120
8-Lane Freeway	4,640	8,400	11,900	14,560	16,280

[a] The LOS capacity thresholds are based on Highway Capacity Manual (HCM) 2010 methodology.
[b] Non-directional peak hour traffic volumes are assumed to be 10 percent of the daily traffic volume. All volumes are approximate and assume ideal roadway characteristics.
[c] LOS A and B are not achievable for arterial roadways using the HCM 2010 methods.
[d] TWLTL = Two-way left-turn lane
[e] For collector roadway segments, the capacity limitation is related to neighborhood quality of life rather than the physical carrying capacity of the road.

Source: *Highway Capacity Manual*, Transportation Research Board, 2010.

(2) Roadway Level of Service Analysis. Traffic operations of the existing roadway system were analyzed based on the existing daily and AM and PM peak hour traffic data and generalized capacities and thresholds that correspond to a level of service as described above.

Roadways were analyzed by comparing the counted daily and peak hour volumes to threshold volumes based on roadway type as presented in Table IV.C-5. It is important to note that daily volume thresholds are used for planning purposes to generally size roads, and traffic during peak periods may temporarily result in worse operations than indicated by the daily LOS. Therefore, AM and PM peak hour traffic volumes were also analyzed, in addition to the average daily traffic volumes. Consistent with a general plan where development details and locations are not identified, this approach helps to determine the overall capacity of the roadway and is not intended to address detailed operational issues at the intersection level that are dependent on the number of turn lanes, signal timing, adjacent driveway operations, peak hour volumes, etc. Table IV.C-6 summarizes the daily and AM and PM peak hour volumes and the corresponding LOS.

Table IV.C-6: Existing Roadway Segment Levels of Service

Roadway Segment [a]	Roadway Type	ADT		AM Peak Hour		PM Peak Hour	
		Volume [b]	LOS [c]	Volume [b]	LOS [c]	Volume [b]	LOS [c]
Cleveland Avenue north of Washington Avenue	2-Lane Undivided Arterial	6,600	C	780	C	460	C
Pierce Street north of Washington Avenue	2-Lane Undivided Arterial	4,060	C	450	C	350	C
Eastshore Highway south of Buchanan Street	2-Lane Collector	5,500	C	640	C	400	B
Buchanan Street between Fillmore and Taylor Streets	4-Lane Divided Arterial	29,640	D	2,110	D	2,240	D
Jackson Street between Portland Avenue and Castro Street	2-Lane Collector	3,920	B	440	B	380	B
San Pablo Avenue between Portland and Garfield Avenues	4-Lane Undivided Arterial	24,720	D	1,800	D	2,070	D
San Pablo Avenue between Buchanan Street and Solano Avenue	4-Lane Undivided Arterial	23,500	D	1,610	C	1,820	D
San Pablo Avenue between Monroe and Dartmouth Streets	4-Lane Undivided Arterial	23,520	D	1,810	D	1,980	D
Brighton Avenue between Stannage and Cornell Avenues	2-Lane Collector	3,540	B	280	B	340	B
Solano Avenue between Stannage and Cornell Avenues	2-Lane Undivided Arterial	10,390	D	680	C	750	C
Marin Avenue between Stannage and Cornell Avenues	3-Lane Arterial (TWLTL)[e]	19,030	D	1,360	D	1,480	D
Masonic Avenue between Dartmouth Street and Marin Avenue	2-Lane Undivided Arterial	3,830	C	350	C	420	C
Key Route Boulevard between Portland Avenue and Thousand Oaks Boulevard	2-Lane Divided Arterial	5,160	C	460	C	480	C
Solano Avenue between Santa Fe Avenue and Curtis Street	2-Lane Undivided Arterial	9,670	D	610	C	750	C
Marin Avenue between Santa Fe Avenue and Curtis Street	3-Lane Arterial (TWLTL)	17,580	D	1,180	D	1,450	D
I-80 south of the I-580 interchange	8-Lane Freeway	**193,100**	**F**	11,630	C[f]	10,920	B[f]
I-80 north of the I-580 interchange	6-Lane Freeway	**118,900**	**E**	6,490	C[f]	6,390	C[f]
I-580 north of the I-80 interchange	4-Lane Freeway	**76,500**	**F**	5,500	C[f]	6,130	D[f]

[a] Major roadways nearest the count location.
[b] Average Daily Traffic (ADT) volume based on traffic counts collected in April 2014 for surface streets and based on Caltrans Performance Measurement System (PeMS) data collected in January through March 2015 for freeways.
[c] LOS – Level of Service
[d] **Bold** text indicates LOS E or F.
[e] TWLTL = Two-way left-turn lane
[f] Reported volume and corresponding LOS is based on the served volume during the peak hour at the reported location, and does not account for upstream congestion and queuing. Therefore, actual LOS experienced by drivers at this location is worse than reported.

Source: Fehr & Peers, 2015.

Based on daily volume thresholds, the following freeway segments currently operate at or LOS F:

- I-580 north of the I-80 interchange
- I-80 south of the I-580 interchange
- I-80 north of the I-580 interchange

All surface roadway segments (non-freeway) operate at an LOS D or better under daily and AM and PM peak hour conditions.

2. Regulatory Framework

Several regional, State and local agencies have jurisdiction over transportation planning and implementation of circulation improvements in Albany. Each agency and their relevant planning documents are described below.

a. State and Regional Agencies. State and regional transportation agencies are described below.

(1) California Department of Transportation. California Department of Transportation (Caltrans) has authority over the State highway system, including freeways, interchanges, and arterial State Routes. Caltrans approves the planning, design, and construction of improvements for all State-controlled facilities including I-80, I-580, and SR 123 (also called San Pablo Avenue) within the City of Albany. Caltrans maintains a volume monitoring program and reviews local agencies' planning documents to assist in its forecasting of future volumes and congestion points.

Caltrans has as an objective to maintain a target Level of Service (LOS) at the transition between LOS "C" and "D." Levels of Service are defined in Table IV.C-5. However, according to the Caltrans' Guide for the Preparation of Traffic Impact Studies, Caltrans recognizes that maintaining the adopted LOS may not always be feasible. Within Alameda County, the County Transportation Commission (Alameda CTC) determines the applicable LOS and Measure of Effectiveness (MOE) for State highways.

(2) Alameda County Transportation Commission. The Alameda County Transportation Commission (Alameda CTC) was created by a merger of the Alameda County Congestion Management Agency (ACCMA) and the Alameda County Transportation Improvement Authority (ACTIA) in July 2010. It is managed by elected officials and their representatives from all of the cities in the County and a County elected official. The merger resulted in a more efficient and streamlined project delivery system for Alameda County transportation projects, including improvements for vehicular safety, travel efficiency, and congestion relief, and for bicycle and pedestrian travel.

The Alameda CTC plans, funds and delivers transportation programs and projects that expand access and improve mobility, with the objective of fostering a more vibrant and livable Alameda County. The Alameda CTC coordinates countywide transportation planning and prepares the expenditure plan for the sales taxes approved by Alameda County voters in 2000 and 2014. The Alameda CTC prepared the County-wide Transportation Plan, the Congestion Management Program (CMP), as well as an update of the 2006 Countywide Bicycle and Pedestrian Plans, approved in 2012. The CMP establishes analysis thresholds for designated roadways, which in the vicinity of the City are I-80/580 and San Pablo Avenue (SR 123). For most projects, the Alameda CTC Technical & Policy Guidelines uses a 100-trip PM peak (increase) threshold, which if exceeded, would require a detailed traffic impact study.

Several advisory committees, composed of staff representatives from each city and the County, provide technical guidance and oversight to the Alameda CTC. The Alameda County Technical Advisory Committee (ACTAC), composed of representatives from each city, unincorporated areas, and transit agencies serving Alameda County provides technical expertise, analysis and recommendations related to transportation planning, programming and funding. In addition, a separate Bicycle and Pedestrian Advisory Committee (BPAC), composed of citizens appointed by the cities and County, make recommendations to the Alameda CTC and staff on development and implementation of bicycle and pedestrian programs, including updates of the countywide plans. The Citizens Advisory

Committee and the Watchdog Committee ensure that projects funded with Measure B funds reflect the needs of the community as established by the enactment of the sales tax program. The Paratransit Advisory and Planning Committee advises Alameda CTC on the development and implementation of paratransit programs.

(3) Metropolitan Transportation Commission. The Metropolitan Transportation Commission (MTC) is the Bay Area's regional transportation planning agency and federally designated Metropolitan Planning Organization (MPO). MTC is responsible for preparing the Regional Transportation Plan (RTP), a comprehensive blueprint for the development of mass transit, highway, airport, seaport, railroad, bicycle, and pedestrian facilities. The RTP is a 20-year plan that is updated every three years to reflect new planning priorities and changing projections of future growth and travel demand. The long-range plan must be based on a realistic forecast of future revenues, and the transportation projects taken as a whole must help improve regional air quality. The Commission also screens requests from local agencies for State and federal grants for transportation projects to determine compatibility with the RTP.

In recent years, State and federal laws have given MTC an increasingly important role in financing Bay Area transportation improvements. Most significant was the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA), which increased the powers of MPOs, such as MTC, to determine the mix of transportation projects best suited to meet their region's needs. MTC also administers State monies, including the Local Transportation Fund and State Transit Assistance, derived from the Transportation Development Act (TDA). TDA is a quarter-cent sales tax that primarily funds transit operations and other non-transit related projects and programs that comply with regional transportation plans in the State. Legislation passed in 1997 gives MTC increased decision-making authority over the selection of projects and allocation of funds for the State Transportation Improvement Program (STIP).

The most recent federal surface transportation funding program, Moving Ahead for Progress in the 21st Century Act (MAP-21), was signed into law in July 2012. Funding surface transportation programs at over $105 billion for fiscal years (FY) 2013 and 2014, MAP-21 is the first long-term highway authorization enacted since 2005. MAP-21 creates a streamlined, performance-based, and multimodal program to address challenges such as improving safety, maintaining infrastructure condition, reducing traffic congestion, improving efficiency of the system and freight movement, protecting the environment, and reducing delays in project delivery. MAP-21 builds on and refines many of the highway, transit, bike, and pedestrian programs and policies established in 1991.

b. City of Albany Transportation Planning Framework. The following section provides a description of current local transportation planning policies and efforts that have been initiated in the community:

(1) City of Albany General Plan. The 1992 Albany General Plan, now 23 years old and soon to be replaced, included the following major goals and policies related to transportation and circulation:

- **Goal CIRC-1:** Preserve the character of residential areas near and on arterial streets.
- **Policy CIRC 1.1:** Evaluate traffic and circulation along Kains and Adams Streets. Take advantage of San Pablo Avenue or an east-west street for primary access. Discourage or prevent the use of Kains and Adams for primary access to non-residential uses.

- **Policy CIRC 1.3:** Support staging and careful scheduling of I-80 corridor improvements to reduce traffic diversion onto City streets.
- **Policy CIRC 1.4:** Concentrate East/West through traffic along Marin and Solano Avenues, and discourage such traffic from Washington and Portland.
- **Policy CIRC 1.5:** Concentrate North/South through traffic along Masonic, Key Route, and Santa Fe.
- **Goal CIRC-2:** Protect residential neighborhoods from excessive parking demands.
- **Policy CIRC 2.1:** Evaluate on-street parking use and capacity along Kains and Adams and consider more stringent regulation including timed parking or parking permits. Similarly, consider the impacts of more stringent parking regulation on adjacent residential streets.
- **Policy CIRC 2.2:** Evaluate the impacts of increased parking demand on streets adjacent to Solano Avenue. Consider the potential impacts of more stringent parking regulation on nearby residential streets.
- **Goal CIRC-3:** Maintain adequate circulation throughout the City and improve the parking capacity on Solano and San Pablo Avenues.
- **Policy CIRC 3.1:** Monitor critical intersections for indications of necessary traffic improvements. Develop specific improvement plans to reduce the impacts of increased traffic and incorporate into the City's Capital Improvements Plan.
- **Policy CIRC 3.2:** Conduct more detailed studies to address the traffic effects and needed improvements associated with specific development proposals.
- **Policy CIRC 3.3:** Establish funding mechanisms to acquire and develop municipal parking facilities in the City's commercial areas along Solano and San Pablo Avenue, including an in-lieu fee for new development, expansion/intensification of existing commercial uses, or major change of use, as parcels become available.
- **Goal CIRC-4:** Support public transit, and other means to reduce reliance on the automobile as the primary means of transportation.
- **Policy CIRC 4.1:** Monitor existing and proposed transit service for responsiveness to residents' and employers' needs.
- **Policy CIRC 4.2:** Encourage the continuation of paratransit services operated through the Albany Senior Center.
- **Policy CIRC 4.3:** Continue to work with the City's Trip Reduction Ordinance and continue to develop programs and incentives for the use of carpools, staggered work hours, bicycling, walking and the increased use of public transit for residents and employees in the community.
- **Policy CIRC 4.5:** Increase pedestrian travel throughout the City by connecting major pathway systems such as the BART linear park to other City, regional, and State Parks, and other community facilities.
- **Policy CIRC 4.6:** Increase disabled access throughout the City by installing curb cuts wherever feasible as part of new construction, repair or improvements to streets, sidewalks, pathways and trails.
- **Policy CIRC 4.7:** Assure that sidewalks, pathways and trails used by pedestrians are safe and provide unhindered access for all.
- **Goal CIRC-5:** Improve and enhance the City's bicycle route and path system.

- **Policy CIRC 6.1:** Develop a plan for bike routes for Albany, linking existing bike paths and routes in Berkeley and El Cerrito. Implement this plan as part of the City's overall road maintenance and traffic sign program within the annual capital projects budget, as well as through specific transportation funding.

The City has released preliminary goals, policies, and action programs for transportation as part of the proposed Draft General Plan. The new goals, policies and programs incorporate the direction provided by the Active Transportation Plan (discussed below) and the Albany Climate Action Plan. In general, they move the City toward a less auto-dependent and sustainable transportation pattern, with an emphasis on walking, bicycling, public transportation, and safety. Upon adoption of the proposed Draft General Plan, the goals and policies listed above will be superseded by the new goals and policies.

(2) Albany Traffic Management Plan. The Albany Traffic Management Plan began in 1998 as a comprehensive planning process that utilized public participation to identify traffic related community needs. The process was supported by a comprehensive city-wide traffic data study which informed goals and policies, and facilitated the implementation of programs.

(3) Albany Parks and Recreation Master Plan. In 2004, the City of Albany adopted a new Master Plan for Parks, Recreation and Open Space. This process started with evaluation of community needs and assessment of existing parks and facilities and concluded with a five to ten year Plan for the enhancement of the City's park system, open space, recreation facilities, programs and services. This process established a set of goals, policies and objectives and provides direction to City staff, the Parks and Recreation Commission and the City Council. Transportation-related topics such as bicycling and walking are addressed by this Plan.

(4) Albany Complete Streets Plan for San Pablo and Buchanan Street. In 2012, the City of Albany in partnership with the Local Government Commission (LGC), conducted a visioning process for San Pablo Avenue and Buchanan Street in order to help foster a safer, more comfortable, and aesthetically pleasing environment for all users. The visioning process and strategies developed through a complete streets design focus helped to produce a set of design principles that the City will use to guide the implementation of new infrastructure over the next several years.

(5) Albany Active Transportation Plan (ATP-2012). The City of Albany Active Transportation Plan includes updates to the Bicycle Master Plan and development of the City's first Pedestrian Master Plan. Both Master Plans are key implementation steps in support of the City's greenhouse gas emissions reduction policy which aims to reduce emissions by 25 percent below 2004 levels by 2020. The Active Transportation Plan sets key goals and policy objectives that apply to bicycle and pedestrian facilities and seeks to institutionalize the accommodation for these modes throughout City policies and practices. The ATP entails 27 bicycle and pedestrian projects that will encourage the use of non-motorized transportation and reduce greenhouse gas emissions from transportation sources. Most of these projects are signage and striping installations and relatively easy to implement. The proposed Draft General Plan incorporates the adopted Albany Active Transportation Plan.

(6) Complete Streets Ordinance of the City of Albany. In January 2013, the City of Albany adopted a Complete Streets Resolution which confirms the City's commitment to implementing measures consistent with the Complete Streets Policy, further stating that the proposed Draft

General Plan will include policies that are consistent with Complete Streets. The resolution requires that the mobility of all users, including non-automotive users, be considered in planning and designing City streets.

3. Impacts and Mitigation Measures

This section provides an assessment of the potential transportation and circulation impacts related to implementation of the Draft General Plan. This section begins with the criteria of significance, which establishes the thresholds for determining whether an impact is significant. The latter part of this section identifies potential impacts and evaluates how they relate to policies and actions of the Draft General Plan. Where potentially significant impacts are identified, mitigation measures are recommended.

a. Criteria of Significance. Implementation of the Draft General Plan would have a significant impact on transportation and circulation under the following circumstances: [3]

- A significant traffic-related impact would occur on a roadway segment on the Metropolitan Transportation System if the addition of project-related traffic causes:
    - Roadway segment to degrade from LOS E or better to LOS F *and* increase the volume-to-capacity ratio by more than 5 percent; or
    - Increase the volume-to-capacity ratio by more than 5 percent for a roadway segment that would operate at LOS F without the project.
- A significant traffic-related impact would occur on a roadway segment not on the on the Metropolitan Transportation System if the addition of project-related traffic causes:
    - Roadway segment to degrade from LOS D or better to LOS E or LOS F *and* increase the volume-to-capacity ratio by more than 5 percent; or
    - Increase the volume-to-capacity ratio by more than 5 percent for a roadway segment that would operate at LOS E or LOS F without the project.
- The project would have a significant impact on bicycle/pedestrian facilities if it would:
    - Hinder or eliminate an existing or designated bikeway, or interfere with implementation of a proposed bikeway; or
    - Result in unsafe conditions for bicyclists, including unsafe bicycle/pedestrian or bicycle/motor vehicle conflicts;[4] or

[3] City of Albany is aware of the prospective changes to traffic impact analyses as required by California Senate Bill 743 which would prohibit the use of LOS or other congestion-based metrics in identifying significant impacts under California Environmental Quality Act (CEQA). Since the State Office of Planning and Research (OPR) has not published the final guidelines on analysis methodologies or significance criteria, this evaluation uses thresholds of significance based on LOS to analyze the potential transportation impacts of the proposed Draft General Plan, consistent with current City of Albany standards and practices. In addition, this document also uses a threshold of significance based on VMT, which is likely to be proposed by OPR to replace LOS as the methodology to conduct traffic impact analysis under CEQA.

[4] Factors to consider in evaluating the potential impact to cyclists include, but are not limited to, removal of existing bikeways, addition of new automobile travel lanes or turn lanes, and/or limited visibility between motorists and bicyclists.

- Adversely affect an existing pedestrian facility or result in unsafe conditions for pedestrians, including unsafe pedestrian/bicycle or pedestrian/motor vehicle conflicts. [5]

- The project would have a significant impact on transit if it would:
  - Cause a substantial delay in transit service.[6]

The project will also have a significant impact if it would:

- Result in inadequate emergency access; or
- Substantially increase hazards due to a design feature or incompatible uses or create unsafe conditions for pedestrians or bicyclists; [7] or
- Conflict with local or regional policies or programs supporting alternative transportation. [8]
- Result in an increase in VMT per service population over current City averages.

b. Impact Analysis. The following sections provide an evaluation and analysis for the potential less-than-significant, significant and cumulative impacts of the Draft General Plan for each of the criteria of significance listed above.

(1) Traffic Impacts. This section describes the methodology and assumptions used to identify the impacts of the Draft General Plan on traffic operations. Impacts are assessed based on comparing traffic operations between 2040 No Growth in Albany and 2040 Plus Project conditions. This analysis presents the extent of the impacts caused by the growth facilitated by the proposed Draft General Plan on roadway operations (LOS) based on application of Significance Criteria #1 and #2 as listed in section 3.a. (e.g., the first two bulleted items in the list)

Traffic Volume Forecasts. Traffic forecasts were prepared using the Alameda County Transportation Commission (Alameda CTC) Travel Demand Model. This is a regional travel demand model developed by the Alameda CTC to forecast future traffic volumes on the regional roadway network throughout Alameda County. The most recent version of the Alameda CTC Model, released in July 2014, which reflects assumptions in residential and non-residential land use growth consistent with ABAG Projections 2013 (i.e., Sustainable Community Strategies), served as the basis for developing AM and PM peak hour volume forecasts for the year 2040 scenarios.

[5] Factors to consider in evaluating the potential impact to pedestrians include, but are not limited to, removal or narrowing of existing sidewalks, removal of existing sidewalk-street buffering elements (e.g., on-street parking or planting strip), increase in street crossing distance, and/or limited visibility between motorists and pedestrians.

[6] Factors to consider depend on the specific bus route and the corridor the bus route operates on. For example, congestion on a corridor may result in a significant impact if it would require providing additional buses on the route to meet current service standards.

[7] In addition to the factors described above, factors to consider in evaluating the potential impact of increased hazards include, but are not limited to, introduction of design features that do not meet established design standards, and/or an increase in truck traffic on residential streets.

[8] Factors to consider in evaluating the potential conflict include, but are not limited to, adversely affecting the future installation of planned transportation improvement, and/or fundamentally conflicting with the applicable goals, policies, and/or actions identified in an adopted City policy, plan, or program.

The Model land use database and roadway network were checked for accuracy within Albany and surrounding areas. For the 2040 No Growth in Albany conditions, no growth within the City of Albany was assumed, and the 2040 land use conditions within the City of Albany are the same as the existing model estimates for year 2010, while the land uses outside the City of Albany reflect ABAG Projections 2013 for year 2040. For the 2040 Plus Project conditions, the land uses within the City of Albany were adjusted to reflect the changes in land use as described in the Project Description chapter. It is expected that the buildout of the proposed Draft General Plan would result in about 815 new residential units (775 households) and 850 new jobs within the City of Albany, between 2015 and buildout of the Draft General Plan.

The Alameda CTC Model was run with the inputs described above for the 2010 (existing), 2040 No Growth in Albany, and 2040 Plus Project conditions to produce daily, and AM and PM peak hour street segment volumes. The 2040 No Growth in Albany and 2040 Plus Project peak hour volumes were estimated by adding the growth estimated by the Alameda CTC Model for each street segment between 2010 and the respective 2040 scenario to the existing traffic volumes. Existing roadway segment levels of service are shown in Table IV.C-6.

Along certain segments, the Alameda CTC Model assigns more traffic than the street capacity. The street capacities, as defined in Table IV.C-5, are based on the physical and operational design of the roadway. By contrast, the Alameda CTC Model, similar to other travel demand models, assigns 100 percent of the regional travel demand to the roadway network. As a result, the year 2040 volumes forecasted by the Model on several street segments exceed the actual daily and peak hour capacity of the roadway. Therefore, where travel demand model projections exceeded the defined capacities on streets within Albany, the traffic volume was capped at capacity, reflecting the physical and operational constraints of these streets.

Table IV.C-7 presents the forecasted daily roadway segment volumes and levels of service for 20140 No Growth in Albany and 2040 Plus Project conditions. Table IV.C-8 presents the forecasted AM and PM peak hour volumes under 2040 No Growth in Albany and 2040 Plus Project conditions.

Roadway Level of Service Analysis. Similar to existing conditions, roadway levels of service were estimated by comparing the daily and peak hour forecasted volumes to the threshold volumes based on roadway type as presented in Table IV.C-5.

Under 2040 No Growth in Albany conditions, the study roadway segments are forecasted to serve higher volumes and experience more congestion than under Existing Conditions. This is due to traffic generated outside of Albany passing through Albany. Considering that I-80 freeway is forecasted to continue to operate at or near capacity in the future, it is estimated that a higher amount of regional traffic would use the major arterials in Albany, especially San Pablo Avenue, for trips that start and end in Albany.

Table IV.C-7: 2040 Daily Roadway Segment Levels of Service

Roadway Segment [a]	Roadway Type	2040 No Growth in Albany		2040 Plus Project		Significant Impact?
		Volume	LOS [b]	Volume	LOS [b]	
Cleveland Avenue north of Washington Avenue	2-Lane Undivided Arterial	7,800	C	7,900	C	No
Pierce Street north of Washington Avenue	2-Lane Undivided Arterial	4,100	C	4,100	C	No
Eastshore Highway south of Buchanan Street	2-Lane Collector	8,200	D	8,600	D	No
Buchanan Street between Fillmore and Taylor Streets	4-Lane Divided Arterial	32,100	D	32,300	D	No
Jackson Street between Portland Avenue and Castro Street	2-Lane Collector	4,200	B	4,400	B	No
San Pablo Avenue between Portland and Garfield Avenues	4-Lane Undivided Arterial	**27,500**	**E**	**28,700**	**E**	No
San Pablo Avenue between Buchanan Street and Solano Avenue	4-Lane Undivided Arterial	25,000	D	25,700	D	No
San Pablo Avenue between Monroe and Dartmouth Streets	4-Lane Undivided Arterial	**27,500**	**E**	**27,900**	**E**	No
Brighton Avenue between Stannage and Cornell Avenues	2-Lane Collector	3,800	B	3,900	B	No
Solano Avenue between Stannage and Cornell Avenues	2-Lane Undivided Arterial	10,900	D	11,100	D	No
Marin Avenue between Stannage and Cornell Avenues	3-Lane Arterial (TWLTL)[d]	19,300	D	20,100	D	No
Masonic Avenue between Dartmouth Street and Marin Avenue	2-Lane Undivided Arterial	4,100	C	4,200	C	No
Key Route Boulevard between Portland Avenue and Thousand Oaks Boulevard	2-Lane Divided Arterial	5,900	C	6,000	C	No
Solano Avenue between Santa Fe Avenue and Curtis Street	2-Lane Undivided Arterial	10,100	D	10,200	D	No
Marin Avenue between Santa Fe Avenue and Curtis Street	3-Lane Arterial (TWLTL)	18,800	D	19,200	D	No
I-80 south of the I-580 interchange	Freeway	**235,300**	**F**	**235,600**	**F**	No
I-80 north of the I-580 interchange	Freeway	**140,100**	**F**	**140,100**	**F**	No
I-580 north of the I-80 interchange	Freeway	**103,500**	**F**	**103,700**	**F**	No

[a] Major roadways nearest the count location.
[b] LOS – Level of Service
[c] **Bold** text indicates LOS E or F.
[d] TWLTL = Two-way left-turn lane

Source: Fehr & Peers, 2015.

Table IV.C-8: 2040 Peak Hour Roadway Segment Levels of Service

Roadway Segment [a]	Roadway Type	Peak Hour	2040 No Growth in Albany		2040 Plus Project		Significant Impact?
			Volume	LOS [b]	Volume	LOS [b]	
Cleveland Avenue north of Washington Avenue	2-Lane Undivided Arterial	AM	790	C	790	C	No
		PM	710	C	720	C	No
Pierce Street north of Washington Avenue	2-Lane Undivided Arterial	AM	460	C	500	C	No
		PM	360	C	420	C	No
Eastshore Highway south of Buchanan Street	2-Lane Collector	AM	800	D	810	D	No
		PM	820	D	860	D	No
Buchanan Street between Fillmore and Taylor Streets	4-Lane Divided Arterial	AM	2,410	D	2,460	D	No
		PM	2,600	D	2,620	D	No
Jackson Street between Portland Avenue and Castro Street	2-Lane Collector	AM	490	B	500	B	No
		PM	410	B	430	B	No
San Pablo Avenue between Portland and Garfield Avenues	4-Lane Undivided Arterial	AM	**2,760**	**E**	**2,820**	**E**	No
		PM	**2,810**	**E**	**2,880**	**E**	No
San Pablo Avenue between Buchanan Street and Solano Avenue	4-Lane Undivided Arterial	AM	2,220	D	2,240	D	No
		PM	2,050	D	2,070	D	No
San Pablo Avenue between Monroe and Dartmouth Streets	4-Lane Undivided Arterial	AM	2,410	D	2,450	D	No
		PM	2,250	D	2,310	D	No
Brighton Avenue between Stannage and Cornell Avenues	2-Lane Collector	AM	300	B	310	B	No
		PM	370	B	380	B	No
Solano Avenue between Stannage and Cornell Avenues	2-Lane Undivided Arterial	AM	1,100	D	1,120	D	No
		PM	1,300	D	1,340	D	No
Marin Avenue between Stannage and Cornell Avenues	3-Lane Arterial (TWLTL)[d]	AM	1,610	D	1,620	D	No
		PM	1,560	D	1,570	D	No
Masonic Avenue between Dartmouth Street and Marin Avenue	2-Lane Undivided Arterial	AM	400	C	410	C	No
		PM	460	C	480	C	No
Key Route Boulevard between Portland Avenue and Thousand Oaks Boulevard	2-Lane Divided Arterial	AM	500	C	510	C	No
		PM	750	C	760	C	No
Solano Avenue between Santa Fe Avenue and Curtis Street	2-Lane Undivided Arterial	AM	520	C	540	C	No
		PM	1,080	D	1,090	D	No
Marin Avenue between Santa Fe Avenue and Curtis Street	3-Lane Arterial (TWLTL)	AM	1,500	D	1,510	D	No
		PM	1,620	D	1,630	D	No
I-80 south of the I-580 interchange [e]	8-Lane Freeway	AM	14,300	D	14,340	D	No
		PM	13,520	D	13,550	D	No
I-80 north of the I-580 interchange [e]	6-Lane Freeway	AM	7,690	C	7,720	C	No
		PM	7,690	C	7,710	C	No
I-580 north of the I-80 interchange [e]	4-Lane Freeway	AM	7,180	E	7,180	E	No
		PM	7,470	E	7,490	E	No

[a] Major roadways nearest the count location.
[b] LOS – Level of Service
[c] **Bold** text indicates LOS E or F.
[d] TWLTL = Two-way left-turn lane
[e] Estimated volume and corresponding LOS is based on the served volume during the peak hour at the reported location, and does not account for upstream congestion and queuing. Therefore, actual LOS experienced by drivers at this location would be worse than reported.

Source: Fehr & Peers, 2015.

Under 2040 Plus Project conditions, all study roadway segments would operate at the same LOS as under 2040 No Growth in Albany conditions. Most roadway segments would experience slightly higher congestion due to the additional traffic generated by the development facilitated by the proposed Draft General Plan. In general, the development facilitated by the proposed Draft General Plan is expected to have a lower automobile trip generation rate because the majority of the expected development would occur in mixed-use developments along major transit corridors (San Pablo and

Solano Avenues) and in proximity to existing services, where residents and workers are more likely to use non-automobile modes of transportation.

Impacts on MTS Roadways. MTS roadways in Albany include I-80, I-580, San Pablo Avenue, Buchanan Street, Solano Avenue, and Marin Avenue.

As shown in Tables IV.C-7 and IV.C-8 and similar to Existing Conditions, based on the defined thresholds, the following MTS roadway segments are forecasted to operate at LOS F under 2040 conditions regardless of the proposed Draft General Plan:

- I-80 south of the I-580 interchange (LOS F)
- I-80 north of the I-580 interchange (LOS F)
- I-580 north of the I-80 interchange (LOS F)

The proposed Draft General Plan would not degrade any roadway segment on the MTS from LOS E or better to LOS F; nor would it increase the volume-to-capacity ratio by more than 5 percent for a MTS roadway segment operating at LOS F under 2040 No Growth in Albany conditions. Therefore, the proposed Draft General Plan would not cause a significant traffic-related impact on the MTS roadway segments. No mitigation measures are required.

Impacts on non-MTS Roadways. Non-MTS roadways in Albany include the surface streets primarily serving the local generated traffic. All non-MTS roadway segments would operate at LOS D or better under daily and AM and PM peak hour conditions, in 2040 regardless of the proposed Draft General Plan.

Likewise, the proposed Draft General Plan would not degrade any non-MTS roadway segment from LOS D or better to LOS E or LOS F; nor would it increase the volume-to-capacity ratio by more than 5 percent for a roadway segment operating at LOS E or LOS F under 2040 No Growth in Albany conditions. Therefore, the proposed Draft General Plan would not cause a significant traffic-related impact on the roadway segment not on the on the MTS. No mitigation measures are required.

Impact of General Plan Policies on Roadway LOS. As discussed above, the traffic generated by the growth facilitated by the proposed Draft General Plan would not cause a significant impact on roadway operations. One of the primary goals of the Transportation Element of the proposed Draft General Plan is to create a complete multi-modal transportation network in the City of Albany that provides transportation choices, enhances mobility, and discourages the use of single-occupant private automobile. These actions and polices are discussed in further detail in subsequent sections. As such, the implementation of these policies and actions would reduce the automobile trips generated in Albany and reduce congestion on Albany streets.

In addition, the proposed Draft General Plan also includes the following policies and actions that can directly reduce traffic congestion and improve traffic operations:

- **Policy T-5.3: Regional Traffic on Local Streets**. Support measures to reduce traffic resulting from vehicles exiting I-80 onto Albany surface streets to avoid freeway congestion. Encourage traffic to and from major employment centers such as the University of California and Downtown Berkeley to stay on I-80 to the appropriate exit.

- **Policy T-6.1: Road Hierarchy.** Maintain a network of arterial, collector, and local streets that safely and efficiently moves motorized and non-motorized vehicle traffic through Albany. Engineering and design standards for each road type should reflect function, road volumes, and the characteristics of adjacent uses, and should be consistent with the Complete Streets policies in Goal 1 and the bicycle and pedestrian policies in Goal 3.
- **Policy T-6.2: Monitoring Road Performance.** Monitor critical road segments and intersections to determine where traffic improvements may be needed. When such locations are identified, develop plans to address them and incorporate them into the City's Capital Improvement Program.
- **Policy T-6.3: Transportation Efficiency.** Undertake improvements which manage lane capacity more efficiently and avoid the need to widen roads or add lanes. Examples of such projects include signal interconnect projects, directional signage, and "intelligent transportation systems" providing real-time information on congestion and travel conditions.
- **Policy T-6.4: Interstate Improvements.** Coordinate with Caltrans on future planning, construction, repair, and maintenance activities along I-80, I-580, and around the Buchanan Street/I-580 interchange.
- **Policy T-6.5: Development-Related Improvements.** Require the completion of traffic studies to address the effects of new development, including the improvements needed to accommodate increased traffic or changes in traffic patterns. Based on the findings, collect the appropriate fees needed to complete the improvements and maintain satisfactory operating conditions.
- **Policy T-6.6: Maintenance.** Provide adequate funding to maintain pavement, curbs, signage, signals, and other transportation facilities in good operating condition.
- **Policy T-6.7: Signal Timing and Lane Configurations.** Consider modifications to signal timing and turning lanes as necessary to maintain traffic flow through Albany's signalized intersections.
- **Policy T-6.8: Construction Traffic**. Require traffic management plans for major construction projects, and ensure that those plans address bicyclists and pedestrians.
- **Policy T-6.9: Levels of Service.** On major corridors such as San Pablo Avenue and Solano Avenue, evaluate the performance of the transportation network using metrics that not only consider automobile speed and delay but other factors, such as vehicle miles traveled and the volume of transit passengers, bicyclists and pedestrians.
- **Policy T-6.10: Coordination with Berkeley, Richmond, and El Cerrito.** Coordinate traffic planning and road improvements with the cities of Berkeley, Richmond, and El Cerrito. Work collaboratively to manage congestion that may impact Albany streets as a result of development in these cities.
- **Action T-6.A: Integrated Corridor Mobility.** Participate in the I-80 Integrated Corridor Mobility Project, which includes ramp metering and signal coordination in Albany.
- **Action T-6.B: Multi-Modal Levels of Service.** Establish multi-modal level of service (MMLOS) standards for arterial streets, and apply these standards in the evaluation of future development proposals and planning studies. Service standards should utilize vehicle miles traveled (VMT) as the primary metric, rather than the total number of trips generated or projected motor vehicle delays.

The implementation of the above policies and actions would benefit traffic flow on the streets of Albany and would not cause a significant traffic-related impact on the roadway segments in Albany. No mitigation measures are required.

Impact of Traffic Calming. In order to minimize the adverse effects of automobile traffic on Albany's neighborhood streets and enhance bicycling and walking on local streets, the proposed Draft General Plan includes the following policies and actions that reduce through traffic on local streets:

- **Policy T-5.2: Kains and Adams Access.** Ensure that development along the San Pablo Avenue corridor is designed to minimize adverse traffic, parking, and circulation impacts on Kains Avenue and Adams Street.
- **Policy T-5.4: Managing Through Traffic.** Focus motor vehicle through traffic on arterial and collector streets rather than on local streets. Traffic calming measures may be used to encourage drivers to use arterials and collectors, and to discourage aggressive driving and excessive speed on local streets. As appropriate, street closures may be considered as a means of directing traffic to designated arterial and collector streets.
- **Action T-5.B: Washington Avenue Through Traffic.** Evaluate the degree to which vehicles from areas east of San Pablo Avenue are using Washington Avenue as a "shortcut" to the Buchanan/I-80 interchange, and take steps to reduce speeding and other traffic violations on this route.
- **Action T-5.C: Traffic Calming in Area South of El Cerrito Plaza.** As appropriate, undertake a series of traffic calming measures on the 400 blocks of Kains, Stannage, Cornell, Talbot, and Avenues, and on Brighton Avenue between San Pablo Avenue and Key Route Boulevard. The intent of these measures is to reduce speeds, improve safety, create a welcoming environment for pedestrians, bicyclists, and other users of the street, and appropriately direct traffic associated with development in the El Cerrito Plaza area and North Central Albany to arterial and collector streets.

Due to current traffic congestion along various major streets throughout Albany, local streets in several neighborhoods are used as cut-through routes by non-neighborhood through traffic to bypass the congestion. Substantial quantities of cut-through traffic can result in impacts such as noise, pedestrian hazards, impaired driveway access, interference with emergency vehicle access, and similar annoyances that adversely affect the residential character of the neighborhood.

The implementation of the policies listed above would discourage and reduce through traffic on local streets through implementation of traffic calming strategies and/or potential roadway closures, which would be consistent with the Draft General Plan's goals to enhance livability and encourage bicycling and walking on local neighborhood streets. However, these policies would also concentrate through traffic on the collectors and arterials. Although, these streets are more suitable to handling higher traffic volumes, many may not have the capacity for additional traffic.

The proposed Draft General Plan aims to provide a multi-modal transportation system that discourages single-occupant vehicles which would reduce automobile trips, vehicle miles travelled, and traffic volumes on Albany streets. The proposed Draft General Plan also includes Policies T-6.3 through T-6.8, which aim to reduce traffic congestion along Albany's streets.

Considering that the specific traffic calming strategies that may be implemented and the streets where these strategies may be implemented currently is not known, the specific streets that may be impacted, the magnitude of the impact, and the potential mitigation measures cannot be determined at this time.

Impact TRANS-1: Potential traffic calming strategies could result in a significant traffic-related impact. (S)

Mitigation Measure TRANS-1: Prior to approving traffic calming projects, such as a roadway closure, that may divert substantial traffic to other streets, the City shall conduct a transportation impact study to evaluate the potential impacts of the proposed traffic calming project on access and circulation for all travel modes in the vicinity. The study shall identify potential design solutions and/or alternatives to ensure that the proposed traffic calming project would minimize any secondary significant impacts, such as a substantial increase in traffic volumes on nearby streets. (LTS)

(2) Pedestrian and Bicycle Impacts. The discussion of pedestrian and bicycle impacts is based on application of Significance Criteria #3 (i.e., the third major bulleted item) as listed in section 3.a, which identifies a significant impact on pedestrians and bicycles if the project would eliminate or interfere with existing or planned bicycle and pedestrian facilities, or if the project would result in unsafe conditions for bicyclists or pedestrians.

The proposed Draft General Plan would increase the convenience and safety of all road users within Albany, especially cyclists and pedestrians, through implementing Complete Streets policies and incorporating the adopted Active Transportation Plan. The Draft General Plan would promote walking and bicycling by improving the conditions and safety of bicycles and pedestrians while fostering a land use context that is supportive of modes other than the private automobile. The city-wide Complete Streets policy prioritizes transportation infrastructure that accommodates all modes of travel. It also adopts a set of design standards to evaluate whether and to what extent a project achieves these policy goals. Moreover, the proposed Draft General Plan includes several new programs for education, outreach, incentives, and funding, which would directly affect the extent to which biking and walking are accepted and understood to be feasible alternatives to driving.

The Transportation Element of the proposed Draft General Plan includes the following policies that promote and encourage pedestrian and bicycle access, circulation, and safety in the City of Albany.

- **Policy T-1.1: Balancing the Needs of All Users.** Create and maintain "complete streets" that provide safe, comfortable, and convenient travel for all users, including pedestrians, bicyclists, transit users, motorists, movers of commercial goods, emergency responders, persons with disabilities, seniors, children, youth, and families.
- **Policy T-1.3: Complete Streets Operating Procedures.** Incorporate Complete Streets practices as a routine part of City operations. The planning, design, funding, and implementation of any construction, reconstruction, maintenance, alteration, or repair of the transportation network should consider ways to make streets safer and easier to navigate for all users. Exceptions to this policy may be considered, consistent with the Complete Streets Resolution adopted by the City Council in January 2013.
- **Policy T-1.4: Complete Streets Design.** Follow locally adopted policies and standards in the design of City streets, including the Active Transportation Plan and the Climate Action Plan, as well as the General Plan. All roadway planning, design, and maintenance projects should be consistent with local bicycle, pedestrian, and transit plans. National, state, or other recognized standards may also be used if the outcome is improved safety, health, vitality, sense of place, and a more balanced transportation system.

- **Policy T-1.7: Development Review.** Require that future development projects address bicycling and walking access in their project plans, and include provisions to accommodate access by all modes of travel.
- **Action T-1.A: NACTO Standards.** Revise the City's street design standards to incorporate the National Association of City Transportation Officials (NACTO) recommendations for complete streets, thereby ensuring that road improvements accommodate the needs of all travelers.
- **Policy T-3.1: Bikeway System.** Support development of a bikeway system that meets the needs of commuters and recreation users, reduces vehicle trips, and links residential neighborhoods with BART and regional destinations. Bicycling in Albany should be a viable alternative to driving for most short-distance trips.
- **Policy T-3.2: Designated Bike Network and Improvements.** Designate a network of bike paths, lanes, and routes as the primary system for bicyclists traveling through Albany. Improvements to this system, such as bike lanes and signage, should be made in accordance with an official plan for the Albany bicycle system.
- **Policy T-3.3: Intergovernmental Coordination**. Coordinate development of Albany's bike network with plans for adjacent cities in order to improve the functionality of the system and create seamless connections across jurisdictional lines.
- **Policy T-3.4: Bike Route Maintenance.** Regularly maintain bicycle routes and paths through sweeping, pavement repairs, and vegetation trimming. Encourage public reporting of facilities needing repair or clean-up.
- **Policy T-3.5: Bicycle Parking.** Install additional bike racks and bike parking facilities in commercial and civic areas and in other locations where such facilities would help support bicycle use. The need for bicycle parking facilities should be periodically evaluated and at minimum should include locations along Solano and San Pablo Avenues and at high activity bus stops.
- **Policy T-3.6: Sidewalks and Paths.** Improve Albany's network of sidewalks and paths to make the city safer and easier to travel on foot. Sidewalks should be present on all Albany streets, although their design and location may vary based on topography and other factors. Priority walking corridors should be identified and targeted for improvements such as wider sidewalks, enhanced crosswalks, curb ramp upgrades, sidewalk parking enforcement, and routine maintenance.
- **Policy T-3.7: Bicycle and Pedestrian Access to Open Space.** Maintain and enhance trails through open space areas, including the Bay Trail along the shoreline, recreational trails on Albany Hill, trails on Cerrito and Codornices Creeks, and the Ohlone Greenway Trail in the BART Right-of-Way. Where appropriate, developers should be required to dedicate public access easements for trails through designated private open space areas.
- **Policy T-3.8: Bicycle and Pedestrian Connectivity.** Improve the connectivity of Albany's pedestrian and bicycle networks by removing obstacles to pedestrian travel and linking major pathways such as the BART linear park and the Bay Trail to each other and to community facilities.
- **Policy T-3.9: Bicycle Programs.** Continue **to** undertake programs and activities to encourage bicycle use and bicycle safety in the city, including bicycle "rodeos," "Bike to Work Day" events, and programs which stress the health benefits of bicycling. Bicycle programs should increase awareness of "rules of the road" for cyclists as well as motorists, and should encourage lawful cycling behavior while also improving the safety of cyclists.
- **Action T-3.A: Active Transportation Plan Implementation.** Implement the pedestrian and bicycle projects in the Active Transportation Plan through the City's Capital Improvements Program, specific transportation funding sources, and the General Fund budget for maintenance and operations.

- **Action T-3.B: Bike Parking Ordinance.** Adopt an ordinance that requires new development to provide adequate bike parking for tenants and customers and requires businesses with more than 50 employees to provide end of trip facilities, including showers, lockers, and bike storage facilities. Encourage existing establishments to add such facilities in order to make bicycling a more convenient alternative to driving.
- **Action T-3.C: Bicycle and Pedestrian Access to the Waterfront.** Pursue the long-term development of a grade-separated bicycle and pedestrian crossing of the Union Pacific Railroad and I-80 to better connect Albany to its waterfront. Such a project could be collaboratively funded by multiple jurisdictions.
- **Action T-3.D: Signage System.** Implement the City of Albany Wayfinding Plan for Pedestrians and Bicyclists adopted by the City Council in June 2013. The Plan provides coordinated signage for the pedestrian and bicycle network..
- **Action T-3.E: Sidewalk Improvements.** Upgrade sidewalks and curb ramps that do not meet current standards. Where appropriate, the City will require sidewalks to be upgraded as part of the development approval process. Other sidewalks should be upgraded as streets and utilities are improved or as funding allows, with a focus on the priority sidewalk and path network designated by the Active Transportation Plan.
- **Action T-3.F: Homeowner Improvement of Sidewalks.** Streamline the process for homeowners to improve their own sidewalks, and seek out other methods to provide a long-term funding source for sidewalk maintenance and repair.
- **Action T-3.G: Bike-Ped Coordinator.** As funding allows, hire a part-time Bicycle and Pedestrian Coordinator to manage all non-motorized transportation projects and ongoing route maintenance programs.
- **Policy T-4.4: Crosswalks.** Designate, stripe, and maintain a system of pedestrian crosswalks, and take appropriate enforcement measures to ensure the safety of persons using these crosswalks.
- **Policy T-5.8: Sidewalk Cafes.** Maintain Municipal Code provisions allowing outdoor seating on public sidewalks, provided that seating does not interfere with pedestrian movement and that the approval is subject to a revocable encroachment permit and applicable zoning clearance requirements.
- **Policy T-5.10: Hillside Sidewalks.** On streets that traverse the slopes of Albany Hill, allow variations from conventional sidewalk standards which reduce the need for grading but still support continuous pedestrian circulation.
- **Policy T-5.11: UC Village Circulation.** Provide a safe, pedestrian-oriented circulation system within UC Village that emphasizes walking, bicycling, and transit use; decreases internal vehicle traffic, accommodates recreational trips, reinforces a sense of community, and is seamlessly integrated with Albany's transportation system.
- **Action T-5.E: Code Amendment for Hillside Sidewalks.** Amend Municipal Code 20.24.040(F)(10) to eliminate provisions discouraging sidewalks on hillside streets.

The proposed Draft General Plan would not disrupt existing facilities or interfere with planned facilities; but rather enhance and expand the City's current bicycle and pedestrian facilities. Similarly, the proposed Draft General Plan would not result in unsafe conditions for bicyclists or pedestrians and; but rather improve their safety. Therefore, the proposed Draft General Plan would have a beneficial impact on bicycle and pedestrian facilities. No mitigation measures are required.

(3) Transit Impacts. The discussion of transit impacts is based on application of Significance Criteria #4 as listed in section 3.a, which identifies a significant impact on transit service if the project would cause a substantial delay in transit service.

The proposed Draft General Plan seeks to foster increased transit use and a greater emphasis on transit in planning for future transportation. The City aims to increase transit ridership through land use decisions, better amenities at transit stops, improved connectivity to other modes (including walking and biking), and prioritizing traffic operations and other improvements within key corridors to facilitate bus travel times. The proposed Draft General Plan includes policies and actions to expand transit service, increase ridership on existing services, and coordination with BART for a potential BART Station on Solano Avenue.

Consistent, reliable, and frequent transit service is critical to promote transit as a practical alternative to the automobile. Therefore, excessive traffic congestion can be disruptive to bus transit service. As shown in Tables IV.C-7 and IV.C-8, implementation of the General Plan would have minimal effect on traffic congestion, and therefore, it is not expected to substantially delay transit service. In addition, under Impacts on non-MTS Roadways the proposed Draft General Plan includes the previously discussed Policies T-6.1 through T-6.10 and Actions T-6.A and T-6.B, which would reduce traffic congestion and potentially reduce congestion-related delay experienced by transit vehicles.

The Proposed Draft General Plan includes the following policies and actions to promote transit access and circulation in Albany:

- **Policy T-2.1: Transit-Oriented Development.** Encourage land use patterns which support walking, bicycling, and public transit use, thereby reducing greenhouse gas emissions and fossil fuel consumption. Future land use and development choices should maximize opportunities to travel without a car by focusing new growth along walkable, transit-served corridors such as Solano and San Pablo Avenues.
- **Policy T-3.10: Public Transit Service.** Improve public transportation service and transit amenities in Albany so that transit becomes a more reliable alternative to driving. The City will work with AC Transit to provide safe, accessible, convenient bus stops that can be easily accessed on foot or by bicycle. The City will also encourage investment in exclusive transit lanes, synchronization of traffic signals, signal pre-emption devices, curb extensions for bus stops, enforcement of parking rules in bus stops, posting of route information at bus stops, and other measures which increase the attractiveness and comfort of public transportation.
- **Policy T-3.11: Transit and Streetscapes.** Incorporate provisions for public transit when undertaking streetscape improvements, including bike lanes, curb extensions, landscaping, benches, and crosswalks.
- **Policy T-3.12: Monitoring Transit Needs.** Work with AC Transit to monitor and periodically adjust transit service and bus stop locations. A particular emphasis should be placed on feeder service between Albany and the BART stations at North Berkeley and El Cerrito Plaza.
- **Policy T-3.13: UC Village Service.** Encourage AC Transit to continue to provide a route that connects UC Village family student housing and the UC Campus.
- **Policy T-3.14: Paratransit.** Support the provision of para-transit services for seniors and persons with disabilities, and others with special needs.

- **Action T-3.H: Transit Gap Study.** Conduct a public transit gap study that evaluates local transit needs, analyzes strategies for increasing transit use, and identifies funding sources for transit improvements. Consideration should be given to the feasibility of a local circulator that connects destinations within Albany to nearby BART stations.
- **Action T-3.I: Bus Stop Improvements.** Work with AC transit to ensure that bus waiting areas are located in appropriate locations and are designed to maximize rider comfort and safety. Waiting areas should be improved, especially in high activity locations such as San Pablo Avenue and Solano Avenue. Additional investment should be made in bus shelters in these locations, providing transit riders with shade, weather protection, seating, lighting, bike parking, and route information.
- **Action T-3.J: Bus to BART.** Work with AC Transit and BART to reduce the waiting time associated with transferring from AC Transit buses to BART, and vice versa, and to make trips using the two systems as seamless as possible.
- **Action LU-3.H: Solano Avenue BART Feasibility.** Maintain a dialogue with BART and surrounding property owners on the long-term feasibility of an "infill" BART station without off-street parking along Solano Avenue (near Key Route).

Considering that the proposed Draft General Plan would concentrate future growth in Albany along the major transit corridors, and that the Draft General Plan would include policies and actions that encourage and promote transit usage, it is expected the proposed Draft General Plan would increase transit ridership. However, an increase in transit ridership is not considered an impact on the environment. It is considered a benefit because it would reduce the consumption of non-renewable resources and the emission of greenhouse gasses and other air pollutants, consistent with the goals of the proposed Draft General Plan.

Thus, the proposed Draft General Plan would not cause a substantial delay in transit service and would not cause a significant impact on transit service. No mitigation measures are required.

(4) Emergency Access. The discussion of emergency access is based on application of Significance Criteria #5 as listed in section 3.a.

Main goals of the proposed Draft General Plan are to promote a multi-modal transportation network that benefits all modes of transportation. As such, the Draft General Plan includes several policies and actions that may increase vehicular congestion and reduce emergency response times.

The proposed Draft General Plan also includes policies that support the continued provision of adequate vehicle flows, including those listed under Impacts on non-MTS Roadways. Policies T-6.1 through T-6.10 and Actions T-6.A and T-6.B, also benefit emergency access. In addition, Policy T-1.1 (balancing the needs of all users) includes emergency responders as one of the users of the transportation network that need to be accommodated.

In addition, the following action and policy explicitly require coordinating transportation planning with emergency service providers to ensure the safety of residents and the ability for continued rapid emergency response:

- **Action T-1.D: Exceptions to Complete Streets Requirements.** Develop a process for approving exceptions to Complete Streets procedures, including who is allowed to sign off on such exceptions. Written findings for exceptions must be documented in a publicly available memorandum explaining why accommodations for all modes and users were not included.

- **Policy T-4.10: Emergency Vehicles.** Provide adequate access for emergency vehicles as development takes place and as road modifications are completed. The Albany Police and Fire Departments should participate in development review and transportation planning to ensure that adequate access is provided.

Action T-1.D provides a mechanism through which exceptions to Complete Street requirements, which may be necessary to maintain adequate emergency access, can be implemented. Policy T-4.10 addresses emergency vehicles specifically by encouraging Police and Fire Departments to participate in the planning processes.

As previously shown in Tables IV.C-7 and IV.C-8, the traffic generated by the growth facilitated by the proposed Draft General Plan would have minimal effect on traffic congestion and therefore, on emergency response times. Thus, the proposed Draft General Plan would not result in inadequate emergency access and would not cause a significant impact on emergency access. No mitigation measures are required.

(5) Transportation Hazards and Safety. The discussion of transportation hazards and safety impacts is based on application of Significance Criteria #6 as listed in section 3.a, which identifies a significant impact on transportation hazards and safety if the project would result in design features that do not meet established design features, incompatible uses, or unsafe conditions.

As a planning document, the Draft General Plan does not address specific design features. However, it does contain several policies that strengthen the City of Albany's ability to promote safety for all users. For example, to ensure a balanced, multi-modal transportation network, the proposed Draft General Plan would adopt a Complete Streets policy that requires accommodation for all modes and users (Policy T-1.1 listed in Pedestrian and Bicycle Impacts). The Complete Streets design methodology ensures that roadway facilities are contextually sensitive to surrounding land uses, appropriate travel speeds, and the need to accommodate multiple travel modes and various users (Policies T-1.3 and T-1.4 listed in Pedestrian and Bicycle Impacts). Complete streets utilize a number of safety features that are specifically designed for safety, such as lane width reductions, crosswalks with bulb-outs, protected bicycle facilities, and others.

Additionally, the following policies specifically aim to improve transportation safety through a combination of outreach, maintenance, infrastructure improvements, and enforcement:

- **Policy T-4.1: Accident Data.** Collect, analyze, and periodically report out on data on traffic accidents. When prioritizing capital improvement projects, place the highest priority on those that would reduce the potential for such accidents, particularly those involving pedestrians or bicycles.
- **Policy T-4.2: Enforcement.** Strictly enforce traffic safety and speed laws for all modes of travel, taking special care to protect the rights of pedestrians and bicyclists on local streets.
- **Policy T-4.3: Preventive Maintenance.** Continue to undertake preventive maintenance activities on sidewalks, streets, paths, and bike routes and ensure that such facilities are kept in a condition that minimizes accident risks. This should include trimming of trees and other vegetation along local streets to address visibility constraints.
- **Policy T-4.4: Crosswalks.** Designate, stripe, and maintain a system of pedestrian crosswalks, and take appropriate enforcement measures to ensure the safety of persons using these crosswalks.

- **Policy T-4.5: Education on Safety Laws.** Provide educational opportunities for Albany staff and residents to better understand the legal rights and responsibilities of motorists, bicyclists and pedestrians.
- **Policy T-4.6: School Safety.** Work with the Albany Unified School District to identify key improvements and initiatives that would facilitate safer walking and bicycling to school.
- **Policy T-4.7: Pedestrian-Vehicle Interface.** Design the pedestrian circulation system to minimize the number of times that walkers, runners, and other modes of active transportation need to stop for cross traffic.
- **Policy T-4.8: Security.** Enhance security for pedestrians by providing adequate lighting along walkways and keeping vegetation properly trimmed.
- **Policy T-4.9: Street Lighting.** Periodically assess street lighting needs and maintenance of street light facilities to ensure a high level of safety for all travelers. Funds for new and replacement street lights should be set aside as part of the Capital Improvement Program.
- **Action T-4.A: Annual Safety Report**. Annually evaluate pedestrian and bicyclist collision data to determine trends and potential improvements. Produce an annual report that summarizes the data, identifies "hot spots," and includes recommendations to improve safety.
- **Action T-4.B: Parking on Sidewalks.** Enforce ordinances prohibiting the parking of vehicles in a manner that blocks pedestrian travel on sidewalks.
- **Action T-4.C: Safety Education.** Work with the school district, parents, businesses, and other community institutions to enhance awareness of pedestrian safety laws and modify driver behavior.
- **Action T-4.E: Safe Routes to School.** Pursue continued funding for Safe Routes to School programs.
- **Action T-4.F: Pedestrian Crossings.** Consider funding and implementation of demonstration projects for new pedestrian crossing treatments on San Pablo Avenue, Solano Avenue, and Marin Avenue/Buchanan Street.
- **Policy T-5.6: Traffic Calming**. Consider the use of road features such as speed humps, speed trailers, traffic diverters, traffic circles, medians, and other methods to limit throughtraffic and reduce speeds on residential streets. Implementation of such measures should be subject to a public process and should consider the potential impacts to adjacent streets due to changed travel patterns.
- **Policy T-5.7: Truck Routes**. Limit the intrusion of truck traffic into residential areas by designating and signing specific streets as truck routes and enforcing weight limits on all City streets.
- **Action T-5.A: Traffic Calming Procedures**. Maintain and periodically update a formal process for residents to initiate traffic calming requests for local streets. The process should include a series of steps which include evaluation of the street against specific physical design criteria, consultation with the Traffic and Safety Commission, volume and speed surveys, resident petitions, and post-improvement evaluations.
- **Action T-5.D: Truck Route Signage**. Install truck route signs as needed to identify designated truck routes in the city. Provide information on designated truck routes to major employers and to delivery and trucking companies using Albany streets.

The Proposed Draft General Plan aims to create a network of Complete Streets that safely accommodate multiple travel modes and various users appropriate to the surrounding land uses. The proposed Draft General Plan would not substantially increase hazards due to design features or incompatible uses and result in less than significant impacts. No mitigation is required.

(6) Consistency with Local or Regional Policies or Programs Supporting Alternative Transportation. The discussion of impacts on consistency with local or regional policies or programs supporting alternative transportation is based on application of Significance Criteria #7 as listed in section 3.a, which identifies a significant impact if the project would adversely affect future implementation of transportation projects or programs supporting alternative transportation, or fundamentally conflict with applicable local or regional goals, policies, and/or actions.

The primary goals of the Transportation Element of the proposed Draft General Plan are to create and maintain a transportation system that accommodates all modes of travel, meets the mobility needs of the various users, provides the opportunity for safe and efficient travel through various modes, and is sustainable. The proposed goals, policies and actions incorporate the direction provided by the Active Transportation Plan (discussed below) and the Albany Climate Action Plan in moving the City of Albany toward a less auto-dependent and more sustainable transportation pattern, with an emphasis on walking, bicycling, public transportation, and safety.

In addition to the policies discussed in the prior subsections, the following policies and actions in Transportation Element of the Draft General Plan prioritize and promote the use of alternative transportation to reduce the amount of private vehicle trips:

- **Policy T-2.4: Carpools, Vanpools, and Shuttles**. Encourage measures to reduce single passenger auto travel, such as carpools and vanpools, BART shuttles or circulators, and transit passes for City employees.
- **Policy T-2.5: Carsharing and Bike Sharing**. Support car sharing and bike sharing programs and consider incentives for establishing and expanding such programs in Albany.
- **Action T-2.A: Grant Applications.** Pursue grants and other funding sources which support multi-modal transportation improvements and other measures to reduce transportation emissions.
- **Action T-2.B: Outreach and Education**. Develop community outreach and education programs which inform residents on ways they can reduce greenhouse gas emissions through their transportation choices. This should include the use of social media and other internet networking platforms to encourage community participation in carpools, vanpools, ridesharing, bicycling, and other alternative travel modes.
- **Action T-2.D: TDM Ordinance**. Create and implement a transportation demand management (TDM) ordinance to reduce peak commute trips and encourage alternatives to solo passenger driving.
- **Action T-2.F: 511.org Program**. Continue to support the "511.org" program and other regional initiatives that help residents and workers find carpools, rides home from work, and other alternatives to driving alone. A link to 511.org should be included on the City's website.
- **Action T-2.G: Transportation Management Association**. Facilitate the establishment of an Albany Transportation Management Association (TMA) for local employers.
- **Action T-3.K: Active Transportation Plan Updates**. Update the Active Transportation Plan every five years, as required by Caltrans, to reflect new policies and ensure continued eligibility for funding.

The development growth facilitated by the proposed Draft General Plan would further encourage the use of non-automobile transportation modes because the growth would occur along the transit corridors and result in complementary land uses in closer proximity, which encourage bicycling and walking due to shorter trips.

In addition to the Transportation Element, Other elements of the Draft General Plan, such as Land Use and Conservation and Sustainability, include the following policies and actions that further encourage the use of alternative transportation modes to single-occupant private automobile.

- **Policy LU-1.3: Business Districts**. Maintain and enhance San Pablo and Solano Avenues as Albany's principal commercial streets. Encourage a vibrant mix of ground floor retail and service uses that meet the needs of Albany residents, enhance the local tax base, provide job opportunities, and provide a safe, walkable environment.
- **Policy LU-1.7: Sustainable Development**. Ensure that future development mitigates its environmental impacts to the greatest extent possible and is designed and constructed to advance the principles of sustainability. This should include the use of greener building practices, greater energy and water efficiency, and the design of new development in a way that encourages walking and bicycling.
- **Policy LU-1.8: Transit-Oriented Development.** Encourage land use patterns that support transit use, including additional mixed use (commercial and higher-density residential) development along the San Pablo and Solano Avenue corridors.
- **Policy LU-6.4: Streetscape Improvements**. Improve the visual character and safety of heavily traveled Albany streets through streetscape improvements such as lighting, signage, landscaping, sidewalk extensions and repair, public art, and tree planting.
- **Policy CON-3.4: Land Use and Transportation Strategies.** Implement the measures expressed in the Land Use, Transportation, and Housing Elements of the General Plan to achieve more sustainable development and travel patterns in Albany, including:
    - An expanded, safer, and more accessible pedestrian and bicycle network that reduces dependence on automobile travel and creates more walkable and connected neighborhoods
    - Greater emphasis on mixed uses along the San Pablo and Solano Avenue corridors, integrating residential uses above commercial uses and thereby reducing auto trips and trip lengths for goods and services
    - A balance between job growth and housing growth, and more opportunities for residents to live closer to work
    - Public transportation improvements (bus, BART, and possible future shuttle) which provide more viable alternatives to driving, including the possibility of an "infill" station at Solano Avenue
    - Higher densities along the San Pablo corridor, enabling more development to be accommodated in the center of the region and reducing the necessity of developing "greenfields" on the periphery of the Bay Area
    - Transportation demand management programs, including flextime, telecommuting, signal synchronization, carpooling, and other measures to reduce congestion and vehicle idling and cut down on solo passenger driving.

The proposed Draft General Plan would result in the adoption of plans and policies that are consistent with local or regional policies or programs supporting alternative transportation and would benefit these travel modes. Therefore, the proposed Draft General Plan is consistent with existing local and regional policies or programs supporting alternative transportation. No mitigation is required.

(7) VMT. One performance measure used to quantify travel is vehicle miles traveled (VMT). VMT is a particularly useful metric for evaluating the impacts of growth on greenhouse gas emissions because it can be used to estimate fuel consumption by motor vehicles. Increases in VMT cause

proportional increases in greenhouse gas emissions and air pollution. This section presents the extent of the impacts caused by the growth facilitated by the proposed Draft General Plan on VMT based on application of Significance Criteria #8 as listed in section 3.a.

VMT measurement has one primary limitation: it is not easily observed and therefore must be estimated. Methods do not exist that can reliably measure the trip distances of all vehicles on a given day. VMT is typically an output from travel demand models and is calculated based on the number of cars multiplied by the distance traveled by each car. As such, the VMT estimate is dependent on the level of detail in the network and other variables related to vehicle movement through the network. The volume and distance of traffic depends on land use types, density, and location as well as the supporting transportation system, including availability of various travel modes. A travel demand model attempts to represent this relationship when forecasting vehicle trips and VMT.

Although the calculation of VMT is simply the number of cars multiplied by the distance traveled by each car, VMT performance measures can be reported differently. This analysis uses total VMT per service population, where VMT includes all automobile trips with an origin and/or destination in the City of Albany generated on a typical weekday. Service population is defined as the total number of residents and workers within the City of Albany.

The Alameda CTC Travel Demand Model (see page 98 for a description of the Model and its use in this General Plan evaluation) was used to estimate VMT for the Existing (2010) and 2040 Conditions with and without the General Plan. The Alameda CTC Model covers the entire nine county Bay Area and San Joaquin County; therefore, it provides a reasonable estimate of the VMT generated in the City of Albany on a typical weekday. The resulting VMT shown in Table IV.C-9 is based on all trips with either an origin and/or destination in the City of Albany. The calculated VMT accounts for 100 percent of all trips that begin and end within Albany and 50 percent of trips that either begin or end in Albany, and have their other origin or destination outside of Albany. It does not include trips that have both an origin and destination outside of City of Albany but use Albany streets, such as a trip on San Pablo Avenue that starts in Berkeley and ends in El Cerrito.

Table IV.C-9: VMT Summary

	2010	2040 No Growth in Albany	2040 Plus Project
Population	18,560	18,560	20,640
Employment	5,070	5,070	6,070
Service Population	*23,630*	*23,630*	*26,710*
Total VMT	226,400	222,400	249,600
VMT per Service Population	9.6	9.4	9.3

Note: VMT Summary information in this table is based on the results of the Alameda CTC Model.

Source: Fehr & Peers, 2015.

As shown in Table IV.C-9, the estimated VMT per service population is about 9.6 miles per person under Existing (i.e., 2010 as that is the baseline information available in the Alameda CTC Model) conditions. Under 2040 No Growth in Albany conditions, assuming no changes in existing land use within Albany but assuming growth outside of Albany, both VMT and VMT per service population would decrease by about 2 percent. This reduction is primarily due to planned improvements to the

non-automobile transportation network (i.e., pedestrian, bicycle, and transit networks) and the fact that most growth outside of City of Albany is forecasted to occur in transit accessible areas.

The development facilitated by the Draft General Plan would increase Albany's population by about 11 percent and employment by about 20 percent compared to 2010 conditions; however, total VMT is estimated to increase by about 10 percent and VMT per service population is estimated to decrease by about 3 percent. Total VMT is projected to increase at a lower rate and VMT per service population would decrease compared to the expected increase in population and employment because the forecasted population and employment growth is expected to occur in proximity to local and regional transit service. In addition, the overall development density is also expected to increase, which would result in complementary land uses in closer proximity, and encourage bicycling and walking due to shorter trips.

As described above, the Draft General Plan would reduce VMT per service population. Since the Draft General Plan would not result in an increase over the current VMT per service population, the impact is less than significant. No mitigation measures are required.

(8) Parking. The Transportation Element of the proposed Draft General Plan includes policies and actions that address parking management and on-street and off-street parking supply. Since parking is not part of the permanent physical environment and parking conditions change over time, CEQA does not consider unmet parking demand created by a project as a significant environmental impact unless it would cause significant secondary effects.

The proposed Draft General Plan includes the following policies and actions regarding parking:

- **Policy T-7.1: Parking Management.** Develop comprehensive parking management strategies which maximize the efficient use of available on-street and off-street parking spaces.
- **Policy T-7.2: Balancing Supply and Demand.** Consider timed parking limits, residential parking permits, parking benefit districts, paid public parking, more stringent parking enforcement, and other methods to address parking in locations where demand exceeds supply during all or part of the day. When modifying parking regulations, consider the potential impact on adjacent residential streets.
- **Policy T-7.3: Parking Standards.** Adopt residential parking standards which consider factors such as the number of bedrooms in the unit, proximity to transit, the availability of on-street parking, and the characteristics of occupants (e.g., seniors, families, etc.), rather than applying a "one-size-fits-all" standard.
- **Policy T-7.4: Shared Parking.** Encourage shared parking agreements so that adjacent or nearby uses with different demand characteristics can utilize the same parking spaces.
- **Policy T-7.5: Mechanical Lifts.** Allow innovative methods of accommodating parking demand such as mechanical parking lifts.
- **Policy T-7.6: Car-Share and Bike-Share Parking.** Consider incentives or requirements to include parking for car-share vehicles and shared bicycles in new mixed use development.
- **Policy T-7.7: Design of Surface Parking.** On larger development sites where off-street surface parking lots are required, parking should be located to the rear or side of the building rather than between the building and the street. Site plans in which surface parking dominates the site or the street frontage are strongly discouraged.
- **Policy T-7.8: Unbundling.** Allow unbundled multi-family parking, so that owners or buyers of multi-family units may opt out of having their own parking space and pay a lower rent or sales price.

- **Action T-7.A: Citywide Parking Analysis.** Conduct a comprehensive analysis of parking supply and demand in Albany. This analysis should become the foundation for new parking standards which are more responsive to actual conditions and needs.
- **Action T-7.B: Parking Ballot Measure.** Support and advance a ballot measure to modify Albany Measure D so that parking standards are consistent with other City goals, including the goal of reducing carbon footprints and increasing housing affordability. A variety of options for modifying the parking standards should be considered, based on public opinion and data collection on parking supply and demand.
- **Action T-7.C: Measure D Working Group.** Consider additional recommendations of the Measure D Working Group regarding parking, including the possibility of a fee for parking exceptions and waivers, allowing parklets in commercial areas, and the use of metered or time-restricted parking in high demand areas.
- **Action T-7.D: Commercial Parking Standards.** Evaluate Albany's commercial parking requirements relative to best practices around the country and determine whether changes to these requirements should be considered.
- **Action T-7.E: Solano Avenue Parking Management.** Develop a parking management plan for the Solano Avenue commercial district which includes provisions for patron parking, employee parking, and parking for persons living on or near Solano Avenue.
- **Action T-7.F: Second Units.** Consider creating a category of second units in which occupancy is deed-restricted to tenants without cars (or with shared car subscriptions) as a way to permit additional second units without providing off-street parking.

These policies and actions intend to better manage existing parking supplies, and provide future parking supplies that balance the need to accommodate expected parking demand with achieving Albany's sustainability goals. Many policies aim to improve the efficiency and management of the current parking supply. For example, Policy T-7.4 (Shared Parking) would encourage shared parking between different uses (for example, a parking space used during the day by an office worker can be used in the evening by a patron of an adjacent restaurant) in order to reduce the overall resources dedicated to parking and continue to provide adequate parking supply.

The Measure D ballot initiative, approved by Albany voters in 1978, generally requires all residential development, regardless of type, size, or location, to provide two parking spaces per dwelling unit. As shown in Table IV.C-1, the current average automobile ownership per household in Albany is about 1.41 vehicles per household, which is less than Alameda County, California, and U.S. Current residential developments with two spaces per household provide excess parking supply for many Albany residents. The excessive parking supply can add to the cost of housing and reduce housing affordability. It can also encourage auto ownership and driving, which would not be consistent with the Draft General Plan's goals regarding sustainability.

Action T-7.B supports a ballot measure to replace Measure D with more robust parking requirements for residential developments. The details of the potential new ballot measure are not known at this time; however, it is expected that the new parking requirements would be flexible to account for type, size, and location of residential units. For example, a senior-restricted studio along San Pablo Avenue would generate and should require less parking supply than a large single-family house on Albany Hill.

The details of the potential ballot measure and other parking-related policies and actions are not known at this time. Thus, their exact effect on overall parking conditions cannot be determined. Potential parking policy changes would be based on extensive studies (currently underway per Action T-7.A) to ensure that adequate parking supply would continue to be provided for both residential and commercial developments throughout the City. Potential parking changes to parking policy would also be informed by the Draft General Plan's other policies and actions that encourage the use of non-automobile travel modes and reduce the reliance on single-occupant automobile. However, it is possible that the changes in parking policy may result in temporary or permanent parking deficits at some locations.

As previously discussed, parking deficits may be associated with secondary physical environmental impacts, such as air quality and noise effects, caused by congestion resulting from drivers circling as they look for a parking space. However, the absence of a ready supply of parking spaces, combined with available alternatives to auto travel (e.g., transit service, bicycles or walking), would induce some drivers to shift to other modes of travel, or change their overall travel habits. Any such resulting shifts would be consistent with the proposed Draft General Plan and in keeping with Albany's goal to provide a sustainable transportation system.

Additionally, regarding potential secondary effects, cars circling and looking for a parking space in areas of limited parking supply is typically a temporary condition, often offset by a reduction in automobile trips due to others who are aware of constrained parking conditions.

Development facilitated by the Draft General Plan would generally be along the City's transit corridors. The proximity of uses to each other, combined with transportation infrastructure that promotes walking, bicycling, and transit, would reduce reliance on the automobile and the need for parking. Therefore, a growing share of residents and workers who choose to live and/or work in Albany may not have an automobile or need parking. Likewise, reduced parking supplies would align with the Draft General Plan's goals to increase housing affordability and reduce greenhouse gas emissions.

Impact TRANS-2: The parking policies of the Draft General Plan may cause secondary significant impacts on the environment. (S)

> Mitigation Measure TRANS-2: Prior to adopting specific changes to parking requirements, conduct a parking and transportation study to evaluate the potential effects of these changes. Since parking is not considered an environmental topic under CEQA, these studies shall ensure that the changes to parking policies would not result in secondary significant impacts on traffic circulation, safety, noise, and/or air quality. As a result of the study and if necessary, the City shall modify the policy changes and/or identify other measures to minimize potential secondary significant impacts. (LTS)

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D. AIR QUALITY

This section evaluates potential air quality impacts associated with implementation of the Draft General Plan. It has been prepared using methodologies, assumptions and significance thresholds recommended in the adopted air quality guidelines of the Bay Area Air Quality Management District (BAAQMD). In keeping with these guidelines, this section describes existing air quality, impacts of the project on local carbon monoxide (CO) levels, impacts of vehicular emissions that have regional effects, and exposure of sensitive receptors to toxic air contaminants (TACs). Mitigation measures to reduce or eliminate potentially significant air quality impacts are identified, where appropriate. Air quality modeling results are included in Appendix B.

1. Setting

The following discussion provides an overview of existing air quality conditions in the region and the City of Albany. Ambient air quality standards and the regulatory framework are summarized and climate, air quality conditions, and typical air pollutant types and sources are also described.

a. Air Quality Standards. Pursuant to the federal Clean Air Act of 1970, the U.S. Environmental Protection Agency (USEPA) established national ambient air quality standards (NAAQS). The NAAQS were established for major pollutants, termed "criteria" pollutants. Criteria pollutants are defined as those pollutants for which the federal and State governments have established ambient air quality standards, or criteria, for outdoor concentrations in order to protect public health.

Both the USEPA and the California Air Resources Board (ARB) have established ambient air quality standards for common pollutants: CO, ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), and suspended particulate matter (PM). In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. These ambient air quality standards are levels of contaminants which represent safe levels that avoid specific adverse health effects associated with each criteria pollutant.

Federal standards include both primary and secondary standards. Primary standards set limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.[1]

b. Criteria Pollutants and Health Effects. Health effects of criteria pollutants and their potential sources are described below and summarized in Table IV.D-1. The standards would have to be exceeded by a large margin or for a prolonged period of time for the health effects to occur. Table IV.D-2 shows both the State and federal standards for these criteria pollutants; the California Ambient Air Quality Standards (CAAQS) are more stringent than the NAAQS.

[1] U.S. Environmental Protection Agency, 2014. National Ambient Air Quality Standards. Website: www3.epa.gov/ttn/naaqs/criteria.html (accessed November 9, 2015). October.

Table IV.D-1: Sources and Health Effects of Air Pollutants

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

Source: California Air Resources Board, 2014.

Table IV.D-2: Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [a]		Federal Standards [b]		
		Concentration [c]	Method [d]	Primary [c,e]	Secondary [c,f]	Method [g]
Ozone (O_3)	1-Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.07 ppm (137 µg/m^3)		0.075 ppm (147 µg/m^3)		
Respirable Particulate Matter (PM_{10})	24-Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		–		
Fine Particulate Matter ($PM_{2.5}$)[h]	24-Hour	No separate State standard		35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m^3)	–	Non-Dispersive Infrared Photometry (NDIR)
	1-Hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		–	–	
Nitrogen Dioxide (NO_2)[i]	Annual Arithmetic Mean	0.03 ppm (57 µg/m^3)	Gas Phase Chemiluminescence	0.053 ppb (100 µg/m^3)	Same as Primary Standard	Gas Phase Chemi-luminescence
	1-Hour	0.18 ppm (339 µg/m^3)		100 ppb (188 µg/m^3)	-	
Lead (Pb)[j,k]	30-Day Average	1.5 µg/m^3	Atomic Absorption	–	–	High-Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 µg/m^3 (for certain areas)[k]	Same as Primary Standard	
	Rolling 3-Month Average[i]	–		0.15 µg/m^3		
Sulfur Dioxide (SO_2)[l]	24-Hour	0.04 ppm (105 µg/m^3)	Ultraviolet Fluorescence	0.14 ppm (for certain areas)[i]	–	Ultraviolet Fluorescence; Spectrophoto-metry (Pararosaniline Method)
	3-Hour	–		–	0.5 ppm (1300 µg/m^3)	
	1-Hour	0.25 ppm (655 µg/m^3)		75 ppb (196 µg/m^3)	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas)[i]	–	
Visibility-Reducing Particles[m]	8-Hour	Extinction coefficient of 0.23 per kilometer - visibility of 10 miles or more (0.07–30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		No Federal Standards		
Sulfates	24-Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[j]	24-Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

Table notes included on next page.

[a] California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, suspended particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact USEPA for further clarification and current federal policies.

[c] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[d] Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

[e] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[f] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[g] Reference method as described by the USEPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the USEPA.

[h] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

[i] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national standards are in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb are identical to 0.100 ppm.

[j] The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[k] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

[l] On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standards to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

[m] In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

°C = degrees Celsius
ARB = California Air Resources Board
USEPA = United States Environmental Protection Agency
$\mu g/m^3$ = micrograms per cubic meter
mg/m^3 = milligrams per cubic meter
ppm = parts per million
ppb = parts per billion

Source: ARB, 2015.

(1) Ozone. Rather than being directly emitted, ozone (smog) is formed by photochemical reactions between oxides of nitrogen (NO_x) and reactive organic gases (ROG). Ozone is a pungent, colorless gas. Elevated ozone concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors such as the sick, elderly, and young children. Ozone levels peak during the summer and early fall months.

(2) Carbon Monoxide. Carbon monoxide (CO) is formed by the incomplete combustion of fossil fuels, almost entirely from automobiles. It is a colorless, odorless gas that can cause dizziness, fatigue, and impairments to central nervous system functions. CO passes through the lungs into the bloodstream, where it interferes with the transfer of oxygen to body tissues.

(3) Nitrogen Oxides. Nitrogen dioxide (NO_2), a reddish-brown gas, and nitric oxide (NO), a colorless, odorless gas, are formed from fuel combustion under high temperature or pressure. These compounds are referred to as nitrogen oxides, or NO_x. NO_x is a primary component of the photochemical smog reaction. Nitrogen oxides also contribute to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition. NO_2 decreases lung function and may reduce resistance to infection.

(4) Sulfur Dioxide. Sulfur dioxide (SO_2) is a colorless, irritating gas formed primarily from incomplete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous SO_2 levels in the region. SO_2 irritates the respiratory tract, can injure lung tissue when combined with fine particulate matter, and reduces visibility and the level of sunlight.

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

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

In 1998, ARB identified particulate matter from diesel-fueled engines as a toxic air contaminant. The ARB has completed a risk management process that identified potential cancer risks for a range of activities using diesel-fueled engines. High-volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic (e.g., distribution centers and truck stops) were identified as having posing the highest risk to adjacent receptors. Other facilities associated with increased risk include warehouse distribution centers, large retail or industrial facilities, high-volume transit centers, and schools with a high volume of bus traffic. Health risks from TACs are a function of both concentration and duration of exposure.

c. Regulatory Framework. The BAAQMD is primarily responsible for regulating air pollution emissions from stationary sources (e.g., factories) and indirect sources (e.g., traffic associated with new development), as well as for monitoring ambient pollutant concentrations. The District's jurisdiction encompasses seven counties—Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa—and portions of Solano and Sonoma Counties. The ARB and the USEPA regulate direct emissions from motor vehicles.

(1) Federal Clean Air Act. The 1970 federal Clean Air Act authorized the establishment of national health-based air quality standards and also set deadlines for their attainment. The Federal Clean Air Act Amendments of 1990 changed deadlines for attaining NAAQS as well as the remedial actions required of areas of the nation that exceed the standards. Under the Clean Air Act, State and local agencies in areas that exceed the NAAQS are required to develop State Implementation Plans to show how they will achieve the NAAQS by specific dates.

The Clean Air Act requires that projects receiving federal funds demonstrate conformity to the approved State Implementation Plan and local air quality attainment plan for the region. Conformity with the State Implementation Plan requirements would satisfy the Clean Air Act requirements.

(2) California Clean Air Act. In 1988, the California Clean Air Act required that all air districts in the State endeavor to achieve and maintain California Ambient Air Quality Standards for CO, O_3, SO_2, and NO_2 by the earliest practical date. The California Clean Air Act provides air districts with authority to regulate indirect sources and mandates that air quality districts focus particular attention on reducing emissions from transportation and area-wide emission sources. Each nonattainment district is required to adopt a plan to achieve a 5 percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each nonattainment pollutant or its precursors. A Clean Air Plan shows how a district would reduce emissions to achieve air quality standards. Generally, the State standards for these pollutants are more stringent than the national standards.

(3) California Air Resources Board Handbook. The ARB has developed an Air Quality and Land Use Handbook (Handbook) which is intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process.[2] The ARB Handbook recommends that planning agencies strongly consider proximity to these sources when finding new locations for air sensitive land uses such as homes, medical facilities, daycare centers, schools and playgrounds.

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

- Within 500 feet of a freeway, urban roads with 100,000 vehicles per day or rural roads with 50,000 vehicles per day;
- Within 1,000 feet of a major service and maintenance rail yard;

[2] California Air Resources Board, 2005. *Air Quality and Land Use: A Community Health Perspective.* April.

- Immediately downwind of ports (in the most heavily impacted zones) and petroleum refineries;
- Within 300 feet of any dry cleaning operation (for operations with two or more machines, provide 500 feet); or
- Within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater).

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

(4) Bay Area Air Quality Management District. The BAAQMD seeks to attain and maintain air quality conditions in the San Francisco Bay Area Air Basin through a comprehensive program of planning, regulation, enforcement, technical innovation, and education. The clean air strategy includes the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations, and issuance of permits for stationary sources. The BAAQMD also inspects stationary sources and responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements programs and regulations required by law.

The BAAQMD is responsible for developing a Clean Air Plan that guides the region's air quality planning efforts to attain the California Ambient Air Quality Standards. The BAAQMD's *2010 Clean Air Plan* is the latest Clean Air Plan, which contains district-wide control measures to reduce ozone precursor emissions (i.e., ROG and NO_x), particulate matter, and greenhouse gas emissions.

The Bay Area *2010 Clean Air Plan* was adopted on September 15, 2010 by the BAAQMD's Board of Directors. The BAAQMD in partnership with the Association of Bay Area Governments, the Bay Conservation and Development Commissions, and the Metropolitan Transportation Commission is in the process of producing an updated 2015 Clean Air Plan that will include Regional Climate Protection Strategies. The current Clean Air Plan accomplishes the following:

- Updates the Bay Area *2005 Ozone Strategy* in accordance with the requirements of the California Clean Air Act to implement *all feasible measures* to reduce ozone;
- Provides a control strategy to reduce ozone, PM, air toxics, and greenhouse gases in a single, integrated plan;
- Reviews progress in improving air quality in recent years; and
- Establishes emission control measures to be adopted or implemented in the 2010 to 2013 timeframe.

(5) City of Albany 1992 General Plan. The following policies from the 1992 Conservation, Recreation & Open Space Element and the Circulation Element of the City of Albany General Plan specifically address air quality.

- **CROS 4.1:** Coordinate with Caltrans and MTC to monitor air quality impacts of improvements to Interstate 80 and 580 to assure that Albany's air quality will not be allowed to deteriorate any further.

- **CROS 4.4:** Continue to cooperate in local, subregional and regional efforts to implement the Clean Air Plan and meet State Air Quality Standards.
- **CIRC 4.1:** Monitor existing and proposed transit service for responsiveness to residents' and employers' needs.
- **CIRC 4.3:** Continue to work with the City's Trip Reduction Ordinance and continue to develop programs and incentives for the use of carpools, staggered work hours, bicycling, walking and the increased use of public transit for residents and employees in the community.
- **CIRC 4.5:** Increase pedestrian travel throughout the City by connecting major pathway systems such as BART linear park to other City, regional, and State Parks, and other community facilities.
- **CIRC 4.7:** Assure that sidewalks, pathways and trails used by pedestrians are safe and provide unhindered access for all.
- **CIRC 6.1:** Develop a plan for bike routes for Albany, linking existing bike paths and routes in Berkeley and El Cerrito. Implement this plan as part of the City's overall road maintenance and traffic sign program within the annual capital projects budget, as well as through specific transportation funding.
- **CIRC 6.2:** Work to obtain funding sources to develop the Bay Trail in Albany and along the entire East Bay Shoreline corridor as an alternative, parallel route to I-80.

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

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

Table IV.D-3 provides a summary of the attainment status for the San Francisco Bay Area with respect to national and State ambient air quality standards.

Table IV.D-3: San Francisco Bay Area Attainment Status

	Averaging Time	California Standards [a]		National Standards [b]	
		Concentration	Attainment Status	Concentration [c]	Attainment Status
Ozone (O_3)	8-Hour	0.070 ppm (137µg/m^3)	Nonattainment [h]	0.075 ppm	Nonattainment [d]
	1-Hour	0.09 ppm (180 µg/m^3)	Nonattainment	Not Applicable	Not Applicable [e]
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m^3)	Attainment	9 ppm (10 mg/m^3)	Attainment [f]
	1-Hour	20 ppm (23 mg/m^3)	Attainment	35 ppm (40 mg/m^3)	Attainment
Nitrogen Dioxide (NO_2)	1-Hour	0.18 ppm (339 µg/m^3)	Attainment	0.100 ppm	Unclassified
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	Not Applicable	0.053 ppm (100 µg/m^3)	Attainment
Sulfur Dioxide (SO_2)	24-Hour	0.04 ppm (105 µg/m^3)	Attainment	0.14 ppm (365 µg/m^3)	Attainment
	1-Hour	0.25 ppm (655 µg/m^3)	Attainment	0.075 ppm (196 µg/m^3)	Attainment
	Annual Arithmetic Mean	Not Applicable	Not Applicable	0.030 ppm (80 µg/m^3)	Attainment [j]
Coarse Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 µg/m^3	Nonattainment [g]	Not Applicable	Not Applicable
	24-Hour	50 µg/m^3	Nonattainment	150 µg/m^3	Unclassified
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 µg/m^3	Nonattainment [g]	15 µg/m^3	Attainment
	24-Hour	Not Applicable	Not Applicable	35 µg/m^3 [i]	Nonattainment

[a] California standards for ozone, carbon monoxide (except in the Lake Tahoe air basin), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter – PM_{10}, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e., all standards except for lead and the PM_{10} annual standard), then some measurements may be excluded. In particular, measurements are excluded that ARB determines would occur less than once per year on average. The Lake Tahoe CO standard is 6.0 ppm, a level one-third the national standard and two-thirds the State standard.

[b] National standards shown are the "primary standards" designed to protect public health. National standards other than for ozone, particulates and those based on annual averages are not to be exceeded more than once a year. The 1-hour ozone standard is attained if, during the most recent 3-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than 1. The 8-hour ozone standard is attained when the 3-year average of the fourth highest daily concentrations is 0.075 ppm (75 ppb) or less. The 24-hour PM_{10} standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 µg/m^3. The 24-hour $PM_{2.5}$ standard is attained when the 3-year average of 98th percentiles is less than 35 µg/m^3. Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM_{10} is met if the 3-year average falls below the standard at every site. The annual $PM_{2.5}$ standard is met if the 3-year average of annual averages spatially-averaged across officially-designed clusters of sites falls below the standard.

[c] National air quality standards are set by USEPA at levels determined to be protective of public health with an adequate margin of safety.

[d] In June 2004, the Bay Area was designated as a marginal nonattainment area for the national 8-hour ozone standard. USEPA lowered the national 8-hour ozone standard from 0.80 to 0.75 PPM (i.e., 75 ppb), effective May 27, 2008.

[e] The national 1-hour ozone standard was revoked by USEPA on June 15, 2005.

Table notes continued on next page.

[f] In April 1998, the Bay Area was redesignated to attainment for the national 8-hour carbon monoxide standard.
[g] In June 2002, ARB established new annual standards for $PM_{2.5}$ and PM_{10}.
[h] The 8-hour California ozone standard was approved by the ARB on April 28, 2005 and became effective on May 17, 2006.
[i] On January 9, 2013, USEPA issued a final rule to determine that the Bay Area attains the 24-hour $PM_{2.5}$ national standard. This USEPA rule suspends key SIP requirement as long as monitoring data continues to show that the Bay Area attains the standard. Despite this USEPA action, the Bay Area will continue to be designated as nonattainment for the national 24-hour $PM_{2.5}$ standard until such time as the Air District submits a redesignation request and a maintenance plan to USEPA and USEPA approves the proposed redesignation.
[j] On June 2, 2010, the USEPA established a new 1-hour SO_2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030 ppm annual and 0.14 ppm 24-hour SO_2 NAAQS , however, must be used until one year following USEPA initial designations of the new 1-hour SO_2 NAAQS.

Lead (Pb) is not listed in the above table because it has been in attainment since the 1980s.
ppm = parts per million
mg/m^3 = milligrams per cubic meter
$\mu g/m^3$ = micrograms per cubic meter

Source: Bay Area Air Quality Management District, Bay Area Attainment Status, 2014.

e. Existing Climate and Air Quality. Regional air quality, local climate and air quality in the Northern Alameda County region, and air pollution climatology are described below.

(1) Regional and Local Air Quality Conditions. The City of Albany is located in northern Alameda County in the San Francisco Bay Area. The shallow San Francisco Air Basin is ringed by hills that taper into a number of sheltered valleys around the perimeter. Two primary atmospheric outlets exist. One is through the strait known as the Golden Gate, a direct outlet to the Pacific Ocean. The second extends to the northeast, along the west delta region of the Sacramento and San Joaquin Rivers.

Air quality is a function of both local climate and local sources of air pollution. Air quality is the balance of the natural dispersal capacity of the atmosphere and emissions of air pollutants from human uses of the environment. Northwesterly and northerly winds are most common in Albany, reflecting the orientation of the Bay and the San Francisco Peninsula. Winds from these directions carry pollutants released by autos and factories from upwind areas of the Bay Area toward Albany, particularly during the summer months. Winds are lightest on the average in fall and winter at which time local pollutants tend to build up in the atmosphere.

The City of Albany is located centrally in the Northern Alameda and Western Contra Costa Region of the San Francisco Air Basin. This climatological subregion stretches from Richmond to San Leandro. Its western boundary is defined by San Francisco Bay and its eastern boundary by the Oakland–Berkeley hills. The Oakland–Berkeley hills have a ridge line height of approximately 1,500 feet, which is a significant barrier of air flow. The most densely populated area of the subregion lies in a strip of land between San Francisco 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 of the

subregion, including Albany, prevailing winds are from the south–southwest, especially during the summer. Conversely, during the winter, offshore winds develop, blowing from the Central Valley toward the ocean.

Often, the daytime onshore flow of marine air is capped by a massive dome of warm air that acts like a lid over the region. As the clean ocean air moves inland, pollutants are continually added from below without any dilution from above. As the marine layer collects in inland valleys of the basin and undergoes photochemical transformations under abundant sunlight, it creates unhealthful levels of smog (mainly ozone).

A different type of inversion typically forms at night as cool air pools in low elevations while the air aloft remains warm. Shallow radiation inversions are formed (especially in winter) which trap pollutants near intensive traffic sources, such as freeways, shopping centers, etc., and form localized violations of clean air standards called "hot spots." Although inversions are found during all seasons of the year, the summertime regional capping inversion and the localized winter radiation inversions are, by far, the most dominant.

Air quality conditions in the San Francisco Bay Area have improved significantly since the BAAQMD was created in 1955. Ambient concentrations of air pollutants and the number of days during which the region exceeds air quality standards have fallen dramatically. Exceedances of air quality standards occur primarily during meteorological conditions conducive to high pollution levels, such as cold, windless winter nights or hot, sunny summer afternoons.

Ozone levels, measured by peak concentrations and the number of days over the State 1-hour standard, have declined substantially as a result of aggressive programs by the BAAQMD and other regional, State and federal agencies. The reduction of peak concentrations represents progress in improving public health; however the Bay Area still exceeds the State standard for 1-hour ozone as well as the State and federal 8-hour standards. Levels of PM_{10} have exceeded State standards two of the last three years, and the area is considered a nonattainment area for this pollutant relative to the State standards. The Bay Area is an unclassified area for the federal PM_{10} standard.

No exceedances of the State or federal CO standards have been recorded at any of the region's monitoring stations since 1991. The Bay Area is currently considered a maintenance area for State and federal CO standards.

(2) Air Quality Monitoring Results Pollutant monitoring results for the years 2012 to 2014 at the Oakland–West ambient air quality monitoring station (the closest monitoring station to the City of Albany), shown in Table IV.D-4, indicate that air quality in the vicinity of Albany has generally been good. As indicated in the monitoring results, only one violation of the State PM_{10} standard occurred during the 3-year period and no violations of the federal PM_{10} standard were recorded. $PM_{2.5}$ levels exceeded the federal standard once in 2014, twice in 2013, and none were recorded in 2012. Both State and federal 1-hour ozone standards were not exceeded in the 3-year period, and the federal 8-hour ozone standard was not exceeded in the 3-year period at this monitoring station. The CO, SO_2, and NO_2 standards were also not exceeded in this area during the 3-year period.

Table IV.D-4: Ambient Air Quality at the Oakland–West Monitoring Station

Pollutant	Standard	2012	2013	2014
Carbon Monoxide (CO)				
Maximum 1-hour concentration (ppm)		2.8	3.8	3.0
Number of days exceeded:	State: > 20 ppm	0	0	0
	Federal: > 35 ppm	0	0	0
Maximum 8-hour concentration (ppm)		2.40	3.2	2.6
Number of days exceeded:	State: > 9 ppm	0	0	0
	Federal: > 9 ppm	0	0	0
Ozone (O_3)				
Maximum 1-hour concentration (ppm)		0.061	0.071	0.072
Number of days exceeded:	State: > 0.09 ppm	0	0	0
Maximum 8-hour concentration (ppm)		0.048	0.059	0.059
Number of days exceeded:	State: > 0.07 ppm	0	0	0
	Federal: > 0.08 ppm	0	0	0
Coarse Particulates (PM_{10}) [a]				
Maximum 24-hour concentration (µg/m^3)		45.1	45.6	44.3
Number of days exceeded:	State: > 50 µg/m^3	0	0	0
	Federal: > 150 µg/m^3	0	0	0
Annual arithmetic average concentration (µg/m^3)		15.2	17.8	16.0
Exceeded for the year:	State: > 20 µg/m^3	No	No	No
	Federal: > 50 µg/m^3	No	No	No
Fine Particulates ($PM_{2.5}$)				
Maximum 24-hour concentration (µg/m^3)		12.4	42.7	38.8
Number of days exceeded:	Federal: > 35 µg/m^3	0	2	1
Annual arithmetic average concentration (µg/m^3)		ND	ND	9.6
Exceeded for the year:	State: > 12 µg/m^3	ND	ND	ND
	Federal: > 12 µg/m^3	ND	2	1
Nitrogen Dioxide (NO_2)				
Maximum 1-hour concentration (ppm)		0.053	0.063	0.056
Number of days exceeded:	State: > 0.250 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.015	0.016	0.014
Exceeded for the year:	Federal: > 0.053 ppm	0	0	0
Sulfur Dioxide (SO_2)				
Maximum 1-hour concentration (ppm)		0.07	0.05	ND
Number of days exceeded:	State: > 0.25 ppm	0	0	ND
Maximum 3-hour concentration (ppm)		ND	ND	ND
Number of days exceeded:	Federal: > 0.50 ppm	ND	ND	ND
Maximum 24-hour concentration (ppm)		0.008	0.007	ND
Number of days exceeded:	State: > 0.04 ppm	0	0	ND
	Federal: > 0.14 ppm	0	0	ND
Annual arithmetic average concentration (ppm)		0.001	ND	
Exceeded for the year:	Federal: > 0.030 ppm	ND	ND	ND

[a] Data from San Pablo–Rumrill Blvd. monitoring site.
ppm = parts per million
µg/m^3 = micrograms per cubic meter
ND = No data. There was insufficient (or no) data to determine the value.

Source: ARB and USEPA, 2015.

(3) Air Quality Issues. Five key air quality issues – CO hotspots, vehicle emissions, fugitive dust, odors, and construction equipment exhaust – are described below.

Local Carbon Monoxide Hotspots. Local air quality is most affected by CO emissions from motor vehicles. Carbon monoxide is typically the pollutant of greatest concern because it is created in abundance by motor vehicles and it does not readily disperse into the air. Because CO does not readily disperse, areas of vehicle congestion can create "pockets" of high CO concentration called "hot spots." These pockets have the potential to exceed the State 1-hour standard of 20 ppm or the 8-hour standard of 9.0 ppm.

While CO transport is limited, it does disperse over time and with distance from the source under normal meteorological conditions. However, under certain extreme meteorological conditions, CO concentrations near congested roadways or intersections may reach unhealthful levels affecting local sensitive receptors (e.g., residents, schoolchildren, the elderly, and hospital patients). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. In areas with high ambient background CO concentration, modeling is recommended to determine a project's effect on local CO levels.

Vehicle Emissions. Long-term air emission impacts may be associated with changes in automobile travel within Albany. Increases in mobile source emissions could result from vehicle trips associated with increased vehicular travel. As is true throughout much of the United States, motor vehicle use is projected to increase substantially in the region. The BAAQMD, local jurisdictions, and other parties responsible for protecting public health and welfare are continually seeking ways of minimizing the air quality impacts of growth and development in order to avoid further exceedances of the air quality standards. The BAAQMD has developed Transportation Control Measures to reduce vehicle emissions and promote public transportation and bicycle use. Strategies to reduce vehicle emissions include construction of complete streets in order to accommodate all modes of travel and meet mobility needs of all travelers including pedestrians, bicyclists, transit users, and motorists among others. In addition, sustainable transportation would reduce the consumption of non-renewable resources and air pollutant emissions by increasing connectivity, encouraging the use of low-emission vehicles and carpools, vanpools, and shuttles. Reducing peak hour traffic would reduce idling emissions associated with crowded roadways and improving safety for bicyclists and pedestrians is a useful strategy for promoting the use of alternative transportation thus reducing vehicle emissions.

Fugitive Dust. Fugitive dust emissions are generally associated with demolition, land clearing, exposure of soils to the air, and cut and fill operations. Dust generated during construction varies substantially on a project-by-project basis, depending on the level of activity, the specific operations and weather conditions. The ARB estimates that 64 percent of construction-related total suspended particulate emissions occur in the form of PM_{10}. However, construction emissions 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. There are a number of feasible control measures that can be reasonably implemented to significantly reduce particulate emissions from construction. From the BAAQMD's perspective, if all of the control measures from their CEQA Air Quality Guidelines (depending on the size of the project) are implemented, particulate air pollution from construction activities would be considered a less-than-significant impact.

Odors. Odors are also an important element of local air quality conditions. Specific activities allowed within each of the major general plan land use categories can raise concerns on the part of nearby neighbors. Major sources of odors include restaurants, manufacturing plants, and agricultural operations. Other odor producers include industrial facilities. While sources that generate objectionable odors must comply with air quality regulations, the public's sensitivity to locally produced odors often exceeds regulatory thresholds.

Construction Equipment Exhaust. Construction activities cause combustion emissions from utility engines, heavy-duty construction vehicles, equipment hauling materials to and from construction sites and motor vehicles transporting construction crews. Exhaust emissions from construction activities vary daily as construction activity levels change. The use of construction equipment results in localized exhaust emissions.

2. Impacts and Mitigation Measures

This section provides an assessment of the potential adverse impacts related to air quality within the City of Albany. It begins with the criteria of significance, which establishes the threshold for determining whether an impact is significant. The latter part of this section identifies potential impacts and evaluates how they relate to policies and actions of the Draft General Plan. Where potentially significant impacts are identified, mitigation measures are recommended.

a. Criteria of Significance. Implementation of the Draft General Plan would have a significant effect on the environment if it would:

- Conflict with or obstruct implementation of an applicable air quality plan;
- Violate air quality standards or contribute substantially to an existing or projected air quality violation by:
    - Increasing project vehicle miles traveled (VMT) or vehicle trips (VT) (either measure may be used) more than its projected population increase.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or State ambient air quality standard;
- Expose sensitive receptors to substantial pollutant concentration; or
- Frequently expose members of the public to objectionable odors.

According to the BAAQMD CEQA Air Quality Guidelines, to meet the threshold of significance for operational-related criteria air pollutant and precursor impacts, a proposed plan must satisfy the following criteria: Consistency with current air quality plan (AQP) control measures (this requirement applies to project-level as well as plan-level analyses); and a proposed plan’s projected VMT or VT increase is less than or equal to its projected population increase.

For toxic air contaminants, the BAAQMD CEQA Air Quality Guidelines also call for showing special overlay zones around existing and planned sources of TACs and overlay zones of at least 500 feet from all freeways and high volume roadways.

b. Project Impacts. The following section provides an evaluation and analysis for the potential impacts associated with the implementation of the Draft General Plan for each of the criteria of significance listed above.

(1) Conflict with Current Air Quality Plans. The applicable air quality plan is the BAAQMD's 2010 Clean Air Plan, which was adopted on September 15, 2010. The Clean Air Plan is a comprehensive plan to improve Bay Area air quality and protect public health. The Clean Air Plan defines a control strategy to reduce emissions and reduce ambient concentrations of air pollutants; safeguard public health by reducing exposure to air pollutants that pose the greatest health risk, with an emphasis on protecting the communities most heavily affected by air pollution; and reduce greenhouse gas emissions to protect the climate. Consistency with the Clean Air Plan can be determined if the project does the following: 1) supports the goals of the Clean Air Plan; 2) includes applicable control measures from the Clean Air Plan; and 3) if the project would not disrupt or hinder implementation of any control measures from the Clean Air Plan.

Clean Air Plan Goals. The primary goals of the 2010 Bay Area Clean Air Plan are to: attain air quality standards; reduce population exposure and protect public health in the Bay Area; and reduce greenhouse gas emissions and protect climate.

The guiding principles of the Draft Albany General Plan highlight the priorities and key strategies that would guide future development within the City of Albany. These guiding principles include encouraging complete streets and walkable environments, improving public transit and connectivity, and promoting mixed use development. All of these guiding principles support the goals of the Clean Air Plan by including, and ultimately implementing, the following Conservation and Sustainability (CO) and Transportation (T) goals, policies, and actions included in the Draft General Plan:

- **Goal CON-3: Regional Leadership in Climate and Sustainability:** Be a regional leader in efforts to reduce the effects of global climate change, improve air quality, and promote sustainable growth.
- **Policy CON-3.4: Land Use and Transportation Strategies**. Implement the measures expressed in the Land Use, Transportation, and Housing Elements of the General plan to achieve more sustainable development and travel patterns in Albany, including:
    - An expanded, safer, and more accessible pedestrian and bicycle network that reduces dependence on automobile travel and creates more walkable and connected neighborhoods;
    - Greater emphasis on mixed uses along the San Pablo and Solano Avenue corridors, integrating residential uses above commercial uses and thereby reducing auto trips and trip lengths for goods and services;
    - A balance between job growth and housing growth, and more opportunities for residents to live closer to work;
    - Public transportation improvements (bus, BART, and possible future shuttle) which provide more viable alternatives to driving, including the possibility of an "infill" station at Solano Avenue;
    - Higher densities along the San Pablo corridor, enabling more development to be accommodated in the center of the region and reducing the necessity of developing "greenfields" on the periphery of the Bay Area; and

  - Transportation demand management programs, including flextime, telecommuting, signal synchronization, carpooling, and other measures to reduce congestion and vehicle idling and cut down on solo passenger driving.

- **Policy CON-3.6: Clean Air Plan Implementation**. Participate in local, regional, and state efforts to implement the Bay Area Clean Air Plan and meet state and federal air quality standards.
- **Policy CON-3.7: Construction-Related Air Quality Impacts.** Implement measures to reduce construction-related air pollution, especially particulate matter from earth movement, construction debris, stockpiled soil, and truck traffic.
- **Policy CON-3.8: Domestic and Commercial Air Emissions.** Reduce air emissions associated with household and business activities such as gasoline-powered yard equipment and potential air contaminants from commercial and industrial processes.
- **Policy CON-3.9: Indoor Air Quality.** Work proactively to reduce health-related problems caused by indoor air pollutants such as mold, radon, second-hand smoke, and wood smoke.
- **Action CON-3.D: Alternative and Electric Fuel Vehicles.** Plan for and develop the infrastructure necessary for alternative fuel vehicles, including electric cars. This should include automobile charging areas for electric and plug-in hybrid vehicles. Incentives for such vehicles, such as preferential parking, should be developed.
- **Action CON-3.E: Air Quality Monitoring.** Coordinate with adjacent cities and regional agencies such as the Bay Area Air Quality Management District and Caltrans to monitor air quality conditions along Interstates 80 and 580 and the Union Pacific Railroad.
- **Action CON-3.F: Air Quality and Public Health.** Consider air-quality related public health risks when locating development along the I-80/580 corridor, or when approving projects with the potential to create air quality impacts. Periodically review BAAQMD data on air quality conditions and odor complaints to identify and address potential hazards.
- **Policy T-2.7: Evaluating Air Emissions.** Evaluate transportation-related air pollution and greenhouse gas emissions associated with development proposals. Work with applicants to reduce such emissions while supporting infill development.

The control measures of the 2010 Clean Air Plan include measures in the traditional categories of Stationary Source Measures, Mobile Source Measures (MSM), and Transportation Control Measures (TCM). The latest Clean Air Plan identifies two new categories of control measures including: Land Use and Local Impact Measures (LUM) and Energy and Climate Measures (ECM). Stationary Source Measures are not specifically applicable to the Draft General Plan and therefore, are not evaluated further in this EIR. The project's consistency with other measures in the 2010 Clean Air Plan are discussed below.

Transportation and Mobile Source Control Measures. The Transportation Control Measures in the Clean Air Plan are designed to reduce emissions from motor vehicles by reducing vehicle trips and VMT in addition to reducing vehicle idling and traffic congestion. The measures also support alternate modes of transportation.

Table IV.D-5 below lists the proposed Draft General Plan policies that are supportive of the Bay Area 2010 Clean Air Plan measures related to transportation and mobile sources. A description of each applicable TCM, LUM, and ECM is provided along with the listing of the relevant proposed Draft General Plan policies and actions.

Table IV.D-5: Transportation Control Measures and Draft General Plan Policies

Bay Area 2010 Clean Air Plan Transportation Control Measures	Albany Draft General Plan
TCM A-1 – Local and Area-wide Bus Service Improvements This measure will improve transit by sustaining and improving existing service, including new Express Bus or Bus Rapid Transit on major travel corridors, funding the replacement of older and dirtier buses, and implementing the Transit Priority Measures (TPMs) component of the Transportation Climate Action Campaign.	• **Policy T-3.3: Intergovernmental Coordination**. Coordinate development of Albany's bike network with plans for adjacent cities in order to improve the functionality of the system and create seamless connections across jurisdictional lines. • **Policy T-3.10: Public Transit Servic**e. Improve public transportation service and transit amenities in Albany so that transit becomes a more reliable alternative to driving. • **Policy T-3.11: Transit and Streetscapes**. Incorporate provisions for public transit when undertaking streetscape improvements, including bike lanes, curb extensions, landscaping, benches, and crosswalks. • **Policy T-3.13: UC Village Service**. Encourage AC Transit to continue to provide a route that connects UC Village family student housing and the UC Campus • **Policy T-3.14: Paratransit**. Support the provision of para-transit services for seniors and persons with disabilities, and others with special needs
TCM A-2 – Local and Regional Rail Service Improvements This measure will improve rail service by sustaining and expanding existing services and by providing funds to maintain railcars, stations, and other rail capital assets. Specific projects for implementation include BART extensions, Caltrain electrification, Transbay Transit Center Building and rail foundation, Capital Corridor intercity rail service, and Sonoma Marin Area Rail Transit (SMART) District commuter rail project.	• **Policy T-3.12: Monitoring Transit Needs**. Work with AC Transit to monitor and periodically adjust transit service and bus stop locations. A particular emphasis should be placed on feeder service between Albany and the BART stations at North Berkeley and El Cerrito Plaza.
TCM B-1 – Freeway and Arterial Operations Strategies This measure will improve the performance and efficiency of freeway and arterial systems through operational improvements.	• **Policy T-6.4: Interstate Improvements**. Coordinate with Caltrans on future planning, construction, repair, and maintenance activities along I-80, I-580, and around the Buchanan Street/ I-580 interchange. • **Policy T-6.9: Levels of Service**. On major corridors such as San Pablo Avenue and Solano Avenue, evaluate the performance of the transportation network using metrics that not only consider automobile speed and delay but other factors, such as the volume of transit passengers, bicyclists and pedestrians.
TCM B-2 – Transit Efficiency and Use Strategies This measure will improve transit efficiency and make transit more convenient for riders	**Draft General Plan** • **Policy T-2.2: Connectivity**. Improve the ability to travel within Albany and between Albany and other cities using multiple modes of travel (e.g., bicycle and bus, walking and BART, etc.).

Table IV.D-5: Transportation Control Measures and Draft General Plan Policies

Bay Area 2010 Clean Air Plan Transportation Control Measures	Albany Draft General Plan
TCM C-1 – Voluntary Employer Based Trip Reduction Programs This measure will support voluntary efforts by Bay Area employers to encourage their employees to use alternative commute modes, such as transit, ridesharing, bicycling, walking, telecommuting, etc.	• **Policy T-2.4: Carpools, Vanpools, and Shuttles**. Encourage measures to reduce single passenger auto travel, such as carpools and vanpools, BART shuttles or circulators,, and transit passes for City employees. • **Policy T-2.5: Car Sharing and Bike Sharing**. Support car sharing and bike sharing programs and consider incentives for establishing and expanding such programs in Albany. • **Policy T-2.6: Reducing Peak Hour Traffic**. Reduce peak-hour traffic through such measures as flex-time by local employers, safe routes to school programs for local students, allowances for home-based business and telecommuting, support for shared offices and incubators, and creating opportunities for residents to work and shop near their homes. • **Policy CON-3.4: Land Use and Transportation Strategies**. Transportation demand management (TDM) programs, including flextime, telecommuting, signal synchronization, carpooling, and other measures to reduce congestion and vehicle idling and cut down on solo passenger driving. • **Action T-2.D: TDM Ordinance**. Create and implement a TDM ordinance to reduce peak commute trips and encourage alternatives to solo passenger driving.
TCM C-2 – Safe Routes to Schools and Safe Routes to Transit Programs This measure will encourage walking, bicycle and transit use by facilitating safe routes to schools and transit by providing funds and working with transportation agencies, local governments, schools, and communities to implement safe access for pedestrians and cyclists.	• **Policy T-5.10: UC Village Circulation**. Provide a safe, pedestrian-oriented circulation system within UC Village that emphasizes walking, bicycling, and transit use; decreases internal vehicle traffic, accommodates recreational trips, and reinforces a sense of community. • **Policy T-4.6: School Safety.** Work with the Albany Unified School District to identify key improvements and initiatives that would facilitate safer walking and bicycling to school. • **Action T-4.E: Safe Routes to School.** Pursue continued funding for Safe Routes to School Programs.
TCM D-1 – Bicycle Access and Facilities Improvements This measure will expand bicycle facilities serving employment sites, educational and cultural facilities, residential areas, shopping districts, and other activity centers. Typical improvements include bike lanes, routes, paths, and bicycle parking facilities. This TCM also includes improving bicycle access to transit and supporting the annual Bike to Work event.	• **Policy T-3.1: Bikeway System**. Support development of a bikeway system that meets the needs of commuters and recreation users, reduces vehicle trips, and links residential neighborhoods with BART and regional destinations. • **Policy T-3.2: Designated Bike Network and Improvements**. Designate a network of bike paths, lanes, and routes as the primary system for bicyclists traveling through Albany. • **Policy T-3.4: Bike Route Maintenance**. Regularly maintain bicycle routes and paths through sweeping, pavement repairs, and vegetation trimming. • **Policy T-3.5: Bicycle Parking**. Install additional bike racks and bike parking facilities in commercial and civic areas and in other locations where such facilities would help support bicycle use. • **Policy T-3.7: Bicycle and Pedestrian Access to Open Space**. Maintain and enhance trails through open space areas, including the Bay Trail along the shoreline, recreational trails on Albany Hill, and the Ohlone Greenway Trail in the BART Right-of- Way.

Table IV.D-5: Transportation Control Measures and Draft General Plan Policies

Bay Area 2010 Clean Air Plan Transportation Control Measures	Albany Draft General Plan
TCM D-1 *Continued*	• **Policy T-3.8: Bicycle and Pedestrian Connectivity**. Improve the connectivity of Albany's pedestrian and bicycle networks by removing obstacles to pedestrian travel and linking major pathways such as the BART linear park and the Bay Trail to each other and to community facilities. • **Policy T-3.9: Bicycle Programs**. Undertake programs and activities to encourage bicycle use and bicycle safety in the city, including bicycle "rodeos," "Bike to Work Day" events, and programs which stress the health benefits of bicycling. • **Action T-3.A: Active Transportation Plan Implementation**. Implement the pedestrian and bicycle projects in the Active Transportation Plan through the City's Capital Improvements Program, specific transportation funding sources, and the General Fund budget for maintenance and operations. • **Action T-3.B: Bike Parking Ordinance**. Adopt an ordinance that requires new development to provide adequate bike parking for tenants and customers and requires businesses with more than 50 employees to provide end of trip facilities, including showers, lockers, and bike storage facilities. • **Action T-3.C: Bicycle and Pedestrian Access to the Waterfront.** Pursue the long-term development of a grade-separated bicycle and pedestrian crossing of the Union Pacific Railroad and I-80 to better connect Albany to its waterfront. • **Action T-3.D: Signage System.** Implement the City of Albany Wayfinding Plan for Pedestrians and Bicyclists adopted by the City Council in June 2013. The Plan provides coordinated signage for the pedestrian and bicycle network. • **Action T-3.E: Sidewalk Improvements**. Upgrade sidewalks and curb ramps that do not meet current standards. • **Action T-3.F: Bike-Ped Coordinator**. As funding allows, hire a part-time Bicycle and Pedestrian Coordinator to manage all non-motorized transportation projects and ongoing route maintenance programs.
TCM D-2 – Pedestrian Access and Facilities Improvements This measure will improve pedestrian facilities and encourage walking by funding projects that improve pedestrian access to transit, employment and major activity centers. Improvements may include sidewalks/paths, benches, reduced street width, reduced intersection turning radii, crosswalks with activated signals, curb extensions/bulbs, buffers between sidewalks and traffic lanes, and street trees.	• **Policy T-1.1: Balancing the Needs of All Users**. Create and maintain "complete streets" that provide safe, comfortable, and convenient travel for all users, including pedestrians, bicyclists, transit users, motorists, movers of commercial goods, emergency responders, persons with disabilities, seniors, children, youth, and families. • **Policy T-1.3: Complete Streets Operating Procedures**. Incorporate Complete Streets practices as a routine part of City operations. • **Policy T-1.4: Complete Streets Design**. Follow locally adopted policies and standards in the design of City streets, including the Active Transportation Plan and the Climate Action Plan, as well as the General Plan. All roadway planning, design, and maintenance projects should be consistent with local bicycle, pedestrian, and transit plans. • **Policy T-1.5: Connecting the City**. Ensure that the design of streets and other transportation features helps to connect the city and facilitate safer and more convenient travel between Albany and surrounding communities.

Table IV.D-5: Transportation Control Measures and Draft General Plan Policies

Bay Area 2010 Clean Air Plan Transportation Control Measures	Albany Draft General Plan
TCM D-2 *Continued*	• **Policy T-1.6: Accessibility**. Improve access throughout the City for persons with disabilities, seniors, and others with mobility limitations. • **Policy T-1.7: Development Review**. Require that future development projects address bicycling and walking access in their project plans, and include provisions to accommodate access by all modes of travel. • **Policy T-3.6: Sidewalks and Paths**. Improve Albany's network of sidewalks and paths to make the city safer and easier to travel on foot. Sidewalks should be present on all Albany streets, although their design and location may vary based on topography and other factors. Priority walking corridors should be identified and targeted for improvements such as wider sidewalks, enhanced crosswalks, curb ramp upgrades, sidewalk parking enforcement, and routine maintenance. • **Action T-3.H: Transit Gap Study**. Conduct a public transit gap study that evaluates local transit needs, analyzes strategies for increasing transit use, and identifies funding sources for transit improvements. • **Action T-3.I: Bus Stop Improvements**. Work with AC transit to ensure that bus waiting areas are located in appropriate locations and are designed to maximize rider comfort and safety. • **Action T-3.J: Bus to BART**. Work with AC Transit and BART to reduce the waiting time associated with transferring from AC Transit buses to BART, and vice versa, and to make trips using the two systems as seamless as possible. • **Action T-3.J: Active Transportation Plan Updates**. Update the Active Transportation Plan every five years, as required by Caltrans, to reflect new policies and ensure continued eligibility for funding. • **Policy T-4.4: Crosswalks.** Designate, stripe, and maintain a system of pedestrian crosswalks and take appropriate enforcement measures to ensure the safety of persons using these crosswalks. • **Policy T-4.7: Pedestrian-Vehicle Interface.** Design the pedestrian circulation system to minimize the number of times that walkers, runners, and other modes of active transportation need to stop for cross traffic. • **Policy T-4.8: Security.** Enhance security for pedestrians by providing adequate lighting and keeping vegetation properly trimmed. • **Action T-4.F: Pedestrian Crossings.** Consider funding and implementation of demonstration projects for new pedestrian crossing treatments on San Pablo Avenue, Solano Avenue, and Marin Avenue/Buchanan Street.

Table IV.D-5: Transportation Control Measures and Draft General Plan Policies

Bay Area 2010 Clean Air Plan Transportation Control Measures	Albany Draft General Plan
TCM D-3 – Local Land Use Strategies This measure will support and promote land use patterns, policies, and infrastructure investments that support higher density mixed use, residential and employment development near transit in order to facilitate walking, bicycling and transit use.	• **Policy CON-3.4: Land Use and Transportation Strategies**. Implement the measures expressed in the Land Use, Transportation, and Housing Elements of the General Plan to achieve more sustainable development and travel patterns in Albany, including: o An expanded, safer, and more accessible pedestrian and bicycle network that reduces dependence on automobile travel and creates more walkable and connected neighborhoods; o Greater emphasis on mixed uses along the San Pablo and Solano Avenue corridors, integrating residential uses above commercial uses and thereby reducing auto trips and trip lengths for goods and services o A balance between job growth and housing growth, and more opportunities for residents to live closer to work; o Public transportation improvements (bus, BART, and possible future shuttle) which provide more viable alternatives to driving, including the possibility of an "infill" station at Solano Avenue; o Higher densities along the San Pablo corridor, enabling more development to be accommodated in the center of the region and reducing the necessity of developing "greenfields" on the periphery of the Bay Area; o Transportation demand management programs, including flextime, telecommuting, signal synchronization, carpooling, and other measures to reduce congestion and vehicle idling and cut down on solo passenger driving.
TCM E-2 – Promote Parking Policies to Reduce Motor Vehicle Travel This measure will reduce emission of the key ozone precursors, ROG and NO_x by implementing parking policies that support infill and transit-oriented development, and reduce vehicle miles traveled, and vehicle emissions through increased transit use, walking and bicycling.	• **Policy T-2.1: Transit-Oriented Development**. Encourage land use patterns which support walking, bicycling, and public transit use, thereby reducing greenhouse gas emissions and fossil fuel consumption. • **Policy T-2.3: Low-Emission Vehicles**. Encourage the use of low emission or zero emission vehicles, along with the infrastructure to support such vehicles, such as electric vehicle charging stations. • **Action CON-3.D: Alternative Fuel Vehicles**. Plan for and develop the infrastructure necessary for alternative fuel vehicles. This should include automobile charging areas for electric and plug-in hybrid vehicles. Incentives for such vehicles, such as preferential parking, should be developed. • **Policy T-7.1: Parking Management.** Develop comprehensive parking management strategies which maximize the efficient use of available on-street and off-street parking spaces. • **Policy T-7.2: Balancing Supply and Demand.** Consider timed parking limits, residential parking permits, parking benefit districts, paid public parking, more stringent parking enforcement, and other methods to address parking in locations where demand exceeds supply during all or part of the day. When modifying parking regulations, consider the potential impact on adjacent residential streets.

Table IV.D-5: Transportation Control Measures and Draft General Plan Policies

Bay Area 2010 Clean Air Plan Transportation Control Measures	Albany Draft General Plan
TCM E-2 *Continued*	• **Policy T-7.3: Parking Standards.** Adopt residential parking standards which consider factors such as the number of bedrooms in the unit, proximity to transit, the availability of on-street parking, and the characteristics of occupants (e.g., seniors, families, etc.), rather than applying a "one-size-fits-all" standard. • **Policy T-7.4: Shared Parking.** Encourage shared parking agreements so that adjacent or nearby uses with different demand characteristics can utilize the same parking spaces. • **Policy T-7.5: Mechanical Lifts.** Allow innovative methods of accommodating parking demand such as mechanical parking lifts. • **Policy T-7.6: Car-Share and Bike-Share Parking.** Consider incentives or requirements to include parking for car-share vehicles and shared bicycles in new mixed use development. • **Policy T-7.7: Design of Surface Parking.** On larger development sites where off-street surface parking lots are required, parking should be located to the rear or side of the building rather than between the building and the street. Site plans in which surface parking dominates the site or the street frontage are strongly discouraged. • **Policy T-7.8: Unbundling.** Allow unbundled multi-family parking, so that owners or buyers of multi-family units may opt out of having their own parking space and pay a lower rent or sales price in exchange.

Source: Bay Area Air Quality Management District, *Bay Area 2010 Clean Air Plan*; City of Albany, 2015.

Land Use and Local Impact Measures. The BAAQMD's 2010 Clean Air Plan includes Land Use and Local Impacts Measures (LUM) to achieve the following: promote mixed use and compact development to reduce motor vehicle travel and emissions, and ensure that planned growth is focused in a way that protects people from exposure to air pollution from stationary and mobile sources of emissions. The land use and local impact measures identified by the BAAQMD are not specifically applicable to the proposed Draft General Plan, as they relate to actions the BAAQMD will take to reduce impacts from goods movement and reduce health risks in affected communities. Consistent with the LUMs, the Draft General Plan includes measures to encourage mixed use growth including LU-1.7 and LU-1.8.

- **Policy LU-1.7: Sustainable Development.** Ensure that future development mitigates its environmental impacts to the greatest extent possible and is designed and constructed to advance the principles of sustainability. This should include the use of greener building practices, greater energy and water efficiency, and the design of new development in a way that encourages walking and bicycling.
- **Policy LU-1.8: Transit-Oriented Development.** Encourage land use patterns that support transit use, including additional mixed use (commercial and higher-density residential) development along the San Pablo and Solano Avenue corridors.

Energy and Climate Control Measures. The BAAQMD's 2010 Clean Air Plan also includes Energy and Climate Control Measures (ECM) which are designed to reduce ambient concentrations of criteria pollutants and reduce emissions of CO_2. Implementation of these measures should: promote energy conservation and efficiency in buildings throughout the community; promote renewable forms of energy production; reduce the "urban heat island" effect by increasing reflectivity of roofs and parking lots; and promote the planting of (low-volatile organic compound emitting) trees to reduce biogenic emissions from trees, lower air temperatures, provide shade and absorb air pollutants. Table IV.D-6 lists the proposed City of Albany Draft General Plan ECMs. A description of the ECM's applicable to the City of Albany is provided along with a listing of relevant proposed Draft General Plan policies that would implement each measure.

Table IV.D-6: Energy and Climate Control Measures and Draft General Plan Policies

Bay Area 2010 Clean Air Plan Energy and Climate Control Measures	Draft General Plan Policies and Actions
ECM-1 Energy Efficiency The purpose of this measure is to provide: 1) education to increase energy efficiency; 2) technical assistance to local governments to adopt and enforce energy-efficient building codes; and 3) incentives for improving energy efficiency at schools.	• **Policy CON-6.2: Energy and Water Audits**. Promote the use of energy audits and water audits by Albany residents and businesses to identify and eliminate sources of waste, conserve resources, and reduce utility costs. Lead by example by performing such audits on municipal buildings and properties, and undertaking appropriate improvements to address energy and water inefficiencies in City facilities. • **Policy CON-6.3: Energy Retrofits**. Encourage the retrofitting of residential and commercial buildings to increase energy efficiency and maximize the use of renewable energy.
ECM-2 Renewable Energy This measure calls for promotion of distributed renewable energy generation (solar, micro wind turbines, cogeneration, etc.) on commercial and residential buildings, and at industrial buildings.	• **Policy CON-6.5: Solar Access**. Preserve solar access rights in a way that is consistent with state law and supports the use of photovoltaic energy systems. • **Policy CON-6.7: Renewable Energy**. Support low cost financing programs which incentivize private investment in energy efficiency and renewable energy systems. This could include measures such as solar energy empowerment districts and alternative financing for solar installations.
ECM-3 Urban Heat Island Mitigation The purpose of this measure is to mitigate the "urban heat island" effect by promoting the implementation of cool roofing, cool paving, and other strategies.	• **Policy CON-6.4: Cool Roofs and Pavement**. Encourage the design of roofs, pavement, and other exposed surfaces in a manner that mitigates the heat island effects of development and improves energy efficiency.
ECM-4 Tree Planting The purpose of this measure is to promote planting of low-VOC emitting shade trees to reduce urban heat island effects, save energy, and absorb CO_2 and other air pollutants.	• **Policy CON-2.1: Trees and the Environment**. Recognize the importance of trees and vegetation to improving air and water quality in the City and contributing to local efforts to reduce global climate change. • **Policy CON-2.2: Tree Preservation**. Require preservation of mature trees during the review of development proposals and subsequent construction projects. Site design and construction plans should identify individual trees and groves of trees and include measures to protect them wherever feasible. When tree preservation is not feasible, require replacement trees and ongoing maintenance measures to avoid net loss of tree coverage. • **Policy CON-2.3: Tree Planting**. Undertake street tree planting and maintenance programs to beautify the City, create shade, provide habitat for birds and other animals, and enhance the built environment.

Table IV.D-6: Energy and Climate Control Measures and Draft General Plan Policies

Bay Area 2010 Clean Air Plan Energy and Climate Control Measures	Draft General Plan Policies and Actions
ECM-4 *Continued*	• **Policy CON-2.4: Bay Friendly Landscaping**. Encourage and where appropriate require bay-friendly and drought-tolerant landscaping to enhance aesthetics, buffer residences from noise and air pollution, create privacy, reduce wind, and provide habitat. • **Action CON-2.A: Street Tree Planting Program**. Continue implementation of a comprehensive street tree planting and maintenance program for Albany streets, including priorities, time schedules, and species selection guidelines. • **Action CON-2.B: Tree Preservation Requirements**. Continue to study alternatives for protecting large specimen trees and addressing tree removal and preservation issues on private property. • **Action CON-2.C: Tree Inventories**. Implement standard operating procedures requiring inventories of trees and significant site vegetation as a part of development application review. • **Action CON-2.D: Creekside Master Plan Implementation**. Implement the vegetation management prescriptions of the Albany Hill Creekside Master Plan, and periodically update the Plan as conditions change. • **Action CON-2.E: Green Albany Plan**. Prepare a "Green Albany" Plan to evaluate areas in the City for carbon sequestration and enhancement of the tree canopy, and for potential "green streets" enhancements. • **Action CON-2.F: Replacement of Hazardous Trees**. Continue to implement measures for replacing, sick, dying, or hazardous trees with replacement trees.

Source: Bay Area Air Quality Management District, *Bay Area 2010 Clean Air Plan*; City of Albany, 2015.

As shown in the tables above, the Draft General Plan incorporates or is consistent with many of the control measures outlined in the BAAQMD 2010 Clean Air Plan. The Draft General Plan is consistent with the BAAQMD 2010 Clean Air Plan in the area of transportation control measures, mobile source measures, and energy control measures. The Draft General Plan would support the goals of the Clean Air Plan, includes applicable measures, and would not disrupt tor hinder implementation of the Plan. Therefore, the proposed project would not conflict with or obstruct implementation of the Clean Air Plan, and this impact would be less than significant.

(2) Violate Any Air Quality Standards. According to the BAAQMD's CEQA Air Quality Guidelines, a general plan would not have a significant operational-related criteria air pollutant and air precursor impact, if it satisfies the following criteria: 1) consistency with current air quality plan control measures and 2) the percentage of the general plan's projected VMT increase is less than or equal to its population increase. Additionally, construction of the development allowed under the Draft General Plan could generate dust and exhaust emissions that could violate air quality standards; therefore, such impacts are evaluated in this section.

Clean Air Plan Consistency. The BAAQMD's 2010 Clean Air Plan includes measures that work towards reducing air quality impacts and improving the air quality. As discussed in the section

above, the Draft General Plan would be consistent with these measures. Therefore, this criterion would be met by the project.

Vehicle Miles Traveled Analysis. Section IV.C, Transportation and Circulation, of this EIR discusses the traffic modeling for the Draft General Plan. Based on the transportation analysis and as shown in Table IV.D-7, under Draft General Plan conditions average daily VMT would increase by 10.2 percent from the existing conditions, while the rate of population growth would increase by 11.2 percent.

Table IV.D-7: Draft 2035 General Plan Vehicle Miles Traveled and Population Growth

	Year 2010 Projections	Year 2040[a] Projections		Percent
Factors	**Existing**	**No Growth in Albany**	**Draft General Plan**	**Increase**
Daily VMT	226,400	222,400	249,600	10.2
Population	18,560	18,560	20,640	11.2

[a] While the General Plan horizon is 2035, the traffic analysis was completed for 2040 to align with the latest Alameda CTC model, and the VMT analysis is based on the traffic analysis.

Sources: LSA Associates, Inc., August 2015; Fehr and Peers, August 2015.

Based on the significance criteria, a significant impact would occur if the project-related VMT increase is greater than the increase in population. The development facilitated by the Draft General Plan would increase Albany's population by approximately 11 percent compared to existing conditions, while VMT is estimated to increase by approximately 10 percent. Total VMT would increase at a lower rate than population growth because the forecasted growth is expected to occur in proximity to local and regional transit service and increase the overall development density, which would result in complementary land uses in closer proximity, and encourage transit use and bicycling and walking due to shorter trips.

As shown in Table IV.D-7, the projected VMT increase would be less than the projected increase in population and employment related to implementation of the Draft General Plan. Therefore, the Draft General Plan would not be expected to result in a violation of air quality standards or contribute substantially to an existing or projected air quality violation.

Construction Emissions Analysis. During construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by excavation, grading, hauling, and other activities. Emissions from construction equipment are also anticipated and would include CO, NO_x, ROG, directly-emitted particulate matter ($PM_{2.5}$ and PM_{10}), and TACs such as diesel exhaust particulate matter. Development allowed under the City of Albany Draft General Plan would require construction which could contribute to violations of air quality standards.

In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NO_x, and VOCs and some soot ($PM_{2.5}$ and PM_{10}) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction sites. However, development allowed under Draft General Plan would allow for construction of multiple projects citywide which could contribute to a violation of air quality standards.

The BAAQMD CEQA Air Quality Guidelines suggest that the significance of construction period emissions should be based on implementation of a set of feasible control measures designed to reduce particulate and exhaust emissions near construction sites. The BAAQMD recommends the implementation of Best Management Practices to reduce construction impacts to a less-than-significant level.

The Draft General Plan includes the following policy that would implement measures to reduce construction related emissions added by future development.

- **Policy CO – 3.7: Construction-Related Air Quality Impacts**. Implement measures to reduce construction-related air pollution, especially particulate matter from earth movement, construction debris, stockpiled soil, and truck traffic.

Therefore, this policy would implement program-level support of BAAQMD's recommendations and construction-related emissions would be less-than-significant for existing and cumulative conditions.

(3) Result in a Cumulatively Considerable Net Increase of any Criterial Pollutant. The San Francisco Bay Area Air Basin is a nonattainment area for federal and State 8-hour ozone standards, nonattainment for the State 1-hour standard and nonattainment for State and federal $PM_{2.5}$ standards. Air pollution is a regional issue affected by climate, land uses and topography. Development projects from the past, present, and future contribute to the region's adverse air quality impacts on a cumulative basis because air pollutants, once emitted at a particular location, move throughout the atmosphere and air basin. If a project's contribution at the individual level is considerable, then the project's cumulative impact on air quality would also be considered significant.

The analysis presented above discusses air quality conditions related to implementation of the Draft General Plan and conformance with the BAAQMD's 2010 Bay Area Clean Air Plan. The BAAQMD 2010 Bay Area Clean Air Plan is the region's plan for attaining criteria pollutant air quality standards (including ozone and $PM_{2.5}$) and accounts for future cumulative regional growth. Therefore, at the General Plan level, consistency with the Clean Air Plan would indicate the project would not result in a cumulative considerable net increase of any criteria pollutant.

As discussed above, implementation of the project would cause the overall regional VMT to increase in the Year 2040 (per the Alameda CTC model); however, the VMT growth would not result in a cumulatively considerable net increase in ozone precursor emissions according to the BAAQMD because the VMT growth rate would be lower than the rate of growth in population. Therefore, implementation of the project would not result in the substantial increase in criteria air quality pollutants at the project level or under cumulative conditions.

(4) Substantial Pollutant Concentrations. According to the BAAQMD, for general plans to have a less-than-significant impact with respect to potential TACs, special overlay zones should be included in proposed plan policies, land use maps, and implementing ordinances. A land use diagram must identify the following: 1) special overlay zones around existing and planned sources of TACs; and 2) special overlay zones of at least 500 feet on each side of all freeways and high-volume roadways (10,000 average daily trips or more). The general plan must also identify goals and policies to minimize potential impacts and create overlay zones for sources of TACs and receptors.

Construction Impacts. Construction of new development, associated with implementation of the Draft General Plan, would occur over a period of approximately 20 years. Construction would result in dust and diesel exhaust emissions. Toxic construction-related health risks are dependent on the type of construction equipment used and duration of the construction period. Because of the lack of specific construction information, given the program-level analysis of the General Plan, an estimate of project construction health risks cannot be determined at the Plan level.

Construction of new projects associated with implementation of the Draft General Plan could result in exposure of sensitive receptors to substantial pollutant concentrations. The following action of the Draft General Plan would ensure that construction impacts do not adversely affect sensitive receptors:

- **Action CON-3.G: Construction-Related Emissions.** Require that future construction projects implement basic control measures consistent with BAAQMD recommendations including those emissions related to fugitive dust and the operation of diesel-powered equipment.

Implementation of Action CON-3 would require BAAQMD best management practices be applied to construction projects to ensure that dust and emissions from diesel-powered equipment are minimized. With implementation of this Action, impacts related to substantial construction-related pollutant concentrations would be less than significant.

Operation Impacts. Proposed projects associated with implementation of the Draft General Plan that would emit TACs would require review under the BAAQMD rules and regulations or review under CEQA, especially if located near sensitive receptors. Projects with sensitive receptors proposed near localized sources of TAC emissions (e.g., residences to be located near major roadways or stationary sources) could expose new sensitive populations to TACs and $PM_{2.5}$. According to the ARB and BAAQMD, exposure to elevated levels of TACs and $PM_{2.5}$ contributes to elevated health risks. BAAQMD recommends that buffers should be reflected in land use maps and included in plans to avoid the exposure of sensitive receptors to TAC sources. Risk levels and $PM_{2.5}$ concentrations drop dramatically beyond 500 feet from a source due to dispersion of emissions with distance.

According to the BAAQMD's database of permitted sources in Albany, stationary sources with TAC emissions are from diesel generators, dry cleaners and laundry facilities, gasoline stations, and auto shops throughout Albany. Dry cleaners are a source of Perchloroethylene (Perc) a substance known to the State of California as a toxic air contaminant. The most prevalent TACs in Albany and Alameda County are benzene and 1,3-Butadiene from combustion of gasoline by vehicles. Other sources of toxic air contaminants include generators in various locations. A complete list TAC sources in the City of Albany is included in Appendix B and are graphically displayed in Figure IV.D-1.

On July 1, 2010, the ARB required the elimination of Perc for use at co-residential dry cleaning facilities. Therefore, use of Perc at facilities that share a wall or are in the same building as a residence is no longer permitted. Additionally, the ARB requires that all use of Perc in dry cleaning be phased out by 2023. The regulations established by the ARB related to dry cleaning will reduce impacts related to Perc exposure to sensitive receptors in Albany.

High-volume roadways are additional sources of toxic air contaminants. Traffic on San Pablo Avenue, I-80, and I-580 are some of the primary sources of toxic air contaminants from motor vehicles in Albany. Other mobile sources of TACs include train operations along the UPRR rail lines.

When considering the toxic risk from railroad lines, the primary risk from trains occurs when trains are left idling, for example at a rail yard. The ARB Land Use Handbook recommends a 1,000 foot setback from major railyards; however, neither the ARB nor BAAQMD have established specific setback recommendations from railroad lines for new receptors.

The Draft General Plan projects that up to 815 new residential units would be constructed; however the precise location of future residential units is unknown at this time. Proposed projects that would emit TACs would require review under the BAAQMD rules and regulations or review under CEQA, especially if near sensitive receptors.

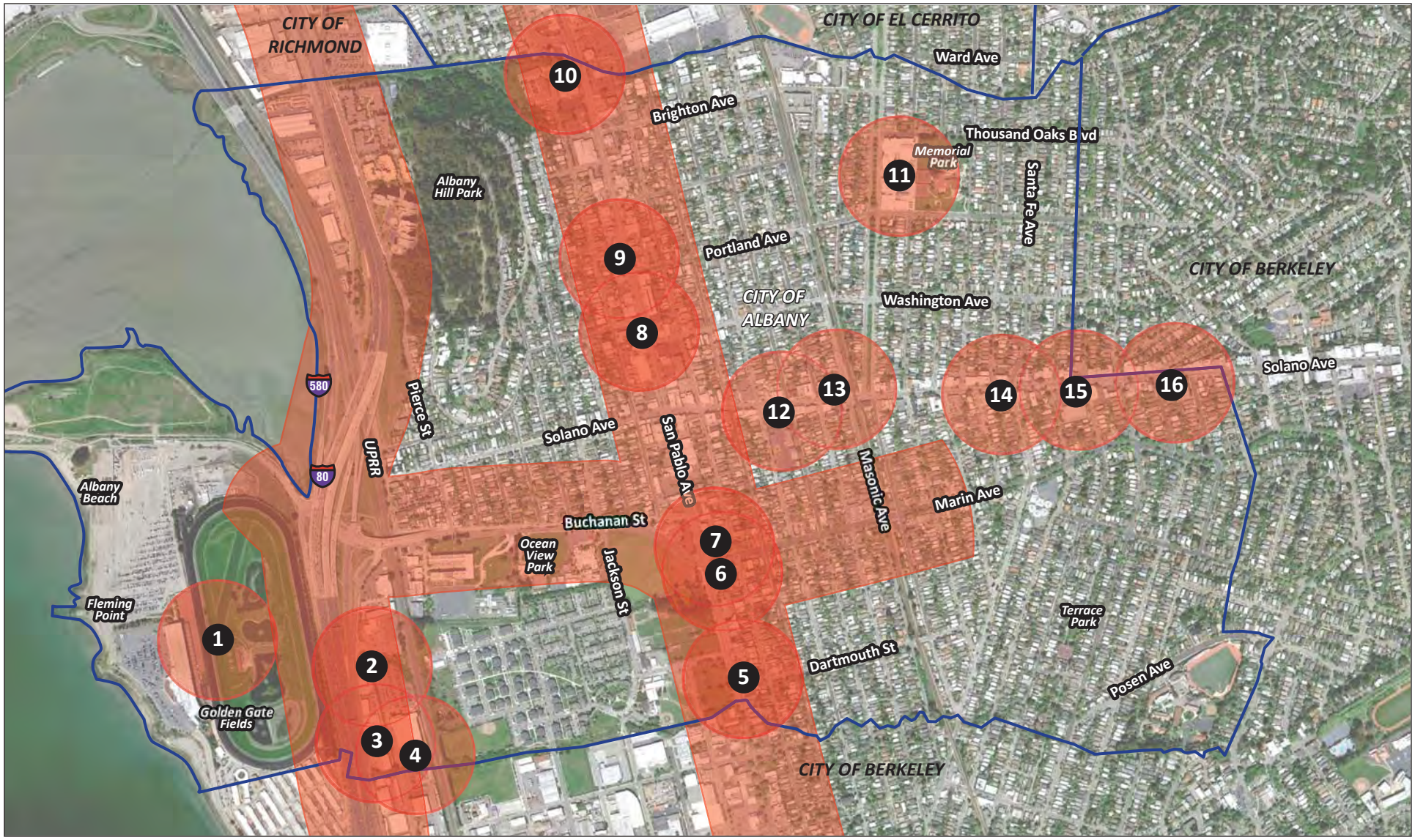
Implementation of the Draft General Plan could result in exposure of sensitive receptors to substantial pollutant concentrations. There are several sources of TACs within or near the Draft General Plan area as shown in Figure IV.D-1. For planning future land uses, the BAAQMD recommends the identification of overlay zones around sources of TACs and these zones should be reflected in General Plan land use maps, and implementing ordinances.

The Draft General Plan includes the following two actions that would consider health risks of future development:

- **Action CON-3.F: Air Quality and Public Health.** Consider air quality-related public health risks when locating development along the I-80/580 corridor, or when approving projects with the potential to create air quality impacts. Periodically review BAAQMD data on air quality conditions and odor complaints to identify and address potential hazards.
- **Action CON-3.H: Health Risk Assessments.** Require Health Risk Assessments (HRAs) for future development projects resulting in new residential units within 500 feet of the I-80 or I-580 freeways and in other locations where warranted based on BAAQMD criteria. HRAs shall be conducted in accordance with the latest State Office of Environmental Health Hazard Assessment and BAAQMD guidelines, and shall mitigate impacts to levels deemed acceptable by these agencies.

Inclusion of Action CON-3.F and Action CON-3.H that would implement the overlay zones required by the BAAQMD and require health risk assessments for projects when warranted, would result in a less-than-significant impact related to substantial pollutant concentrations.

(5) Frequently expose members of the public to objectionable odors. According to the BAAQMD, a general plan must identify the location of existing and planned odor sources in the plan area. The general plan must also include policies to reduce potential odor impacts in the plan area. During the period from January 1, 2011 through March 19, 2015, the BAAQMD has received a total of 50 odor complaints within Albany, five of which have been confirmed, while the other 45 are unconfirmed. A copy of the odor report obtained by LSA is included in Appendix B. Within Albany, auto body shops and the University Village are the primary sources of odors. One violation notice was issued by the BAAQMD during the four year period surveyed. The Draft General Plan includes Policy LU-3.10 and Action CON-3-B as follows, which would require review of odor complaints and address any potential hazards which would reduce impacts related to odors to a less-than-significant level.



LSA

Stationary Sources

1. Pacific Racing Association
2. Target Store
3. Pacific Racing Association
4. Verizon Wireless
5. Continental Auto Body
6. Arco Gas Station
7. Shell Gas Station
8. Albany Hill Mini Mart
9. Albany Body Shop
10. Norge Cleaners
11. Albany High School
12. One Hour Cleaners
13. One Hour Martinizing
14. Solano Cleanette
15. Clean Living Cleaners
16. Pacific Bell

City Limits

500-foot Radius (approximate)

N

0 600 1200

FEET

SOURCES: GOOGLE EARTH; BAAQMD, 2015.

I:\ABY1401 Albany GP\figures\DEIR\Fig_IVD1.ai (11/2/15)

FIGURE IV.D-1

City of Albany General Plan EIR

500-Foot Buffer from High Volume Roadways and Potential TAC Sources

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- **Policy LU-3.10: Use Permits.** Maintain use permit requirements for businesses with the potential to create off-site impacts. Establish conditions of approval as needed to reduce the potential for traffic, noise, parking, odor, and other external effects.
- **Action CON-3.B: Air Quality and Public Health.** Consider air-quality related public health risks when locating development along the I-80/580 corridor, or when approving projects with the potential to create air quality impacts. Periodically review BAAQMD data on air quality conditions and odor complaints to identify and address potential hazards.

c. Cumulative Impacts. As discussed above, air pollution is a regional issue affected by climate, land uses, and topography. Development projects from the past, present and future contribute to the region's adverse air quality impacts on a cumulative basis because air pollutants, once emitted at a particular location, move throughout the atmosphere and air basin. If a project's contribution at the individual level is considerable, then the project's cumulative impact on air quality would also be considered significant.

The analysis presented above discusses air quality conditions related to implementation of the Draft General Plan, as well as the General Plan's conformance with the BAAQMD's 2010 Bay Area Clean Air Plan. The BAAQMD 2010 Bay Area Clean Air Plan is the region's plan for attaining air quality standards and accounts for future cumulative regional growth. Therefore, consistency with the Clean Air Plan would indicate the project would not result in a cumulative air quality impact.

As demonstrated in the analysis above, the Draft General Plan includes policies and actions that reduce air emissions, and are in conformance with the region's Clean Air Plan. Implementation of the project would result in population growth greater than the growth in VMT. Therefore, under existing and cumulative conditions, implementation of the Draft General Plan would not be expected to contribute to a violation in air quality standards.

Implementation of Draft General Plan General Plan Policy CON-3.10 would reduce construction emissions associated with the Draft General Plan to a less-than-significant level under existing and cumulative conditions. Additionally, implementation of the Draft General Plan could expose sensitive receptors to substantial pollutant concentrations at the existing and cumulative level; however implementation of Actions CON-3.F and CON-3.H would require air quality analysis for projects near high-volume roadways and a construction health risk assessment for construction projects which would reduce this impact to a less-than-significant level at the project and cumulative level.

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E. GREENHOUSE GAS EMISSIONS

This section describes the general background information on global climate change, meteorology, and regulatory framework, and evaluates the impacts of the Draft General Plan on greenhouse gas emissions. It analyzes climate change impacts on a cumulative basis because no single project is large enough to result in a measureable increase in global concentrations of greenhouse gas emissions.

1. Setting

The following section provides background information on greenhouse gases and global climate change.

a. Greenhouse Gases. Global climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans in recent decades. Global surface temperatures have risen by 0.74°C (±0.18°C) over the last 100 years (1906–2005). The rate of warming over the last 50 years is almost double that over the last 100 years.[1] The prevailing scientific opinion on climate change is that most of the warming observed over the last 50 years is attributable to human activities. The increased amounts of carbon dioxide (CO_2) and other greenhouse gases are the primary causes of the human-induced component of warming. Greenhouse gases are released by the burning of fossil fuels, land clearing, agriculture, and other activities and lead to an increase in the greenhouse effect.[2]

Greenhouse gases are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change are the following:

- Carbon dioxide (CO_2)
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur Hexafluoride (SF_6)

Over the last 200 years, humans have caused substantial quantities of greenhouse gases to be released into the atmosphere. These extra emissions are increasing greenhouse gas concentrations in the atmosphere and enhancing the natural greenhouse effect, which is believed to be causing global warming. While some greenhouse gasses are naturally occurring – such as CO_2, methane, and N_2O – others, including HFCs, PFCs, and SF_6, are completely new to the atmosphere.

[1] Intergovernmental Panel on Climate Change, 2007. *Climate Change 2007: The Physical Science Basis.* Contribution of Working Group I to the Fourth Assessment Report of the IPCC.

[2] The temperature on Earth is regulated by a system commonly known as the "greenhouse effect." Just as the glass in a greenhouse lets heat from sunlight in and reduces the heat escaping, greenhouse gases like carbon dioxide, methane, and nitrous oxide in the atmosphere keep the Earth at a relatively even temperature. Without the greenhouse effect, the Earth would be a frozen globe; thus, although an excess of greenhouse gas results in global warming, the naturally occurring greenhouse effect is necessary to keep our planet at a comfortable temperature.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is excluded from the list of greenhouse gases above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

Greenhouse gases vary considerably in terms of global warming potential (GWP). GWP is a concept developed to compare the ability of each greenhouse gas to trap heat in the atmosphere relative to another gas. The GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere (atmospheric lifetime). The GWP of each gas is measured relative to CO_2, the most abundant greenhouse gas. The definition of the GWP for a particular greenhouse gas is the ratio of heat trapped by one unit mass of the greenhouse gas to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. Greenhouse gas emissions are typically measured in terms of pounds or tons of CO_2 equivalents (CO_2e). Table IV.E-1 shows the GWPs for each type of greenhouse gas. For example, SF_6, which is used in such activities as the transmission and distribution of electricity, is 22,800 times more potent at contributing to global warming than CO_2.

Table IV.E-1: Global Warming Potential of Greenhouse Gases

Gas	Atmospheric Lifetime (Years)	Global Warming Potential (100-year Time Horizon)
Carbon Dioxide	50-200	1
Methane	12	25
Nitrous Oxide	114	298
HFC-23	270	14,800
HFC-134a	14	1,430
HFC-152a	1.4	124
PFC: Tetrafluoromethane (CF_4)	50,000	7,390
PFC: Hexafluoromethane (C_2F_6)	10,000	12,200
Sulfur Hexafluoride (SF_6)	3,200	22,800

Source: Intergovernmental Panel on Climate Change, 2007. *Climate Change 2007: The Physical Science Basis.* Contribution of Working Group I to the Fourth Assessment Report of the IPCC.

The following discussion summarizes the characteristics of the six greenhouse gases.

(1) Carbon Dioxide (CO_2). In the atmosphere, carbon generally exists in its oxidized form as CO_2. Natural sources of CO_2 include the respiration (breathing) of humans, animals and plants, volcanic outgassing, decomposition of organic matter, and evaporation from the oceans. Human caused sources of CO_2 include the combustion of fossil fuels and wood, waste incineration, mineral production, and deforestation. Natural sources release approximately 150 billion tons of CO_2 each year, far outweighing the 7 billion tons of man-made emissions of CO_2 each year. Nevertheless, natural removal processes, such as photosynthesis by land and ocean-dwelling plant species, cannot keep pace with this extra input of man-made CO_2, and, consequently, the gas is building up in the atmosphere.

In 2002, CO_2 emissions from fossil-fuel combustion accounted for approximately 98 percent of man-made CO_2 emissions and approximately 84 percent of California's overall greenhouse gas emissions (CO_2e). The transportation sector accounted for California's largest portion of CO_2 emissions, with

gasoline consumption making up the greatest portion of these emissions. Electricity generation was California's second largest category of greenhouse gas emissions.

(2) Methane (CH_4). Methane is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources include wetlands, termites, and oceans. Decomposition occurring in landfills accounts for the majority of human-generated CH_4 emissions in California and in the United States as a whole. Agricultural processes such as intestinal fermentation, manure management, and rice cultivation are also significant sources of CH_4 in California. Methane accounted for approximately 7.2 percent of gross climate change emissions (CO_2e) in California from 2000-2014. [3]

Total annual emissions of methane in California are approximately 500 million tons, with manmade emissions accounting for the majority. As with CO_2, the major removal process of atmospheric methane—a chemical breakdown in the atmosphere—cannot keep pace with source emissions, and methane concentrations in the atmosphere are increasing.

(3) Nitrous Oxide (N_2O). Nitrous oxide is produced naturally by a wide variety of biological sources, particularly microbial action in soils and water. Tropical soils and oceans account for the majority of natural source emissions. Nitrous oxide is a product of the reaction that occurs between nitrogen and oxygen during fuel combustion. Both mobile and stationary combustion emit N_2O, and the quantity emitted varies according to the type of fuel, technology, and pollution control device used, as well as maintenance and operating practices. Agricultural soil management and fossil fuel combustion are the primary sources of human-generated N_2O emissions in California Nitrous oxide emissions accounted for approximately 2.9 percent of man-made greenhouse gas emissions (CO_2e) in California, 2000-2012. [4]

(4) Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), and Sulfur Hexafluoride (SF_6). Hydrofluorocarbons are primarily used as substitutes for ozone-depleting substances regulated under the Montreal Protocol.[5] Perfluorocarbons and SF_6 are emitted from various industrial processes, including aluminum smelting, semiconductor manufacturing, electric power transmission and distribution, and magnesium casting. There is no aluminum or magnesium production in California; however, the rapid growth in the semiconductor industry leads to greater use of PFCs. Hydrofluorocarbons, PFCs, and SF_6 accounted for about 4.1 percent of man-made greenhouse gas emissions (CO_2e) in California, 2000-2012. [6]

b. Impacts of Climate Change. The potential impacts of global climate change are described in the following section.

[3] Ibid.

[4] Ibid.

[5] The Montreal Protocol is an international treaty that was approved on January 1, 1989, and was designated to protect the ozone layer by phasing out the production of several groups of halogenated hydrocarbons believed to be responsible for ozone depletion.

[6] Ibid.

(1) Temperature Increase. Temperatures in California are expected to rise 3 to 10.5°F by the end of the century.[7] Because greenhouse gases persist for a long time in the atmosphere, accumulate over time, and are generally well-mixed, their impact on the atmosphere cannot be tied to a specific point of emission.

Climate change refers to any significant change in measures of climate (such as temperature, precipitation, or wind) lasting for an extended period (decades or longer). Climate change may result from the following:

- Natural factors, such as changes in the sun's intensity or slow changes in the Earth's orbit around the sun;
- Natural processes within the climate system (e.g., changes in ocean circulation and reduction in sunlight from the addition of greenhouse gases and other gases to the atmosphere from volcanic eruptions); or
- Human activities that change the atmosphere's composition (e.g., through burning fossil fuels) and the land surface (e.g., from deforestation, reforestation, urbanization, and desertification).

The primary effect of global climate change has been a rise in the average global temperature. The impact of human activities on global climate change is readily apparent in the observational record. For example, surface temperature data show that 11 of the 12 years from 1995 to 2006 rank among the 12 warmest since 1850, the beginning of the instrumental record for global surface temperature.[8] Climate change modeling shows that further warming could occur, which would induce additional changes in the global climate system during the current century. Changes to the global climate system, ecosystems, and the environment of California could include but are not limited to the following:

- The loss of sea ice and mountain snowpack resulting in higher sea levels and higher sea surface evaporation rates with a corresponding increase in tropospheric water vapor due to the atmosphere's ability to hold more water vapor at higher temperatures;
- Rise in global average sea level primarily due to thermal expansion and melting of glaciers and ice caps in the Greenland and Antarctic ice sheets;
- Changes in weather that include widespread changes in precipitation, ocean salinity, and wind patterns, and more energetic aspects of extreme weather, including droughts, heavy precipitation, heat waves, extreme cold, and the intensity of tropical cyclones;
- Decline of the Sierra snowpack, which accounts for a significant amount of the surface water storage in California, by 70 percent to as much as 90 percent over the next 100 years;
- Increase in the number of days conducive to ozone formation by 25 to 85 percent (depending on the future temperature scenario) in high ozone areas of Los Angeles and the San Joaquin Valley by the end of the 21st century; and

[7] California Climate Change Center, 2006. *Our Changing Climate. Assessing the Risks to California.* July.

[8] California, State of, 2008. California Energy Commission's Public Interest Energy Research Program. *The Future is Now: An Update on Climate Change Science, Impacts, and Response Options for California.* September.

- High potential for erosion of California's coastlines and seawater intrusion into the Delta and levee systems due to the rise in sea level.

(2) Precipitation and Water Supply. Global average precipitation is expected to increase overall during the 21st century as the result of climate change but will vary in different parts of the world. However, global climate models are generally not well-suited for predicting regional changes in precipitation because of the scale of regionally important factors (e.g., proximity of mountain ranges) that affect precipitation.[9]

Most of California's precipitation falls in the northern part of the State during the winter. A vast network of man-made reservoirs and aqueducts capture and transport water throughout the State from northern California rivers, as the greatest demand for water comes from users in the southern part of the State during the spring and summer.[10] The current distribution system relies on Sierra Nevada snowpack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snowpack, increasing the risk of summer water shortages.

Some models predict drier conditions and decreased water flows, while others predict wetter conditions in various parts of the world. If heat-trapping emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, thus reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent over the next 100 years.

The extent to which various meteorological conditions will impact groundwater supply is unknown. Warmer temperatures could increase the period when water is on the ground by reducing soil freeze. However, warmer temperatures could also lead to higher evaporation or shorter rainfall seasons, shortening the recharge season. Warmer winters could increase the amount of runoff available for groundwater recharge. However, the additional runoff would occur at a time when some basins, particularly in Northern California, are being recharged at their maximum capacity.

Where precipitation is projected to increase in California, the increases are focused in Northern California. However, various California climate models provide mixed results regarding changes in total annual precipitation in the State through the end of this century; therefore, no conclusion on an increase or decrease can be made. Considerable uncertainties about the precise effects of climate change on California hydrology and water resources will remain until there is more precise and consistent information about how precipitation patterns, timing, and intensity will change.[11] The East Bay Municipal Utility District (EBMUD) supplies water for the City of Albany. The principal raw water source for EBMUD is the Mokelumne River in the Sierra Nevada, with a diversion point at Pardee Reservoir in Calaveras and Amador Counties.[12] The EBMUD evaluated the potential effects

[9] Intergovernmental Panel on Climate Change, 2007, op. cit.

[10] California Climate Change Center, 2006, op. cit.

[11] California, State of, 2006. Department of Water Resources. *Progress on Incorporating Climate Change into Management of California's Water Resources*. July.

[12] East Bay Municipal Utility District. 2012. *Water Supply Management Program 2040 Plan.* Website: ebmud.com/water-and-wastewater/water-supply/water-supply-management-program-2040 (accessed June 24, 2014). April.

of climate change of future water supplies for the East Bay and found that the District will likely "experience changes in its Mokelumne River watershed water supply in the future; though, due to relatively coarse information currently available about the degree of future climate changes, these impacts cannot be known exactly."[13] As such, the District identified potential strategies to meet future challenges of reduced supply due to the effects of climate change:[14]

- Employ potable demand management measures;
- Increase system storage;
- Optimize use and storage of excess water in wet years;
- Reoperation of Mokelumne Reservoir system;
- Intra- and interregional cooperation and agreements;
- Development of drought resistant supplies (not dependent on hydrologic conditions); and
- Diversification of water supply source locations.

(3) Sea Level Rise. Rising sea level is one of the major areas of concern related to global climate change. Two of the primary causes for a sea level rise are the thermal expansion of ocean waters (water expanding as it heats up) and the addition of water to ocean basins by the melting of land-based ice. From 1961 to 2003, global average sea level rose at an average rate of 0.07 inches per year, and at an accelerated average rate of about 0.12 inches per year during the last decade of this period (1993 to 2003).[15] Over the past 100 years, sea levels along California's coasts and estuaries have risen about seven inches.[16]

Sea levels could rise an additional 22 to 35 inches by the end of the century as global climate change continues.[17] Although these projections are on a global scale, the rate of sea level rise along California's coast is relatively consistent with the worldwide average rate observed over the past century. Therefore, it is reasonable to assume that changes in worldwide sea level rise will also be experienced along California's coast.[18]

Sea level rise of this magnitude would increasingly threaten California's coastal regions with more intense coastal storms, accelerated coastal erosion, threats to vital levees, and disruption of inland water systems, wetlands, and natural habitats. Rising sea levels and more intense storm surges could increase the risk for coastal flooding. The San Francisco Bay Conservation and Development

[13] Ibid. p. 4-20.

[14] Ibid.

[15] California, State of, 2008. California Energy Commission's Public Interest Energy Research Program. *The Future is Now: An Update on Climate Change Science, Impacts, and Response Options for California.* September.

[16] Ibid.

[17] California Climate Change Center, 2006, op. cit.

[18] California, State of. Department of Water Resources, 2006. *Progress on Incorporating Climate Change into Management of California's Water Resources*. July.

Commission (BCDC) employed geographic information system software to identify the shoreline areas likely to be most impacted by a one meter rise in sea level.[19]

In the San Francisco Bay Area, the background rate of sea level rise has been estimated to be approximately 0.079 inch per year over the past 100 years.[20] An increased rate of sea level rise is anticipated in the near future due to projected global climate change. Although the rate of increase has not been precisely modeled and cannot be known with certainty, several projections predict a rise in sea level of at least 50 centimeters (approximately 20 inches) and as much as 200 centimeters (approximately 80 inches) by the year 2100. Sea level rise is also discussed in Section IV.I, Hazards and Hazardous Materials.

(4) Water Quality. Water quality depends on a wide range of variables such as water temperature, flow, runoff rates and timing, waste discharge loads, and the ability of watersheds to assimilate wastes and pollutants. Climate change could alter water quality in a variety of ways, including higher winter flows that reduce pollutant concentrations (through dilution) or increase erosion of land surfaces and stream channels, leading to higher sediment, chemical, and nutrient loads in rivers. Water temperature increases and decreased water flows can result in increasing concentrations of pollutants and salinity. Increases in water temperature alone can likely to lead to adverse changes in water quality and aquatic habitat value, even in the absence of changes in precipitation.

Land and resource use changes can have impacts on water quality comparable to or even greater than those from global climate change. The net effect on water quality for rivers, lakes, and groundwater in the future is dependent not just on climate conditions, but also on a wide range of other human actions and management decisions.

(5) Public Health. Global climate change is anticipated to result in not only changes to average temperature but also to more extreme heat events.[21] These extreme heat events increase the risk of death from dehydration, heart attack, stroke, and respiratory distress, especially with people who are ill, children, the elderly, and the poor, who may lack access to air conditioning and medical assistance. According to the California Climate Change Center, more research is needed to understand the effects of higher temperatures and how adapting to these temperatures can minimize health effects.

c. Regulatory Framework. The federal and State regulatory framework related to greenhouse gas emissions is described below.

[19] California, State of, 2009. San Francisco Bay Conservation and Development Commission. *Climate Change*. Website: www.bcdc.ca.gov/planning/climate_change/climate_change.shtml.

[20] National Oceanic & Atmospheric Administration, 2007. *Mean Sea Level Trend (station) 9414290 San Francisco, California.* Website: tidesandcurrents.noaa.gov/sltrends_station.shtml?stnid=9414290.

[21] California Climate Change Center, 2006, op. cit.

(1) Federal Regulations. The United States has historically had a voluntary approach to reducing greenhouse gas emissions. However, on April 2, 2007, the United States Supreme Court ruled [549 U.S. 497 (2007)] that the U.S. Environmental Protection Agency (USEPA) has the authority to regulate CO_2 emissions under the federal Clean Air Act (CAA). While there currently are no adopted federal regulations for the control or reduction of greenhouse gas emissions, the USEPA commenced several actions in 2009 to implement a regulatory approach to global climate change, including the ones described below.

On September 22, 2009, the USEPA issued a final rule for mandatory reporting of greenhouse gases from large greenhouse gas emission sources in the United States. In general, this national reporting requirement will provide the USEPA with accurate and timely greenhouse gas emissions data from facilities that emit 25,000 metric tons or more of CO_2 per year. This publicly-available data will allow the reporters to track their own emissions, compare them to similar facilities, and aid in identifying cost-effective opportunities to reduce emissions in the future. Reporting is at the facility level, except that certain suppliers of fossil fuels and industrial greenhouse gases, along with vehicle and engine manufacturers, will report at the corporate level. An estimated 85 percent of the total U.S. greenhouse gas emissions, from approximately 10,000 facilities, are covered by this rule.

On December 7, 2009, the USEPA Administrator signed a final action under the CAA, finding that six greenhouse gases (CO_2, CH_4, N_2O, HFCs, PFCs, SF_6) constitute a threat to public health and welfare, and that the combined emissions from motor vehicles contribute to global climate change. This USEPA action does not impose any requirements on industry or other entities. However, the findings are a prerequisite to finalizing the greenhouse gas emission standards for light-duty vehicles discussed further below. The USEPA received ten petitions challenging this determination. On July 29, 2010, USEPA denied these petitions.

On April 1, 2010, the USEPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced a final joint rule to establish a national program consisting of new standards for model year 2012 through 2016 light-duty vehicles that will reduce greenhouse gas emissions and improve fuel economy. USEPA is finalizing the first-ever national greenhouse gas emissions standards under the CAA, and NHTSA is finalizing Corporate Average Fuel Economy standards under the Energy Policy and Conservation Act. The USEPA greenhouse gas standards require light-duty vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile in model year 2016, equivalent to 35.5 miles per gallon.

In December 2010, the USEPA issued its plan for establishing greenhouse gas pollution standards under the CAA in 2011. The agency looked at a number of sectors and is moving forward on greenhouse gas standards for fossil fuel power plants and petroleum refineries – two of the largest industrial sources, representing nearly 40 percent of the greenhouse gas pollution in the United States.

On August 9, 2011, USEPA and the NHTSA announced the first-ever standards to reduce greenhouse gas emissions and improve the fuel efficiency of heavy-duty trucks and buses. The final combined standards of the Heavy-Duty National Program will reduce CO_2 emissions by about 270 million metric tons (MMT) and save about 530 million barrels of oil over the life of vehicles built for the 2014 to 2018 model years. The heavy duty sector addressed in the USEPA and NHTSA rules (including the largest pickup trucks and vans, semi-trucks, and all types and sizes of work trucks and buses in between) accounts for nearly 6 percent of all U.S. greenhouse gas emissions and 20 percent

of transportation emissions. In addition, air quality will continue to improve as less fuel use leads to reduced ozone and particulate matter.

On April 18, 2012, the USEPA finalized cost effective regulations to reduce harmful air pollution from the oil and natural gas industry, while allowing continued, responsible growth in U.S. oil and natural gas production. The final rules are expected to yield a nearly 95 percent reduction in volatile organic compounds (VOC) emissions from more than 11,000 new hydraulically fractured gas wells each year. The rules will also reduce air toxics and emissions of methane, a potent greenhouse gas.

On July 1, 2014 the USEPA proposed updates to its air standards for new municipal solid waste landfills. These updates would require certain landfills to capture additional landfill gas, which would reduce emissions of methane and further reduce pollution that harms public health.[22]

On August 3, 2015 the USEPA issued the Clean Power Plan, which put the nation on track to cut pollution from the power sector by 32 percent below 2005 levels, while also cutting smog- and soot-forming emissions that threaten public health by 20 percent. These emission guidelines are for states to follow in developing plans to reduce greenhouse gas emissions from existing fossil fuel-fired electric generating units.

(2) State Regulations. In 1967, the California Legislature passed the Mulford–Carrell Act, which combined two Department of Health bureaus, the Bureau of Air Sanitation and the Motor Vehicle Pollution Control Board, to establish the California Air Resources Board (ARB). Since its formation, the ARB has worked with the public, the business sector, and local governments to find solutions to California's air pollution problems.

The ARB is typically the lead agency for implementing climate change regulations in the State. There are many regulations and statutes in California that address, both directly and indirectly, greenhouse gas emissions, such as renewable portfolio standards (SB 1078, SB 107, SB 2(1X)) and energy efficiency standards (Title 24, Cal. Code Regs.). Key State regulatory activities specifically addressing climate change and greenhouse gas emissions are discussed below.

Assembly Bill 1493 (2002). In a response to the transportation sector's significant contribution to California's CO_2 emissions, AB 1493 (Pavley) was enacted on July 22, 2002. AB 1493 requires the ARB to set greenhouse gas emission standards for passenger vehicles and light duty trucks (and other vehicles whose primary use is noncommercial personal transportation in the State) manufactured in 2009 and all subsequent model years. These standards (starting in model years 2009 to 2016) were approved by the ARB in 2004, but the needed waiver of Clean Air Act Preemption was not granted by the USEPA until June 30, 2009. The ARB responded by amending its original regulation, now referred to as Low Emission Vehicle III, to take effect for model years starting in 2017 to 2025.

[22] U.S. Environmental Protection Agency, 2015. *Regulatory Initiatives.* Website: www.epa.gov/climatechange/EPAactivities/regulatory-initiatives.html (accessed August 10, 2015) August 3.

Executive Order S-3-05 (2005). Governor Arnold Schwarzenegger signed Executive Order S-3-05 on June 1, 2005, which proclaimed that California is vulnerable to the impacts of climate change. To combat those concerns, the executive order established California's greenhouse gas emissions reduction targets, which 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 (CalEPA) is required to coordinate efforts of various State agencies in order to collectively and efficiently reduce greenhouse gases. A biannual progress report must be submitted to the Governor and State Legislature disclosing the progress made toward greenhouse emission reduction targets. In addition, another biannual report must be submitted illustrating the impacts of global warming on California's water supply, public health, agriculture, the coastline, and forestry, and report possible mitigation and adaptation plans to address these impacts.

Assembly Bill 32 (2006), California Global Warming Solutions Act. California's major initiative for reducing greenhouse gas emissions is AB 32, passed by the State legislature on August 31, 2006. This effort aims at reducing greenhouse gas emissions to 1990 levels by 2020. The ARB has established the level of greenhouse gas emissions in 1990 at 427 MMT CO_2e. The emissions target of 427 MMT requires the reduction of 169 MMT from the State's projected business-as-usual 2020 emissions of 596 MMT. AB 32 requires the ARB to prepare a Scoping Plan that outlines the main State strategies for meeting the 2020 deadline and to reduce greenhouse gases that contribute to global climate change.

The Scoping Plan was approved by the ARB on December 11, 2008, and contains the main strategies California will implement to achieve the reduction of approximately 30 percent, from the State's projected 2020 emission level (this is a reduction of 42 MMT CO_2e, or almost 10 percent from 2002-2004 average emissions). The Scoping Plan also includes ARB-recommended greenhouse gas reductions for each emissions sector of the State's greenhouse gas inventory. The Scoping Plan calls for the largest reductions in greenhouse gas emissions to be achieved by implementing the following measures and standards:

- Improved emissions standards for light-duty vehicles (estimated reductions of 31.7 MMT CO_2e);
- The Low-Carbon Fuel Standard (15.0 MMT CO_2e);
- Energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMT CO_2e); and
- A renewable portfolio standard for electricity production (21.3 MMT CO_2e).

The Scoping Plan identifies 18 emission reduction measures that address cap-and-trade programs, vehicle gas standards, energy efficiency, low carbon fuel standards, renewable energy, regional transportation-related greenhouse gas targets, vehicle efficiency measures, goods movement, solar roof programs, industrial emissions, high speed rail, green building strategies, recycling, sustainable forests, water, and air. The measures would result in a total reduction of 174 MMT CO_2e by 2020.

On August 24, 2011, the ARB unanimously approved both ARB's new supplemental assessment and reapproved its Scoping Plan, which provides the overall roadmap and rule measures to carry out AB 32. The ARB also approved a more robust CEQA equivalent document supporting the supplemental analysis of the cap-and-trade program. The cap-and-trade took effect on January 1, 2012, with an enforceable compliance obligation that began January 1, 2013.

ARB has not yet determined what amount of greenhouse gas reductions it recommends from local government operations and local land use decisions; however, the Scoping Plan states that land use planning and urban growth decisions will play an important role in the State's greenhouse gas reductions because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions (meanwhile, ARB is also developing an additional protocol for community emissions). ARB further acknowledges that decisions on how land is used will have large impacts on the greenhouse gas emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emission sectors. The Scoping Plan states that the ultimate greenhouse gas reduction assignment to local government operations is to be determined. With regard to land use planning, the Scoping Plan expects an approximately 5.0 MMT CO_2e reduction due to implementation of SB 375 (described later in this chapter).

The ARB approved the First Update to the Climate Change Scoping Plan on May 22, 2014, which is currently underway. The First Update identifies opportunities to leverage existing and new funds to further drive greenhouse gas emission reductions through strategic planning and targeted low carbon investments. The First Update defines ARB's climate change priorities until 2020, and also sets the groundwork to reach long-term goals set forth in Executive Orders S-3-05 and B-16-2012. The Update highlights California's progress toward meeting the "near-term" 2020 greenhouse gas emission reduction goals and defined in the initial Scoping Plan. It also evaluates how to align the State's "longer-term" GHG reduction strategies with other State policy priorities for water, waste, natural resources, clean energy, transportation, and land use.

Senate Bill 97 (2007). SB 97, signed by the Governor in August 2007 (Chapter 185, Statutes of 2007; Public Resources Code, Sections 21083.05 and 21097), acknowledges climate change is a prominent environmental issue that requires analysis under CEQA. This bill directed the Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Resources Agency guidelines for mitigating greenhouse gas emissions or the effects of greenhouse gas emissions, as required by CEQA.

The California Natural Resources Agency adopted the amendments to the CEQA Guidelines in January 2010, which went into effect in March 2010. The amendments do not identify a threshold of significance for greenhouse gas emissions, nor do they prescribe assessment methodologies or specific mitigation measures. The amendments encourage lead agencies to consider many factors in performing a CEQA analysis, but preserve the discretion granted by CEQA to lead agencies in making their own determinations based on substantial evidence. The amendments also encourage public agencies to make use of programmatic mitigation plans and programs when they perform individual project analyses.

Senate Bill 375 (2008). Signed into law on October 1, 2008, SB 375 supplements greenhouse gas reductions from new vehicle technology and fuel standards with reductions from more efficient land use patterns and improved transportation. Under the law, the ARB approved greenhouse gas reduction targets in February 2011 for California's 18 federally designated regional planning bodies, known as Metropolitan Planning Organizations (MPOs). The ARB may update the targets every 4 years and must update them every 8 years. MPOs in turn must demonstrate how their plans, policies and transportation investments meet the targets set by the ARB through Sustainable Community Strategies (SCS). The SCS are included with the Regional Transportation Plan (RTP), a report required by State law. However, if an MPO finds that their SCS will not meet the greenhouse gas reduction target, they may prepare an Alternative Planning Strategy (APS). The APS identifies the impediments to achieving the targets.

(3) Bay Area Air Quality Management District. The Bay Area Air Quality Management District (BAAQMD) is the regional government agency that regulates sources of air pollution within the nine San Francisco Bay Area counties. The BAAQMD regulates greenhouse gas emissions through the following plans, programs, and guidelines.

Clean Air Plans. BAAQMD and other air districts prepare clean air plans in accordance with the State and federal Clean Air Acts. The Bay Area 2010 Clean Air Plan is a comprehensive plan to improve Bay Area air quality and protect public health through implementation of a control strategy designed to reduce emissions and ambient concentrations of harmful pollutants. The 2010 Clean Air Plan also includes measures designed to reduce greenhouse gas emissions. The BAAQMD is in the process of updating this plan and will release the 2015 Clean Air Plan later this year.

BAAQMD Climate Protection Program. The BAAQMD established a climate protection program to reduce pollutants that contribute to global climate change and affect air quality in the San Francisco Bay Area Air Basin. The climate protection program includes measures that promote energy efficiency, reduce vehicle miles traveled, and develop alternative sources of energy, all of which assist in reducing emissions of greenhouse gas and in reducing air pollutants that affect the health of residents. BAAQMD also seeks to support current climate protection programs in the region and to stimulate additional efforts through public education and outreach, technical assistance to local governments and other interested parties, and promotion of collaborative efforts among stakeholders.

BAAQMD CEQA Air Quality Guidelines. The BAAQMD CEQA Air Quality Guidelines were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with CEQA requirements, and include recommended thresholds of significance, mitigation measures, and background air quality information. The guidelines also include recommended assessment methodologies for air toxics, odors, and greenhouse gas emissions. In June 2010, the BAAQMD's Board of Directors adopted CEQA thresholds of significance and an update of the CEQA Guidelines. In May 2011, the updated BAAQMD CEQA Air Quality Guidelines were amended to include a risk and hazards threshold for new receptors and modified procedures for assessing impacts related to risk and hazard impacts.

On March 5, 2012, the Alameda County Superior Court issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted the thresholds of significance in the BAAQMD CEQA Air Quality Guidelines. The court did not determine whether the thresholds of significance

were valid on their merits, but found that the adoption of the thresholds was a project under CEQA. The court issued a writ of mandate ordering the BAAQMD to set aside the thresholds and cease dissemination of them until the BAAQMD complied with CEQA. In May of 2012, the BAAQMD filed an appeal of the court's decision. The Court of Appeal of the State of California, First Appellate District, reversed the trial court's decision. The court of Appeal's decision was appealed to the California Supreme Court, which granted limited review, and the matter is currently pending there.

In view of the court's order, the BAAQMD is no longer recommending that the thresholds of significance from the 2011 CEQA Air Quality Guidelines be used as a generally applicable measure of a project's significant air quality impacts. Following the court order, the BAAQMD released revised CEQA Air Quality Guidelines in May of 2012 that include guidance on calculating air pollution emissions, obtaining information regarding the health impacts of air pollutants, and identifying potential mitigation measures, and which set aside the significance thresholds. The BAAQMD recognizes that lead agencies may rely on the previously recommended Thresholds of Significance contained in its CEQA Air Quality Guidelines adopted in 1999. However, the 1999 CEQA Guidelines do not contain a threshold for greenhouse gas emissions.

Under the 2011 CEQA Air Quality Guidelines, a local government may prepare a qualified greenhouse gas Reduction Strategy that is consistent with AB 32 goals. If a project is consistent with an adopted qualified Greenhouse Gas Reduction Strategy and General Plan that addresses the project's greenhouse gas emissions, it can be presumed that the project will not have significant greenhouse gas emissions under CEQA. The 2011 Guidelines also included a quantitative threshold for project level analyses based on estimated greenhouse emissions as well as per capita metrics.

(4) Metropolitan Transportation Commission/Association of Bay Area Governments Sustainable Communities Strategy. The Metropolitan Transportation Commission (MTC) is the federally recognized MPO for the nine county Bay Area, which includes Alameda County and the City of Albany. In March 2011, Plan Bay Area released its Initial Vision Scenario, which presents a first draft of targeted growth areas and regional projections. Based on the Initial Vision Scenario, Plan Bay Area adopted a preferred SCS scenario. On March 22, 2013 the Draft Plan Bay Area was released and the Plan Bay Area EIR was released on April 2, 2013 for public review and comment. These documents were certified and adopted in July 2013.

(5) City of Albany General Plan. While the City of Albany 1990–2010 General Plan does not include policies that specifically address global climate change, the following goals and policies would be expected to reduce greenhouse gas emissions:

- **Goal CIRC 4:** Support public transit, and other means to reduce reliance on the automobile as the primary means of transportation.
- **Policy CIRC 4.1:** Monitor existing and proposed transit service for responsiveness to residents' and employers' needs.
- **Policy CIRC 4.3:** Continue to work with the City's Trip Reduction Ordinance and continue to develop programs and incentives for the use of carpools, staggered work hours, bicycling, walking and the increased use of public transit for residents and employees in the community.
- **Policy CIRC 4.5:** Increase pedestrian travel throughout the City by connecting major pathway systems such as the BART linear park to other City, regional, and State Parks, and other community facilities.

- **Policy CIRC 4.7:** Assure that sidewalks, pathways, and trails used by pedestrians are safe and provide unhindered access for all.
- **Goal CIRC 6:** Improve and enhance the City's bicycle route and path system.
- **Policy CIRC 6.1:** Develop a plan for bike routes for Albany linking existing bike paths and routes in Berkeley and El Cerrito. Implement this plan as part of the City's overall road maintenance and traffic sign program within the annual capital projects budget, as well as through specific transportation funding.
- **Policy CIRC 6.2:** Work to obtain funding sources to develop the Bay Trail in Albany and along the entire East Bay Shoreline corridor as an alternative, parallel route to 1-80.
- **Program HE 2.1.3:** Enact a density bonus ordinance consistent with State law requirements.
- **Goal CROS 2:** Increase street tree planting throughout Albany to beautify the City and to help purify the air.
- **Policy CROS 2.1:** Develop and implement a comprehensive street tree planting program for City residential and commercial streets, including establishing priorities, setting time schedules, and developing a comprehensive maintenance program.
- **Goal CROS 4:** Strive to maintain and improve the quality of Albany's natural environment and cultural resources, and natural resources in general.
- **Policy CROS 4.1:** Coordinate with CalTrans and MTC to monitor air quality impacts of improvements to Interstates 80 and 580 to assure that Albany's air quality will not be allowed to deteriorate any further.
- **Policy CROS 4.3:** Promote preservation of trees and other vegetation by requiring an inventory of significant site vegetation prior to development application review.
- **Policy CROS 4.4:** Continue to cooperate in local, sub-regional and regional efforts to implement the Clean Air Plan and meet State Air Quality Standards.
- **Policy CROS 4.5:** Require tree preservation measures during site design and construction.
- **Policy CROS 4.6:** Develop a comprehensive water conservation policy for City facilities and new development, including requirements for drought-resistant landscaping, water-conserving fixtures, and continue to support EBMUD public information campaigns to reduce water consumption.
- **Policy CROS 6.3:** Develop a plan for bikeways for Albany, linking existing bike paths in Berkeley and El Cerrito. Implement this plan as part of the City's overall road maintenance and traffic signs program within the annual capital projects budget, as well as through specific transportation funding (refer to Circulation Element.)
- **Policy CROS 6.4:** Increase non-automobile public access routes throughout the City by connecting major pathway systems such as the BART linear park to other City, regional and State Parks.

The policies listed above will be superseded by policies in the updated Albany General Plan. The new Plan includes several policies and action programs that are specifically aimed at reducing greenhouse gas emissions. Some of the policies and programs originated in the Albany Climate Action Plan, described below.

(6) City of Albany Climate Action Plan. The Albany City Council adopted the City of Albany Climate Action Plan[23] (CAP) in April 2010. The CAP outlines a course of action for the City and community to reduce greenhouse gasses and, thus, the effects of global climate change. The CAP was designed to support three primary functions:[24]

- Provide clear guidance to City staff regarding when and how to implement key provisions of the plan;
- Inspire residents and businesses to participate in community efforts to reduce greenhouse gasses; and
- Demonstrate Albany's commitment to comply with State greenhouse gas reduction efforts.

The CAP is broad in scope and is intended to reduce greenhouse gas emissions generated in municipal and community-wide activities including building and community energy use, transportation and land use, waste reduction and diversion, water conservation, and green infrastructure enhancements. The strategies, objectives, measures, and actions are meant to direct the City's reduction efforts through 2020.

The strategies identified in the CAP provide approximately 15,660 MMT CO_2e of potential reductions, or 19 percent below 2004 baseline levels, by 2020. This level of reduction goes beyond the recommendation of the State's Climate Action Scoping Plan, which calls on local governments to reduce emissions to 15 percent below current levels by 2020. The CAP includes six major strategies intended to reduce greenhouse gas emissions:

- **Transportation and Land Use.** Create an interconnected transportation system and land-use pattern that shifts travel from personal automobiles to walking, biking, and public transit.
- **Buildings and Energy.** Minimize energy consumption; create high performance buildings, and transition to clean, renewable energy sources.
- **Waste.** Become a zero-waste community.
- **Green Infrastructure.** Enhance natural assets that improve community quality of life.
- **Water Conservation.** Celebrate water as an essential community resource.
- **Food and Agriculture.** Create a sustainable and climate-friendly food system.

In July 2010, the City of Albany approved the CAP Implementation Plan[25] to identify opportunities for short-term and more extended-term implementation of CAP measures given current funding and

[23] Albany, City of, 2010. *City of Albany Climate Action Plan.* Website: www.albanyca.org/index.aspx?page=256 (accessed June 24, 2014). April.

[24] Ibid. p. I-2.

[25] Albany, City of, 2010. *City of Albany Climate Action Plan—Implementation Plan.* Website: www.albanyca.org/index.aspx?page=256 (accessed June 24, 2014). July.

staffing levels. The Implementation Plan also identifies opportunities for additional funding and staffing that may be required to increase the scale at which the CAP can be implemented.[26]

As measures within the CAP are under development, the City of Albany continues to identify and quantify emissions reduction benefits of climate and sustainability strategies that could be implemented in the future, including energy efficiency, renewable energy, vehicle fuel efficiency, alternative transportation, vehicle trip reduction, land use and transit planning, waste reduction and other strategies.[27] The City is also considering strategies and reduction targets beyond 2020, which is the CAP horizon year.

d. Emissions Inventories. An emissions inventory identifies and quantifies the primary human-generated sources and sinks of greenhouse gases. This section summarizes the latest information on global, United States, California, and City of Albany greenhouse gas emission inventories.

(1) Global Emissions. Worldwide net emissions (including the effects of land use and forestry) of greenhouse gases in 2010 were 46 billion metric tons[28] of CO_2e per year,[29] representing a 35 percent increase from 1990.

(2) United States Emissions. In 2012, the United States emitted about 6.5 billion metric tons of CO_2e or about 21 metric tons per year per person. The total 2012 CO_2e emissions represent a 5 percent increase since 1990 but a 10 percent decrease since 2005. Of the six major sectors nationwide – residential, commercial, agricultural, industry, transportation, and electricity generation – electricity generation accounts for the highest amount of greenhouse gas emissions since 1990 (approximately 32 percent), with transportation being a close second at 27 percent since 1990; these emissions are generated entirely from direct fossil fuel combustion.[30]

(3) State of California Emissions. The ARB is responsible for developing the California Greenhouse Gas Emission Inventory. This inventory estimates the amount of greenhouse gases emitted to and removed from the atmosphere by human activities within the State and supports the AB 32 Climate Change Program.

According to ARB emission inventory estimates, California emitted approximately 460 million metric tons of CO_2e emissions in 2012.[31] California ranks second in the nation in terms of total greenhouse gas emissions (Texas is highest), with a per-capita greenhouse gas emission rate of

[26] Ibid.

[27] Albany, City of, 2013. *City of Albany 2010 Community-Wide Greenhouse Gas Emissions Inventory*. January.

[28] A metric ton is equivalent to approximately 1.1 tons.

[29] U.S. Environmental Protection Agency, 2014. *Climate Change Indicators in the United States: Global Greenhouse Gas Emissions.* Website: www.epa.gov/climatechange/science/indicators/ghg/global-ghg-emissions.html (accessed June 23, 2014).

[30] Ibid.

[31] California Air Resources Board, 2014. Greenhouse Gas Inventory Data for 2000–2012. Website: www.arb.ca.gov/cc/inventory/data/data.htm (accessed June 23, 2014).

approximately 12 metric tons per person (43 percent less than the national average in 2012); only 5 other states (all in the northeast) have lower per-capita greenhouse gas emissions.[32]

California greenhouse gas emissions from the transportation sector—still the State's largest single source of greenhouse gases, contributing 36 percent of total emissions—declined modestly compared to 2011; however, over the past 7 years, transportation-related greenhouse gas emissions have dropped 12 percent.[33] The ARB attributes much of this decrease to the growing statewide fleet of fuel-efficient vehicles—the hybrid vehicle market share increased in 2012 to 7.4 percent from the 2011 level of 5.4 percent.[34]

ARB staff has projected 2020 unregulated greenhouse gas emissions, which represent the emissions that would be expected to occur in the absence of any greenhouse gas reduction actions, would be 507 MMT of CO_2e.[35] The total emissions are lower than originally forecast (596 MMT) in the AB32 Scoping Plan to account for new estimates for future fuel and energy demand and accounting for the recent economic recession.

Greenhouse gas emissions in 2020 from the transportation sector as a whole are expected to increase to 184 MMT of CO_2e (2012 inventory is 167 MMT of CO_2e). The industrial sector consists of large stationary sources of greenhouse gas emissions and includes oil and gas production and refining facilities, cement plants, and large manufacturing facilities. Emissions for this sector are forecast to grow to 91.5 MMT of CO_2e by 2020, an increase of approximately 3 percent from the 2012 emissions inventory level. The commercial and residential sectors are expected to contribute 45.3 MMT of CO_2e, or about 9 percent of the total Statewide greenhouse gas emissions in 2020.[36]

(4) San Francisco Bay Area Emissions. The BAAQMD established a climate protection program in 2005 to acknowledge the link between climate change and air quality. The BAAQMD regularly prepares inventories of criteria and toxic air pollutants to support planning, regulatory and other programs. The most recent emissions inventory estimates greenhouse gas emissions produced by the San Francisco Bay Area in 2011.[37] The inventory, which was published January 2015, updates the Air District's previous greenhouse gas emission inventory for base year 2007.

In 2011, 86.6 million metric tons of CO_2e of greenhouse gases were emitted by the San Francisco Bay Area. Fossil fuel consumption in the transportation sector was the single largest source of the San Francisco Bay Area's greenhouse gas emissions in 2011. The transportation sector (including on-road motor vehicles, locomotives, ships and boats, and aircraft) contributed 39.7 percent of greenhouse gas

[32] California Air Resources Board, 2014. *California Greenhouse Gas Emissions for 2000 to 2012: Trends of Emissions and Other Indicators*. Website: www.arb.ca.gov/cc/inventory/data/data.htm (accessed June 23, 2014). May 13.

[33] Ibid.

[34] Ibid.

[35] California Air Resources Board, 2013. Greenhouse Gas Inventory: 2020 Emissions Forecast. Website: www.arb.ca.gov/cc/inventory/data/forecast.htm (accessed June 23, 2014).

[36] Ibid.

[37] Bay Area Air Quality Management District, 2015. *Source Inventory of Bay Area Greenhouse Gas Emissions.* January.

emissions and the industrial and commercial sectors (excluding electricity and agriculture) contributed 35.7 percent of greenhouse gas emissions in the Bay Area. Energy production activities such as electricity generation and co-generation were the third largest contributor with approximately 14.0 percent of the total greenhouse gas emissions. Off-road equipment such as construction, industrial, commercial, and lawn and garden equipment contributed 1.5 percent of greenhouse gas emissions.

(5) City of Albany Emissions. In 2007, the City of Albany adopted an aggressive greenhouse gas reduction target in response to AB 32 goals, requiring the community's greenhouse gas emissions to be reduced by 25 percent below 2004 baseline emission levels by 2020. The City, in coordination with ICLEI—Local Governments for Sustainability (formerly the International Council for Local Environmental Initiatives), developed a baseline greenhouse gas emissions inventory for both community-wide and municipal sources for the 2004 operational year. The baseline inventory was compiled using ICLEI's Clean Air Climate Protection (CACP) software. The community-wide sources within the CACP software are intended to represent greenhouse gas emissions from the following sectors: residential, commercial, and industrial energy use; transportation; and solid waste.

While the baseline inventory is meant to capture emissions that physically occur in Albany as a direct result of activities within the community, it also includes some of the emissions in other jurisdictions caused as an indirect result of activities within Albany for which adequate data exists (e.g., electricity use, wastewater). Other indirect emissions, such as transportation beyond City limits, air travel by Albany residents, and the production and transportation of goods consumed in Albany, are not included in the emission inventory because of the difficulty in accurately quantifying these emissions.

The 2004 baseline greenhouse gas emissions inventory for the City of Albany is 69,830 metric tons (MT) CO_2e. As shown in Table IV.E-2, approximately 34 percent of the greenhouse gas emissions are related to transportation. This percentage does not reflect the greenhouse gas emissions associated with travel on State highways; these indirect emissions were left out of the 2004 baseline inventory because of the inability of City policies to control or affect State highway vehicle miles travelled (VMT) patterns. However, greenhouse gas emissions related to water consumption, also indirect emissions, are included in the 2004 baseline inventory due to the availability of historical water consumption data from the EBMUD specific to Albany.

Table IV.E-2: 2004 Greenhouse Gas Emissions Inventory of Albany

Sector	CO_2e Emissions (MTs)
Residential energy use	20,495
Commercial–industrial energy use	20,788
Transportation [a]	23,703
Waste	3,652
Water consumption	1,190
Total	**69,830**

[a] Emission do not include emissions from State highway VMT due to the inability of City policies to control or affect state highway VMT patterns.

Note: Total reflects rounding.

Source: Albany, City of, 2010. *City of Albany Climate Action Plan.* April.

2. Impacts and Mitigation Measures

This section evaluates significant impacts to greenhouse gas emissions that could result from implementation of the proposed Draft General Plan. It establishes the thresholds of significance, identifies the methodology used in this section, and then evaluates the General Plan. Where potentially significant impacts are identified, mitigation measures are recommended as appropriate.

a. Criteria of Significance. The BAAQMD and *CEQA Guidelines* have identified the following significance criteria for evaluating greenhouse gas impacts for General Plan documents. Implementation of the General Plan would result in significant adverse impacts related to greenhouse gas emissions if it would:

- **Generate greenhouse gas emissions**, either directly or indirectly, that may have a significant impact on the environment; or
- **Conflict with an applicable plan, policy, or regulation** adopted for the purpose of reducing the emissions of greenhouse gases.

For Plan level analysis, the BAAQMD has defined the operation-related greenhouse gas emission threshold as 6.6 metric tons (MT) CO_2e per service population (SP) (residents plus employees).

These significance thresholds were adopted as part of the May 2011 CEQA Air Quality Guidelines. As previously noted, the Alameda County Superior Court issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted the thresholds of significance in the BAAQMD CEQA Air Quality Guidelines. The court did not determine whether the thresholds of significance were valid on their merits, but found that the adoption of the thresholds was a project under CEQA. The court issued a writ of mandate ordering the BAAQMD to set aside the thresholds and cease dissemination of them until the BAAQMD complied with CEQA.

Although lead agencies may rely on the 2011 BAAQMD CEQA Air Quality Guidelines for assistance in calculating air pollution emissions, obtaining information regarding the health impacts of air pollutants, and identifying potential mitigation measures, the BAAQMD has been ordered to set aside the thresholds and is no longer recommending that they be used as a general measure of a project's significant air quality impacts. The BAAQMD also recognizes that lead agencies may rely on the previously recommended thresholds of significance contained in its CEQA Air Quality Guidelines adopted in 1999.[38] However, the 1999 CEQA Guidelines do not contain thresholds to determine the significance of greenhouse gas emissions.

The court's invalidation of BAAQMD's thresholds presents uncertainty for local agencies regarding proper evaluation of air quality and greenhouse gas emissions in CEQA documents. Although reliance on the thresholds is no longer required, local agencies still have a duty to evaluate impacts related to air quality and greenhouse gas emissions. In addition, CEQA grants local agencies broad discretion to develop their own thresholds of significance, or to rely on thresholds previously adopted or recommended by other public agencies or experts so long as they are supported by substantial evidence.[39] The BAAQMD's approach to developing a quantitative threshold of significance for greenhouse gas emissions was to identify the emissions level for which a plan would not be expected to substantially conflict with existing California legislation and policy adopted to reduce Statewide greenhouse gas emissions. According to the BAAQMD CEQA Air Quality Guidelines, if a plan would generate greenhouse gas emissions above the threshold level, it would be considered to contribute substantially to a cumulative impact, and would be considered significant. The Alameda County

[38] Bay Area Air Quality Management District, 1999. *BAAQMD CEQA Guidelines, Assessing the Air Quality Impacts of Projects and Plans.* December.

[39] CEQA 2014 Guidelines Section 21082; Sections 15064.7 and 15064.4 (addressing GHG impacts).

Superior Court did not question the science behind the thresholds or their merit. For that reason, substantial evidence supports continued use of the 2011 BAAQMD CEQA Air Quality Guidelines and the significance thresholds contained therein, and those guidelines are used for the analyses in this section.

b. Project Impacts. The following section provides an evaluation and analysis for the potential impacts of the General Plan for each of the criteria of significance listed above.

(1) Generate Greenhouse Gas Emissions. Greenhouse gas emissions associated with land use projects would predominantly consist of CO_2. In comparison to criteria air pollutants, such as ozone and PM_{10}, CO_2 emissions persist in the atmosphere for a substantially longer period of time. While emissions of other greenhouse gases, such as CH_4, are important with respect to global climate change, emission levels of other greenhouse gases are less dependent on the land use and circulation patterns associated with the General Plan than are levels of CO_2.

The efficiency metric of 6.6 MT per Service Population (SP) per year of CO_2e established by the BAAQMD was derived from statewide emissions estimates and would accommodate statewide projected population and employment growth while allowing for consistency with AB 32 goals, which mandate achieving 1990 greenhouse gas emissions levels by 2020.

The buildout of the City of Albany Draft General Plan would contribute to greenhouse gas emissions through direct and indirect emissions from mobile sources, energy use, water and wastewater generation, solid waste generation, and equipment use. Greenhouse gas emissions are by nature a cumulative impact. The Draft General Plan would add residents and jobs that create additional energy demand and therefore contribute to added greenhouse gas emissions.

The City of Albany has a Climate Action Plan (CAP) that includes GHG reduction strategies; many of those strategies are incorporated as policies and actions in the Draft General Plan. However, the CAP is not formally recognized by the BAAQMD as a "qualified" Greenhouse Gas Reduction Strategy. Therefore, a greenhouse gas efficiency approach was conducted based on the BAAQMD's CEQA Guidelines to quantify emissions associated with the Draft General Plan for the purposes of determining the greenhouse gas emissions per SP. Baseline and future greenhouse gas emissions were quantified to analyze potential increases in each emission sector, as a result of the Draft General Plan.

The Climate Action Plan uses land use data to project future communitywide emissions. Emissions would increase by 3 percent between 2004 and 2020, and would increase 22 percent between 2004 and 2050. The increase in emissions is primarily due to anticipated future population growth projected by The Association of Bay Area Governments.[40]

Population and employment are expected to grow steadily over the Draft General Plan planning horizon. Population and employment forecasts are shown in Table IV.E-3 and Table IV.E-4.

[40] Albany, City of, 2010, *Albany Climate Action Plan*, op. cit.

Table IV.E-3: City of Albany Draft General Plan Population and Employment Projections

Year	Population	Employment	Service Population
2010	18,560	5,070	23,630
No Growth in Albany through 2035	18,560	5,070	23,630
Draft General Plan 2035	20,640	6,070	26,710

Source: Fehr and Peers, July 2015.

Table IV.E-4: Population, Housing, and Jobs Baseline (2014) and 2035 Draft General Plan

Unit	2014 Existing	2035 Draft General Plan	Net Difference
Population	18,585	20,385	1,800
Housing Units	7,845	8,660	815
Jobs	4,560	5,410	850

Note: Housing units include vacant and occupied units. The 2014 Existing column shows jobs in 2015.

Source: City of Albany, 2015; Barry Miller, Planning Consultant to the City of Albany, 2015; LSA Associates, Inc., 2015.

A significant greenhouse gas impact would occur if emissions are greater than 6.6 MT CO_2e per SP from all emission sectors. To determine the additional greenhouse gas emissions associated with implementation of the Draft General Plan, greenhouse gas emissions were calculated using the California Emission Estimator Model (CalEEMod) Version 2013.2.2. Commercial and retail building area was estimated based on employee rates per square foot provided by U.S. Green Building Council.[41] Additionally, the projected 815 new residential units were included in CalEEMod. The greenhouse gas reduction measures in the City's Climate Action Plan were included in the analysis. Trip lengths for Draft 2035 General Plan conditions were evaluated using the average daily VMT per service population provided in the traffic analysis (see Section IV.C, Transportation and Circulation). The estimated greenhouse gas emissions were added to the projected 2050 MT CO_2e emissions included in Climate Action Plan. The factors used in the calculation and the results are shown in Table IV.E-5.

As shown in Table IV.E-5, the SP greenhouse gas emissions would be 3.3 MT CO_2e per SP. Therefore, the Draft 2035 General Plan emissions would be less than 6.6 MT CO_2e per SP and would not result in a significant impact with respect to release of greenhouse gas emissions. The Draft 2035 General Plan would also not result in a cumulatively considerable contribution to substantial adverse physical effects on the environment related to global climate change, and mitigation would not be required.

[41] U.S. Green Building Council, 2008. *Building Area Per Employee By Business Type*. Available online at: www.usgbc.org/Docs/Archive/General/Docs4111.pdf (accessed August 6, 2015) May 13.

Table IV.E-5: Draft General Plan Greenhouse Gas Emissions Analysis

Emission Source	Year	Emissions (MT CO_2e /year)
GHG Emission Inventory	Base Year 2004	69,830
GHG Emission Projections (Climate Action Plan)	2020	71,995
	2050	85,106
GHG Emission Projection with Draft General Plan	2050	88,847
2035 General Plan Projected Service Population	26,710	
2050 General Plan GHG/SP [a]	3.3 MT CO_2e /SP/year	
BAAQMD GHG/SP Threshold	6.6 MT CO_2e/SP/year	
Does the 2035 General Plan GHG/SP exceed 6.6?	No	

Notes: CO_2e = carbon dioxide equivalent; GHG = Greenhouse Gas; MT = metric tons; SP = service population
[a] Service population for 2035 Draft General Plan conditions.

Source: Albany, City of, 2010. *City of Albany Climate Action Plan*; LSA Associates, Inc. August 2015; Fehr and Peers July 2015.

Additionally, as outlined in the CAP, the City of Albany has established emission reduction goals to improve communitywide emissions efficiency per service population by 27 percent over 2004 levels by 2020.[42] The reduction target exceeds the target required by the BAAQMD CEQA Air Quality Guidelines and would further reduce greenhouse gas emissions per service population, and this impact would be less than significant and no additional mitigation measures would be required.

(2) Conflict with Applicable Plans and Policies. Regional and State plans have been adopted for the purpose of preparing for sea level rise impacts and for reducing greenhouse gas emission. The California Environmental Protection Agency Climate Action Team and the ARB have developed several reports to achieve the Governor's greenhouse gas targets that rely on voluntary actions of California businesses, local government and community groups, and State incentive and regulatory programs. These include the 2006 Report to Governor Schwarzenegger and the Legislature, ARB's 2007 Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California, and ARB's Climate Change Proposed Scoping Plan: a Framework for Change.[43,44, 45]

The reports identify strategies to reduce California's emissions to the levels proposed in Executive Order S-3-05 and AB 32. Table IV.E-6 summarizes those strategies that may be applicable to the Draft General Plan and assesses how the Draft General Plans efforts comply with those strategies. As shown in Table IV.E-6, the Draft 2035 General Plan would implement appropriate greenhouse gas reduction strategies and would not conflict with or impede implementation of reduction goals identified in AB 32, the Governor's Executive Order S-3-05, and other strategies to help reduce greenhouse

[42] Albany, City of, 2010, *Albany Climate Action Plan*, op. cit.

[43] California Climate Action Team, 2010. 2*010 Climate Action Team Report to the Governor and Legislature.* December.

[44] California Air Resources Board, 2007. *Expanded List of Early Action Measures*, October.

[45] California Air Resources Board, 2008. *Climate Change Proposed Scoping Plan: A Framework for Change.* October.

gases to the level proposed by the State. Therefore, this impact would be less than significant and no additional mitigation would be required.

Table IV.E-6: General Plan Compliance with Greenhouse Gas Emission Reduction Strategies

Scoping Plan Strategies	Draft General Plan Compliance
Energy Efficiency Measures	
Energy Efficiency Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts including new technologies, and new policy and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California (including both investor-owned and publicly owned utilities). **Renewables Portfolio Standard** Achieve a 33 percent renewable energy mix statewide. **Green Building Strategy** Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings. **Million Solar Roofs Program** Install 3,000 MW of solar-electric capacity under California's existing solar programs.	**Compliant.** *The Draft General Plan includes a number of goals, policies, and actions that address energy efficiency, including measures to encourage energy conservation, efficiency, and green design in new construction and existing buildings* • **Policy CON-6.1: Green Construction**. Adopt development standards and guidelines which support "green" construction and environmental leadership in the building industry. • **Policy CON-6.2: Energy and Water Audits**. Promote the use of energy audits and water audits by Albany residents and businesses to identify and eliminate sources of waste, conserve resources, and reduce utility costs. Lead by example by performing such audits on municipal buildings and properties, and undertaking appropriate improvements to address energy and water inefficiencies in City facilities. • **Policy CON-6.3: Energy Retrofits**. Encourage the retrofitting of residential and commercial buildings to increase energy efficiency and maximize the use of renewable energy. • **Policy CON-6.4: Cool Roofs and Pavement**. Encourage the design of roofs, pavement, and other exposed surfaces in a manner that mitigates the heat island effects of development and improves energy efficiency. • **Policy CON-6.5: Solar Access**. Preserve solar access rights in a way that is consistent with state law and supports the use of photovoltaic energy systems. • **Policy CON-6.6: Green Businesses**. Create green business programs and other incentive and recognition based initiatives which encourage private enterprise to use greener practices in their operations. • **Policy CON-6.7: Renewable Energy**. Support low cost financing programs which incentivize private investment in energy efficiency and renewable energy systems. • **Action CON-6.A: Green Building Code**. Require new construction to meet or exceed California Green Building Code standards for energy and water efficiency. • **Action CON-6.B: Zero Emissions Municipal Buildings**. Pursue a zero emissions target for City buildings through the development of renewable energy systems, performance data displays, and energy efficiency improvements to public buildings.

Table IV.E-6: General Plan Compliance with Greenhouse Gas Emission Reduction Strategies

Scoping Plan Strategies	Draft General Plan Compliance
Water Conservation and Efficiency Measures	
Water Use Efficiency Continue efficiency programs and use cleaner energy sources to move and treat water. Approximately 19 percent of all electricity, 30 percent of all natural gas, and 88 million gallons of diesel are used to convey, treat, distribute and use water and wastewater. Increasing the efficiency of water transport and reducing water use would reduce greenhouse gas emissions.	**Compliant.** *Policies in the Draft General Plan would reduce impacts associated with increased water demand as shown in the following policies:* • **Policy CON-6.8: Water Conservation Measures**. Conserve water in City facilities and new development by maintaining requirements for bay-friendly landscaping and water-conserving plumbing fixtures, and by continuing to support EBMUD's public information campaigns to reduce water consumption. • **Policy CON-6.9: Reducing Water Usage**. Partner with EBMUD, PG&E, Stopwaste.org and other organizations to achieve water efficiency and reduced usage and support indoor and outdoor conservation practices. • **Policy CON-6.10: Reclaimed Water**. Support the use of reclaimed water, both on an individual basis (e.g., gray water recycling for private residences) and on a citywide basis for landscaping and irrigation. • **Action CON-6.H: Irrigation Efficiency**. As funding allows, replace existing City irrigation infrastructure with more efficient infrastructure that reduces losses from evapotranspiration and creates the opportunity for the future application of reclaimed water.
Industrial Sources	
Industrial Emissions Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce greenhouse gas emissions and provide other pollution reduction co-benefits. Reduce greenhouse gas emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries.	**Compliant.** *The City of Albany will work with BAAQMD and ARB to encourage assessment of greenhouse gas emissions for any new or expanded industrial sources within the approval authority of ARB, BAAQMD, and the City of Albany government.*
Open Space and Agriculture	
Sustainable Forests Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation.	**Compliant.** *The General Plan includes strategies to related to sequestration.* • **Policy CON-2.1: Trees and the Environment**. Recognize the importance of trees and vegetation to improving air and water quality in the City and contributing to local efforts to reduce global climate change. • **Policy CON-2.2: Tree Preservation**. Require preservation of mature trees during the review of development proposals and subsequent construction projects. Site design and construction plans should identify individual trees and groves of trees and include measures to protect them wherever feasible. When tree preservation is not feasible, require replacement trees and ongoing maintenance measures to avoid net loss of tree coverage. • **Policy CON-2.3: Tree Planting**. Undertake street tree planting and maintenance programs to beautify the City, create shade, provide habitat for birds and other animals, and enhance the built environment.

Table IV.E-6: General Plan Compliance with Greenhouse Gas Emission Reduction Strategies

Scoping Plan Strategies	Draft General Plan Compliance
Sustainable Forests *Continued*	• **Policy CON-2.4: Bay Friendly Landscaping**. Encourage bay-friendly and drought-tolerant landscaping to enhance aesthetics, buffer residences from noise and air pollution, create privacy, reduce wind, and provide habitat.
Solid Waste Reduction Measures	
Waste Diversion, Composting, and Commercial Recycling, and Move Toward Zero-Waste Increase waste diversion from landfills beyond the 50 percent mandate to provide for additional recovery of recyclable materials. Composting and commercial recycling could have substantial greenhouse gas reduction benefits. In the long term, zero-waste policies that would require manufacturers to design products to be fully recyclable may be necessary.	**Compliant.** *The Draft General Plan includes policies, actions and strategies related to the reduction of solid waste.* • **Policy CON-7.1: Zero Waste**. Work toward an ultimate target of "zero waste" by continuing to reduce solid waste generation and expand local recycling and composting programs. • **Policy CON-7.2: Expanded Waste Diversion**. Work with Stopwaste.org, Alameda County, and other organizations to adopt local ordinances which expand the scope of recycling and waste reduction. • **Policy CON-7.3: Waste Reduction.** Support regional, statewide, and national initiatives to reduce waste through such measures as eliminating junk mail, reducing excessive product packaging, increasing e-waste recycling, promoting the sharing and reuse of consumer goods in lieu of individual consumption, extending producer responsibility, food waste reduction, and expanding the market for recycled goods and products. • **Policy CON-7.4: Education and Outreach**. Continue education and outreach on the importance and benefits of waste reduction.
Transportation and Motor Vehicle Measures	
Vehicle Climate Change Standards. AB 1493 (Pavley) required the State to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of greenhouse gas emissions from passenger vehicles and light duty trucks. Regulations were adopted by the CARB in September 2004. **Light-Duty Vehicle Efficiency Measures.** Implement additional measures that could reduce light-duty greenhouse gas emissions. For example, measures to ensure that tires are properly inflated can both reduce greenhouse gas emissions and improve fuel efficiency. **Heavy- and Medium-Duty Fuel and Engine Efficiency Measures.** Regulations to require retrofits to improve the fuel efficiency of heavy-duty trucks that could include devices that reduce aerodynamic drag and rolling resistance. This measure could also include hybridization of and increased engine efficiency of vehicles. **Low Carbon Fuel Standard.** ARB identified this measure as a Discrete Early Action Measure. This measure would reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020.	**Compliant.** *The Draft General Plan does not involve the manufacture, sale, or purchase of vehicles. However, vehicles operating within the City would comply with any vehicle and fuel standards that the ARB adopts.* • **Policy T-2.3: Low-Emission Vehicles**. Encourage the use of low emission or zero emission vehicles, along with the infrastructure to support such vehicles, such as electric vehicle charging stations. • **Policy T-2.7: Evaluating Air Emissions**. Evaluate transportation-related air pollution and greenhouse gas emissions associated with development proposals. Work with applicants to reduce such emissions while supporting infill development. • **Policy T-3.1: Bikeway System**. Support development of a bikeway system that meets the needs of commuters and recreation users, reduces vehicle trips, and links residential neighborhoods with BART and regional destinations. • **Policy T-3.2: Designated Bike Network and Improvements**. Designate a network of bike paths, lanes, and routes as the primary system for bicyclists traveling through Albany.

Table IV.E-6: General Plan Compliance with Greenhouse Gas Emission Reduction Strategies

Scoping Plan Strategies	Draft General Plan Compliance
Goods Movement. Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities.	**Compliant.** *City of Albany is committed to improving efficiency of goods movement. Many of the policies related to transportation focus on improving efficiency of the roadways within the City and with efficiency of the State highway system.*
Regional Transportation-Related Greenhouse Gas Targets. Develop regional greenhouse gas emissions reduction targets for passenger vehicles. Local governments will play a significant role in the regional planning process to reach passenger vehicle greenhouse gas emissions reduction targets. Local governments have the ability to directly influence both the siting and design of new residential and commercial developments in a way that reduces green-house gases associated with vehicle travel.	**Compliant.** *The City of Albany is committed to achieve the Bay Area's regional transportation emission reduction targets per SB 375. The Draft General Plan includes policies and actions designed to reduce vehicle miles traveled, encourage and provide alternative modes of transportation, design complete streets, and reduce regional emissions.* • **Policy CON-3.5: Sustainability and the Sharing Economy**. Explore ways to incorporate elements of the sharing economy into strategies to reduce greenhouse gas emissions. This could include such activities as car-sharing, bike-sharing, home-sharing, and reduced consumption and waste made possible by sharing of consumer goods (tools, etc.). • **Action CON-3.B: Project-Level Greenhouse Gas Emission Analysis.** Evaluate greenhouse gas emissions associated with development proposals and work with applicants to reduce emissions during project review. • **Action CON-3.C: Zero Emission City Vehicles**. Improve the fuel efficiency of the City vehicle fleet by purchasing low emission or zero emission vehicles as vehicles are retired from service.

Source: Air Resources Board, 2008, Climate Change Proposed Scoping Plan: A Framework for Change; City of Albany, 2015; LSA Associates, Inc., 2015.

The California Attorney General's Office released a document titled Sustainability and General Plans: Examples of Policies to Address Climate Change in January, 2010, which includes resources and examples of innovative local planning efforts.[46] The Albany General Plan is consistent with these recommended strategies as outlined in Table IV.E-7.

[46] California AGO, 2010. *Sustainability and General Plans: Examples of Policies to Address Climate Change* in January.

Table IV.E-7: Draft General Plan Compliance with Attorney General Office's Strategies

Attorney General Strategies	Draft General Plan Compliance
Smart growth, jobs/housing balance, transit-oriented development, and infill development through land use designations, incentives and fees, zoning, and public-private partnerships.	**Draft General Plan** • **Policy CON-3.4: Land Use and Transportation Strategies.** Implement the measures expressed in the Land Use, Transportation, and Housing Elements of the General Plan to achieve more sustainable development and travel patterns in Albany, including: o An expanded, safer, and more accessible pedestrian and bicycle network that reduces dependence on automobile travel and creates more walkable and connected neighborhoods; o Greater emphasis on mixed uses along the San Pablo and Solano Avenue corridors, integrating residential uses above commercial uses and thereby reducing auto trips and trip lengths for goods and services; o A balance between job growth and housing growth, and more opportunities for residents to live closer to work; o Public transportation improvements (bus, BART, and possible future shuttle) which provide more viable alternatives to driving, including the possibility of an "infill" station at Solano Avenue; o Higher densities along the San Pablo corridor, enabling more development to be accommodated in the center of the region and reducing the necessity of developing "greenfields" on the periphery of the Bay Area; and o Transportation demand management programs, including flextime, telecommuting, signal synchronization, carpooling, and other measures to reduce congestion and vehicle idling and cut down on solo passenger driving. • **Policy LU-1.8: Transit-Oriented Development.** Encourage land use patterns which support transit use, including additional mixed use (commercial and higher-density residential) development along the San Pablo and Solano Avenue corridors.
Create transit, bicycle, and pedestrian connections through planning, funding, development requirements, incentives and regional cooperation; create disincentives for auto use.	• **Policy T-1.3: Complete Streets Operating Procedures**. Incorporate Complete Streets practices as a routine part of City operations. • **Policy T-1.4: Complete Streets Design**. Follow locally adopted policies and standards in the design of City streets, including the Active Transportation Plan and the Climate Action Plan, as well as the General Plan. • **Policy T-1.5: Connecting the City**. Ensure that the design of streets and other transportation features helps to connect the city and facilitate safer and more convenient travel between Albany and surrounding communities. • **Policy T-2.1: Transit-Oriented Development**. Encourage land use patterns which support walking, bicycling, and public transit use, thereby reducing greenhouse gas emissions and fossil fuel consumption. • **Action T-2.A: Grant Applications**. Pursue grants and other funding sources which support multi-modal transportation improvements and other measures to reduce transportation emissions.

Table IV.E-7: Draft General Plan Compliance with Attorney General Office's Strategies

Attorney General Strategies	Draft General Plan Compliance
Green procurement and alternative fuel use through municipal mandates and voluntary bid incentives.	• **Policy T-2.3: Low-Emission Vehicles**. Encourage the use of low emission or zero emission vehicles, along with the infrastructure to support such vehicles, such as electric vehicle charging stations. • **Action T-2.C: Trip Reduction Ordinance**. Update the City's Trip Reduction Ordinance to reflect current conditions. • **Action T-2.D: TDM Ordinance**. Create and implement a TDM ordinance to reduce peak commute trips and encourage alternatives to solo passenger driving. • **Action T-2.E: City Vehicle Fleet**. Improve the fuel efficiency of the City's vehicle fleet by purchasing low or zero emissions vehicles as gasoline-engine vehicles are retired from service.
Alternative fuel facilities and infrastructure through land use designations, zoning, and public private partnerships.	• **Action CON-3.D: Alternative and Electric Fuel Vehicles**. Plan for and develop the infrastructure necessary for alternative fuel vehicles, including electric cars. This should include automobile charging areas for electric and plug-in hybrid vehicles. Incentives for such vehicles, such as preferential parking, should be developed.
Renewable energy generation (utility and residential) through feasibility evaluations, land use designations, zoning, permit streamlining, incentives and financing.	• **Policy CON-6.3: Energy Retrofits**. Encourage the retrofitting of residential and commercial buildings to increase energy efficiency and maximize the use of renewable energy. • **Policy CON-6.5: Solar Access**. Preserve solar access rights in a way that is consistent with state law and supports the use of photovoltaic energy systems. • **Policy CON-6.7: Renewable Energy**. Support low cost financing programs which incentivize private investment in energy efficiency and renewable energy systems.
Water diversion, recycling, water efficiency, energy efficiency and energy recovery in cooperation with public services districts and private entities.	• **Policy CON-6.8: Water Conservation Measures**. Conserve water in City facilities and new development by maintaining requirements for bay-friendly landscaping and water-conserving plumbing fixtures, and by continuing to support EBMUD's public information campaigns to reduce water consumption. • **Policy CON-6.9: Reducing Water Usage**. Partner with EBMUD, PG&E, Stopwaste.org and other organizations to achieve water efficiency and reduced usage and support indoor and outdoor conservation practices. • **Policy CON-6.10: Reclaimed Water**. Support the use of reclaimed water, both on an individual basis (e.g., gray water recycling for private residences) and on a citywide basis for landscaping and irrigation. • **Policy CON-7.1: Zero Waste**. Work toward an ultimate target of "zero waste" by continuing to reduce solid waste generation and expand local recycling and composting programs. • **Policy CON-7.2: Expanded Waste Diversion.** Work with Stopwaste.org, Alameda County, and other organizations to adopt local ordinances which expand the scope of recycling and waste reduction. A particular emphasis should be placed on increasing the diversion rate for multi-family buildings and commercial businesses and expanding recycling of construction and demolition debris. • **Policy CON-7.3: Waste Reduction**. Support regional, statewide, and national initiatives to reduce waste through such measures as eliminating junk mail, reducing excessive product packaging, increasing e-waste recycling, promoting the sharing and reuse of consumer goods in lieu of individual consumption, extending producer responsibility, food waste reduction, and expanding the market for recycled goods and products.

Table IV.E-7: Draft General Plan Compliance with Attorney General Office's Strategies

Attorney General Strategies	Draft General Plan Compliance
Urban and rural forestry through tree planting requirements and programs; preservation of agricultural land and resources that sequester carbon; heat island reduction programs.	• **Policy CON-2.1: Trees and the Environment**. Recognize the importance of trees and vegetation to improving air and water quality in the City and contributing to local efforts to reduce global climate change. • **Policy CON-2.2: Tree Preservation**. Require preservation of mature trees during the review of development proposals and subsequent construction projects. • **Policy CON-2.3: Tree Planting**. Undertake street tree planting and maintenance programs to beautify the City, create shade, provide habitat for birds and other animals, and enhance the built environment. • **Action CON-2.A: Street Tree Planting Program**. Continue implementation of a comprehensive street tree planting and maintenance program for Albany streets, including priorities, time schedules, and species selection guidelines. • **Action CON-2.B: Tree Preservation Requirements**. Continue to study alternatives for protecting large specimen trees and addressing tree removal and preservation issues on private property. • **Action CON-2.C: Tree Inventories**. Implement standard operating procedures requiring inventories of trees and significant site vegetation as a part of development application review.
Regional cooperation to find cross-regional efficiencies in greenhouse gas reduction investments and to plan for regional transit, energy generation, and waste recovery facilities.	• **Policy CON-2.9: Food Production and Transportation**. Promote local food production, urban agriculture, farmers markets, farm-to-table restaurants, and more sustainable methods of growing and transporting food. Local food production can reduce transportation associated with food, thereby reducing food costs and greenhouse gas emissions and promoting public health. • **Policy CON-7.2: Expanded Waste Diversion**. Work with Stopwaste.org, Alameda County, and other organizations to adopt local ordinances which expand the scope of recycling and waste reduction. A particular emphasis should be placed on increasing the diversion rate for multi-family buildings and commercial businesses and expanding recycling of construction and demolition debris.
Community outreach and education to foster community involvement, input, and support for greenhouse gas reduction planning and implementation.	• **Policy CON-2.8: Community Gardens**. Encourage the creation of community gardens in Albany, and the use of open land for food production and urban agriculture. A variety of locations should be considered including parks, school yards, university lands, and other public and private properties. • **Policy CON-3.1: Greenhouse Gas Reduction Goal.** Undertake local programs to support net zero greenhouse gas emissions by 2050 and a 60 percent reduction in emissions by 2035, relative to a 2004 baseline. • **Policy CON-3.2: Climate Change as a Planning Consideration**. Ensure that planning and development decisions consider potential impacts associated with global climate change, including rising sea levels and potential greenhouse gas emissions. • **Policy CON-3.3: Climate Outreach.** Develop outreach and education programs that increase awareness of global climate change and the steps Albany residents can take to reduce their carbon footprints.

Table IV.E-7: Draft General Plan Compliance with Attorney General Office's Strategies

Attorney General Strategies	Draft General Plan Compliance
	• **Action CON-3.A: CAP Progress Reports and Updates**. Provide periodic progress reports on the implementation of Climate Action Plan (CAP) measures regarding building energy and water efficiency measures. Update the CAP at least once every five years to reflect the completion of specified actions, the development of new actions, the availability of resources and technology, and new targets for greenhouse gas reduction. • **Action CON-3.B: Project-Level Greenhouse Gas Emission Analysis.** Evaluate greenhouse gas emissions associated with development proposals and work with applicants to reduce emissions during project review.

Source: AGO, 210, *Sustainability and General Plans: Examples of Policies to Address Climate Change*; City of Albany, 2015; LSA Associates, Inc., 2015.

c. Cumulative Impacts. Cumulative impacts are the collective impacts of one or more past, present, or future projects, that when combined, result in adverse changes to the environment. It is now widely recognized that anthropogenic (human-caused) emissions of greenhouse gases and aerosols are contributing to changes in the global climate, and that such changes (e.g., sea level rise, increase in the occurrence and intensity of wildfires) are having, and will have adverse effects on the environment, the economy, and public health. These are cumulative effects of past, present, and future actions worldwide. While worldwide contributions of greenhouse gases are expected to have widespread consequences, it is not possible to link particular changes to the environment of California or elsewhere to greenhouse gases emitted from a particular source or location.

When considering a project's contribution to impacts from climate change, it is possible to examine the quantity of greenhouse gases that would be emitted either directly from project sources or indirectly from other sources, such as production of electricity. However, that quantity cannot be tied to a particular adverse effect on the environment of California or elsewhere associated with climate change. Rather, climate change is a global environmental problem in which: (a) any given development project contributes only a small portion of any net increase in global greenhouse gases and (b) global growth is continuing to contribute large amounts of greenhouse gases across the world. As such, the above analysis section addresses climate change primarily as a cumulative impact. Because no significant project level impacts were identified for greenhouse gas emissions, the project would also not make a cumulatively considerable contribution to substantial adverse physical effects on the environment related to global climate change.

Therefore, consistent with State CEQA Guidelines, all future projects[47] that are consistent with the adopted Draft 2035 General Plan, would be presumed to have a less than significant impact related to greenhouse gas emissions.

[47] Excludes projects that include stationary sources of greenhouse gas emissions.

F. NOISE AND VIBRATION

This section describes existing noise and vibration conditions, discusses the characteristics of sound, sets forth criteria for determining the significance of noise and vibration impacts, and estimates the potential noise and vibration of the Draft 2035 General Plan. Mitigation measures are identified, as necessary, to address significant environmental impacts. Noise modeling data is provided in Appendix C.

1. Setting

This noise assessment follows noise-related regulatory framework at the City, County, State, and federal levels. This section describes the fundamentals of noise, the applicable regulatory framework, and the existing noise and vibration setting within the City of Albany.

a. Characteristics of Sound. Noise is generally defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, and sleep.

To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is the number of complete vibrations or cycles per second of a wave that results in the range of tone from high to low. Loudness is the strength of a sound that describes a noisy or quiet environment, and it is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves combined with the reception characteristics of the human ear. Sound intensity refers to how hard the sound wave strikes an object, which in turn produces the sound's effect. This characteristic of sound can be precisely measured with instruments.

(1) Measurement of Sound. Sound is characterized by various parameters that describe the rate of oscillation (frequency) of sound waves, the distance between successive troughs or crests in the wave, the speed that it travels, and the pressure level or energy content of a given sound. The sound pressure level has become the most common descriptor used to characterize the loudness (or amplitude) of an ambient sound, and the decibel (dB) scale is used to quantify sound intensity. A decibel (dB) is a unit of measurement which indicates the relative intensity of a sound. The 0 point on the dB scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Changes of 3 dB or less are only perceptible in laboratory environments. Audible increases in noise levels generally refer to a change of 3 dB or more, as this level has been found to be barely perceptible to the human ear in outdoor environments.

Because sound can vary in intensity by over one million times within the range of human hearing, a logarithmic loudness scale[1] is used to keep sound intensity numbers at a convenient and manageable level. Thus, a 10 dBA increase in the level of a continuous noise represents a perceived doubling of loudness, while a 20 dBA increase is 100 times more intense, and a 30 dBA increase is 1,000 times more intense. As noise spreads from a source, it loses energy so that the farther away the noise receiver is from the noise source, the lower the perceived noise level. Noise levels diminish or

[1] Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale, representing points on a sharply rising curve. The logarithmic decibel scale allows an extremely wide range of acoustic energy to be characterized in a manageable notation.

attenuate as distance from the source increases based on an inverse square rule, depending on how the noise source is physically configured. Noise level from a single-point source, such as a single piece of construction equipment at ground level, attenuates at a rate of 6 dB for each doubling of distance (between the single-point source of noise and the noise-sensitive receptor of concern). Heavily traveled roads with few gaps in traffic behave as continuous line sources and attenuate roughly at a rate of 3 dB per doubling of distance.

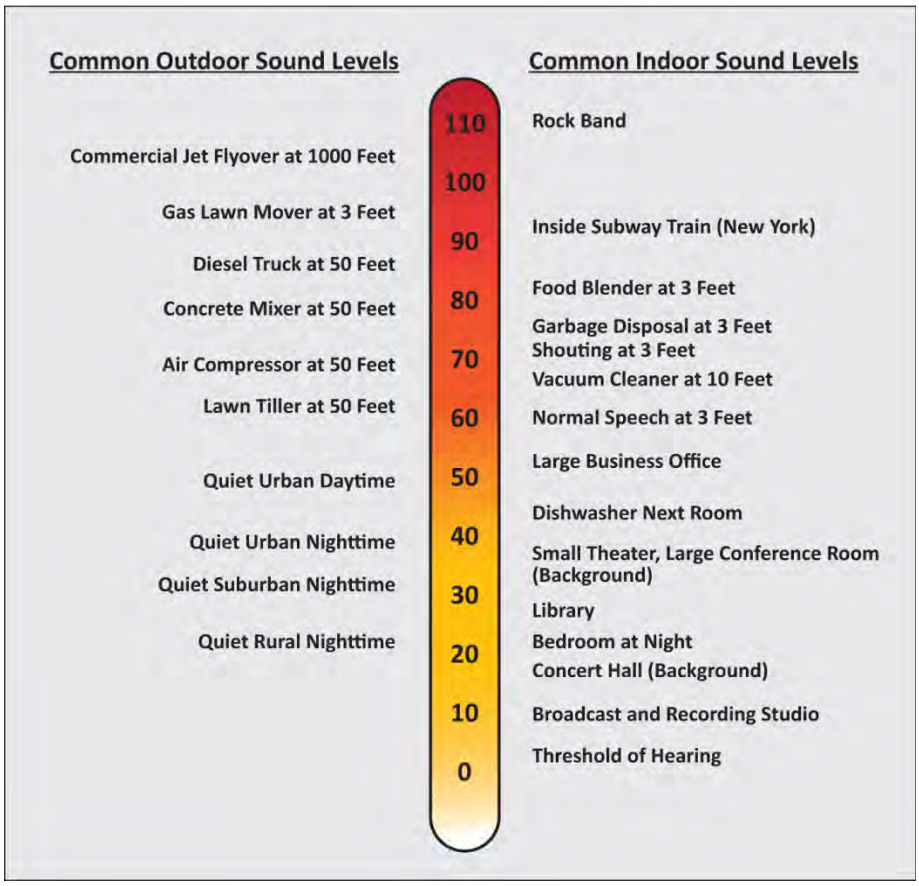
Since the human ear is not equally sensitive to all pitches (sound frequencies) within the entire spectrum, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity in a process called "A-weighting," expressed as "dBA." The dBA or A-weighted decibel refers to a scale of noise measurement that approximates the range of sensitivity of the human ear to sounds of different frequencies. Table IV.F-1 contains a list of typical acoustical terms and definitions. Table IV.F-2 shows representative noise sources and their corresponding noise levels in dBA.

Table IV.F-1: Definitions of Acoustical Terms

Term	Definitions
Decibel, dB	A unit that denotes the ratio between two quantities proportional to power; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
Frequency, Hz	Of a function periodic in time, the number of times that the quantity repeats itself in one second (i.e., number of cycles per second).
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this section are A-weighted, unless reported otherwise.
L_{01}, L_{10}, L_{50}, L_{90}	The fast A-weighted noise levels equaled or exceeded by a fluctuating sound level for 1 percent, 10 percent, 50 percent, and 90 percent of a stated time period.
Equivalent Continuous Noise Level, L_{eq}	The level of a steady sound that, in a stated time period and at a stated location, has the same A-weighted sound energy as the time-varying sound.
Community Noise Equivalent Level, CNEL	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 5 decibels to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
Day/Night Noise Level, L_{dn}	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
L_{max}, L_{min}	The maximum and minimum A-weighted sound levels measured on a sound level meter, during a designated time interval, using fast time averaging.
Ambient Noise Level	The all-encompassing noise associated with a given environment at a specified time, usually a composite of sound from many sources at many directions, near and far; no particular sound is dominant.
Intrusive	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Source: Harris, Cyril M., 1998. Handbook of Acoustical Measurements and Noise Control.

Table IV.F-2: Common Sound Levels and Noise Sources



Source: Compiled by LSA Associates, Inc., 2014.

Noise can be quantified based on various time periods and ratings. Ambient noise quantification for humans accounts for the annoying effects of sound in the equivalent continuous sound level (L_{eq}), which is the total sound energy of time varying noise over a sample period. However, the predominant rating scales for communities in the State of California are the L_{eq}, the community noise equivalent level (CNEL), and the day-night average level (L_{dn}) based on A-weighted decibels (dBA). CNEL is the time varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale, but without the adjustment for events occurring during the evening relaxation hours. CNEL and L_{dn} are within one dBA of each other and are normally exchangeable. The noise adjustments are added to the noise events occurring during the more sensitive hours.

Other noise rating scales when assessing the annoyance factor include the maximum noise level (L_{max}), which is the highest exponential time averaged sound level that occurs during a stated time period. The noise environments discussed in this analysis are specified in terms of maximum levels denoted by L_{max} for short-term noise impacts. L_{max} reflects peak operating conditions, and addresses the annoying aspects of intermittent noise.

Noise impacts can be described in three categories. The first is audible impacts that refer to increases in noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3.0 dBA or greater, since, as described earlier, this level has been found to be barely perceptible in exterior environments. The second category, potentially audible, refers to a change in the noise level between 1.0 and 3.0 dBA. This range of noise levels has been found to be noticeable only in laboratory environments. The last category is changes in noise level of less than 1.0 dBA that are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant.

(2) Physiological Effects of Noise. According to the U.S. Department of Housing and Urban Development's 1985 Noise Guidebook, permanent physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 to 90 dBA.[2] Exposure to high noise levels affects our entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, and thereby affecting blood pressure, functions of the ear, and the nervous system. In comparison, extended periods of noise exposure above 90 dBA would result in permanent cell damage. When the noise level reaches 120 dBA, a tickling sensation occurs in the human ear even with short-term exposure. This level of noise is called the threshold of feeling. For avoiding adverse effects on human physical and mental health in the workplace or in communities, the U.S. Department of Labor, Occupation Health and Safety Administration (OSHA) requires the protection of workers from hearing loss when the noise exposure equals or exceeds an 8-hour time-weighted average of 85 dBA.[3]

Unwanted community effects of noise occur at levels much lower than those that cause hearing loss and other health effects. Annoyance occurs when noise interferes with sleeping, conversation, noise-sensitive work, including learning or listening to radio, television, or music. According to the World Health Organization (WHO) noise studies, during daytime hours, few people are seriously annoyed by activities with noise levels below 55 dBA, or moderately annoyed with noise levels below 50 dBA.[4]

b. Characteristics of Groundborne Vibration. Vibrating objects in contact with the ground radiate vibration waves through various soil and rock strata to the foundations of nearby buildings. As the vibration propagates from the foundation throughout the remainder of the building, the vibration of floors and walls may be perceptible from the rattling of windows or a rumbling noise. The rumbling sound caused by the vibration of room surfaces is called groundborne noise. When assessing annoyance from groundborne noise, vibration is typically expressed as root mean square (rms) velocity in units of decibels of 1 micro-inch per second. To distinguish vibration levels from noise levels, the unit is written as "VdB." Human perception to vibration starts at levels as low as 67 VdB and sometimes lower. Annoyance due to vibration in residential settings starts at approximately 70 VdB. Groundborne vibrations are almost never annoying to people who are outdoors. Although the motion of the ground may be perceived, without the effects associated with the shaking of the building, the motion does not provoke the same adverse human reaction.

[2] U.S. Department of Housing and Urban Development, 1985. *The Noise Guidebook: A Reference Document for Implementing the Department of Housing and Urban Development Noise Policy*. March.

[3] Occupational Safety & Health Administration. Regulations, Standards 29 CFR, Occupational Noise Exposure 1910.95.

[4] World Health Organization, 1999. *Guidelines for Community Noise*. Website: www.who.int/docstore/peh/noise/guidelines2.html.

Common sources of groundborne vibration include trains and construction activities such as blasting, pile driving and operating heavy earthmoving equipment. Typical vibration source levels from construction equipment are shown in Table IV.F-3. Although the table gives one level for each piece of equipment, it should be noted that there is a considerable variation in reported ground vibration levels from construction activities. The data provides a reasonable estimate for a wide range of soil conditions. In extreme cases, excessive groundborne vibration has the potential to cause structural damage to buildings. For buildings considered of particular historical significance or that are particularly fragile structures, the damage threshold is approximately 96 VdB; the damage threshold for other structures is 100 VdB.[5]

Table IV.F-3: Typical Vibration Source Levels for Construction Equipment

Equipment		PPV at 25 ft (in/sec)	Approximate VdB at 25 feet
Pile Driver (impact)	Upper range	1.518	112
	Typical	0.644	104
Pile Driver (sonic)	Upper range	0.734	105
	Typical	0.170	93
Clam shovel drop (slurry wall)		0.202	94
Hydromill (slurry wall)	In soil	0.008	66
	In rock	0.017	75
Vibratory roller		0.210	94
Hoe ram		0.089	87
Large bulldozer		0.089	87
Caisson drilling		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79
Small bulldozer		0.003	58

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

Source: Federal Transit Administration, 2006. *Transit Noise and Vibration Impact Assessment.* May.

c. Noise Regulatory Framework. The following section summarizes the regulatory framework related to noise, including federal, State and City of Albany plans, policies and standards.

(1) U.S. Environmental Protection Agency. In 1972 Congress enacted the Noise Control Act. This act authorized the (USEPA) to publish descriptive data on the effects of noise and establish levels of sound *requisite to protect the public welfare with an adequate margin of safety.* These levels are separated into health (hearing loss levels) and welfare (annoyance levels), as shown in Table IV.F-4. The USEPA cautions that these identified levels are not standards because they do not take into account the cost or feasibility of the levels.

Table IV.F-4: Summary of USEPA Noise Levels

Effect	Level	Area
Hearing loss	$L_{eq}(24) \leq 70$ dB	All areas.
Outdoor activity interference and annoyance	$L_{dn} \leq 55$ dB	Outdoors in residential areas and farms and other outdoor areas where people spend widely varying amounts of time and other places in which quiet is a basis for use.
	$L_{eq}(24) \leq 55$ dB	Outdoor areas where people spend limited amounts of time, such as school yards, play-grounds, etc.
Indoor activity interference and annoyance	$L_{eq} \leq 45$ dB	Indoor residential areas.
	$L_{eq}(24) \leq 45$ dB	Other indoor areas with human activities such as schools, etc.

Source: U.S. Environmental Protection Agency, 1974. *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*. March.

For protection against hearing loss, 96 percent of the population would be protected if sound levels are less than or equal to an $L_{eq(24)}$ of 70 dBA. The "(24)" signifies an L_{eq} duration of 24 hours. The USEPA activity and interference guidelines are designed to ensure reliable speech communication at

[5] Harris, C.M., 1998. *Handbook of Acoustical Measurements and Noise Control.*

about 5 feet in the outdoor environment. For outdoor and indoor environments, interference with activity and annoyance should not occur if levels are below 55 dBA and 45 dBA, respectively.

The noise effects associated with an outdoor L_{dn} of 55 dBA are summarized in Table IV.F-5. At 55 dBA L_{dn}, 95 percent sentence clarity (intelligibility) may be expected at 11 feet, and no community reaction. However, 1 percent of the population may complain about noise at this level and 17 percent may indicate annoyance.

Table IV.F-5: Summary of Human Effects in Areas Exposed to 55 dBA L_{dn}

Type of Effects	Magnitude of Effect
Speech – Indoors	100 percent sentence intelligibility (average) with a 5 dB margin of safety.
Speech – Outdoors	100 percent sentence intelligibility (average) at 1.4 feet. 99 percent sentence intelligibility (average) at 3.2 feet. 95 percent sentence intelligibility (average) at 11.5 feet.
Average Community Reaction	None evident; 7 dB below level of significant complaints and threats of legal action and at least 16 dB below "vigorous action."
Complaints	1 percent dependent on attitude and other non-level related factors.
Annoyance	17 percent dependent on attitude and other non-level related factors.
Attitude Towards Area	Noise essentially the least important of various factors.

Source: U.S. Environmental Protection Agency, 1974. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. March.

(2) State of California. The State of California has established regulations that help prevent adverse impacts to occupants of buildings located near noise sources. Referred to as the *State Noise Insulation Standard*, it requires buildings to meet performance standards through design and/or building materials that would offset any noise source in the vicinity of the receptor. State regulations include requirements for the construction of new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings that are intended to limit the extent of noise transmitted into habitable spaces. These requirements are found in the California Code of Regulations, Title 24 (known as the Building Standards Administrative Code), Part 2 (known as the California Building Code), Appendix Chapters 12 and 12A. For limiting noise transmitted between adjacent dwelling units, the noise insulation standards specify the extent to which walls, doors, and floor ceiling assemblies must block or absorb sound. For limiting noise from exterior noise sources, the noise insulation standards set an interior standard of 45 dBA CNEL in any habitable room with all doors and windows closed. In addition, the standards require preparation of an acoustical analysis demonstrating the manner in which dwelling units have been designed to meet this interior standard, where such units are proposed in an area with exterior noise levels greater than 60 dBA CNEL.

The State has also established land use compatibility guidelines for determining acceptable noise levels for specified land uses. The City has adopted and modified the State's land use compatibility guidelines, as discussed below.

(3) City of Albany. The City of Albany addresses noise in the goals and policies of the current General Plan[6] and in the current noise ordinances of the Municipal Code.[7]

[6] Albany, City of, 1992. *City of Albany General Plan and Final EIR*. December 7.

[7] Albany, City of, 2008. *The Code of the City of Albany*, Chapter VIII Law Enforcement, 8-1 Noise. August 4.

The noise policies of the 1990-2010 General Plan required the preparation of acoustical reports for projects which would be exposed to noise levels in excess of those shown as *normally acceptable* in their established land use compatibility standards. According to these standards, environments with noise levels up to 65 dBA L_{dn} are considered *normally acceptable* for business commercial land use development; while environments with noise levels up to 60 dBA L_{dn} are considered normally acceptable for new residential land uses.

The following goals and policies from the previous City of Albany General Plan specifically address noise:

- **Policy CHS 4.1:** Require preparation of an acoustical report for any project which would be exposed to noise levels in excess of those shown as "normally acceptable" in Figure 3[8] and Table 1[9] and as generally identified on the Noise Contours Map.
- **Policy CHS 4.2:** Require mitigation measures for new residential, transient lodging, motel/hotel, school, library, church and hospital development to reduce noise exposure to "normally acceptable" levels.
- **Policy CHS 4.3:** Require post-construction monitoring and sign-off by an acoustical engineer to ensure that City guidelines have been achieved whenever mitigation measures to achieve conformance with the criteria in Figure 3 and Table 1 are imposed.
- **Policy CHS 4.4:** Require mitigation measures be incorporated into and an acoustical report be prepared for projects that would cause the following criteria to be exceeded or would have the potential for creating significant community annoyance:
    a. the L_{dn} in existing residential areas to exceed an L_{dn} of 60 dB minimum;
    b. the L_{dn} in existing residential areas to increase by 3 dB or more if the L_{dn} currently exceeds 60 dB; or
    c. Noise levels that would be expected to create significant adverse community response.

These policies will be superseded by new policies and programs in the 2035 Draft General Plan. The new policies continue requirements for acoustical reports and mitigation measures for new noise sources, and also provide land use compatibility guidelines related to noise. Policies in the updated plan also address the different sources of noise in the community, including transportation noise, domestic noise, and construction noise.

(4) City of Albany Municipal Code. The City of Albany addresses noise impacts in Chapter 8: Law Enforcement Section 8-1 Noise.[10] The Chapter includes methods to control noise nuisances based on their disturbing nature and their adverse impact on the health and welfare of people residing within the City of Albany. The Code establishes exterior and interior noise standards at receiving land uses as include below.

[8] Found on page 13 of the Albany General Plan Technical Appendices, C. Noise. March 17, 1989.

[9] Found on page 14 of the Albany General Plan Technical Appendices, C. Noise. March 17, 1989.

[10] City of Albany Municipal Code, op. cit.

8-1.4 Exterior Noise Standards

a. It is unlawful for any person at any location within the City of Albany to create any noise or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person which does not comply with the provisions of this section unless the provisions of subsection 8-1.13 have been met.

b. Exterior noise levels when measured at any receiving single- or multi-family residential or public facility zoned property situated in the City of Albany do not conform to the provisions of this section when they exceed the noise level standards set forth in Table I or Table II following:

Table I - Receiving Land Use: Properties in All *Residential and Public Facilities Zones		
Cumulative Number of Minutes in Any One-Hour Time Period	**Daytime 8:00 a.m. - 10:00 p.m.**	**Nighttime 10:00 p.m. - 8:00 a.m.**
30	55	50
15	60	55
5	65	60
1	70	65
0	75	70

* Includes R-1 (Residential Low Density Single-Family), R-2 (Residential Moderate Density), R-3 (Residential High Density), R-4 (Residential Towers) and HD (Hillside District).

Table II - Receiving Land Use: Properties in All Other Zones* Not Covered in Table I		
Cumulative Number of Minutes in Any One-Hour Time Period	**Daytime 8:00 a.m. - 10:00 p.m.**	**Nighttime 10:00 p.m. - 8:00 a.m.**
30	65	60
15	70	65
5	75	70
1	80	75
0	85	80

* Includes C-1 (General Commercial), C-2 (Highway Commercial), and C/S/LI (Commercial, Service, Light Industrial).

c. The noise level limits for Waterfront Zoned (WF) areas of the City shall be as follows: During the period from 8:00 a.m. to 10:00 p.m. the noise limits shall be as stated in Table II, above. After 10:00 p.m., the limits shall be as stated in Table I, above.

d. In the event the measured ambient noise level exceeds the applicable standards, the thirty (30) minute noise standards in Table I or Table II shall be adjusted so as to equal said ambient noise level plus 5 dBA, with the fifteen (15), five (5), one (1) and zero (0) minute standards adjusted upwards in 5 dBA increments, based on the ambient noise level measured. In no case shall the ambient level standard exceed a 100 dBA standard for the zero (0) minute measurement.

e. If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be measured, the noise level measured while the source is in operation shall be compared directly to the applicable noise level standards in Table I or Table II. (Ord. #91-08, §1)

8-1.5 Interior Noise Limits

a. No person shall operate or cause to be operated within any single-family house, apartment, townhouse, duplex or multiple dwelling unit, in any zoning district, any source of sound or allow the creation of any noise which causes the sound level when measured inside a neighboring receiving dwelling unit to exceed the limits shown in the following table:

Table III - Interior Noise Limits Noise Level Standards, dB(A)		
Cumulative Number of Minutes in Any One-Hour Time Period	**Daytime 8:00 a.m. - 10:00 p.m.**	**Nighttime 10:00 p.m. - 8:00 a.m.**
30	45	40
15	50	45
5	55	50
1	60	55
0	65	60

b. In the event the measured ambient noise level exceeds the applicable standards, the thirty (30) minute noise standards shall be adjusted in Table III so as to equal said ambient noise level plus 5 dBA, with the fifteen (15), five (5), one (1) and zero (0) minute standards being adjusted upwards in 5 dBA increments, based on the ambient noise level measured. In no case shall the ambient level standard exceed a 100 dBA standard for the zero (0) minute measurement.

c. If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be measured, the noise level measured while the source is in operation shall be compared directly to the applicable noise level standards in Table III. (Ord. #91-08, §1)

d. Existing Noise Sources. The ambient noise environment in the City of Albany is impacted by a variety of noise sources, including traffic, rail, airport, and stationary noise sources.

(1) Freeways and Internal Roadways. Motor vehicles with their distinctive noise characteristics are the dominant noise source in Albany. The amount of noise varies according to many factors, such as volume of traffic, vehicle mix (percentage of cars and trucks), average traffic speed, and distance from the observer. Major contributing roadway noise sources include Interstates 80 and 580 (I-80 and I-580) and local roadways including Buchanan Street, Marin Avenue, Masonic Avenue, San Pablo Avenue, Solano Avenue, Thousand Oaks Boulevard and other arterial and collector roadways throughout the City.

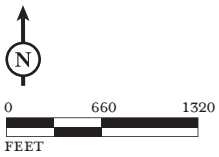
Documentation of the existing highway and roadway traffic noise levels in the City of Albany were performed using the Federal Highway Administration (FHWA) highway traffic noise prediction model (FHWA RD-77-108). This model uses a typical vehicle mix for urban/suburban areas in California and requires parameters, including traffic volumes, vehicle speed, and roadway geometry to compute typical equivalent noise levels during daytime, evening, and nighttime hours. The resultant noise levels are weighted and summed over 24-hour periods to determine the day-night average level (L_{dn}) values. Existing traffic noise contours along modeled roadway segments are shown in Table IV.F-6, and Figure IV.F-1 shows 2014 noise contours.

Table IV.F-6: Existing Traffic Noise Levels

Roadway Segment	Average Daily Trips	Centerline to 70 dBA L_{dn} (feet)	Centerline to 65 dBA L_{dn} (feet)	Centerline to 60 dBA L_{dn} (feet)	L_{dn} (dBA) 50 Feet From Centerline of Outermost Lane
Cleveland Avenue north of Washington Avenue	6,600	<50	<50	<50	58.5
Pierce Street north of Washington Avenue	4,100	<50	<50	<50	54.3
Eastshore Highway south of Buchannan Street	5,500	<50	<50	<50	57.7
Buchannan Street – Filmore Street to Taylor Street	29,600	<50	61	123	63.5
Jackson Street – Portland Avenue to Castro Street	3,900	<50	<50	<50	56.2
San Pablo Avenue – Buchanan Avenue to Solano Avenue	24,700	<50	86	182	66.4
San Pablo Avenue – Buchanan Avenue to Solano Avenue	23,500	<50	84	176	66.2
San Pablo Avenue – Monroe Street to Dartmouth Street	23,500	<50	84	176	66.2
Brighton Avenue – Stannage Avenue to Cornell Avenue	3,500	<50	<50	<50	55.8
Solano Avenue – Stannage Avenue to Cornell Avenue	10,400	<50	<50	60	60.5
Marin Avenue – Stannage Avenue to Cornell Avenue	19,000	<50	<50	<50	56.1
Masonic Avenue – Dartmouth Street to Marin Avenue	3,800	<50	<50	<50	51.1
Key Route Boulevard – Portland Avenue to Thousand Oaks Boulevard	5,200	<50	<50	58	60.2
Solano Avenue – Santa Fe Avenue to Curtis Street	9,700	<50	<50	86	62.2
Marin Avenue – Santa Fe Avenue to Curtis Street	17,600	<50	<50	91	63.2
I-580, west of I-80	76,500	430	921	1,983	80.5
I-80, south of Buchannan Street Interchange	193,100	313	668	1,435	78.4
I-80, south of Buchannan Street Interchange	118,900	233	498	1,071	77.1

Source: LSA Associates, Inc., August 2015.

LSA



LEGEND

- Albany City Limit
- Freeway
- BART Tracks
- Railroad Tracks
- Building
- 60 dBA L_{dn} Roadway Noise
- 65 dBA L_{dn} Roadway Noise
- 70 dBA L_{dn} Roadway Noise
- 60 dBA L_{dn} Rail/BART Noise
- 65 dBA L_{dn} Rail/BART Noise
- 70 dBA L_{dn} Rail/BART Noise

FIGURE IV.F-1

City of Albany General Plan EIR

2014 Noise Contours

SOURCES: CITY OF ALBANY; LSA ASSOCIATES, INC., 2015.

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(2) Existing Rail Noise Levels. The City of Albany is subject to operational rail noise. The BART rail line passes through the City of Albany on elevated tracks along the east side of Masonic Avenue. Based on existing noise monitoring the BART trains generate noise levels of 78 dBA L_{eq} and 97 dBA L_{max}. Land uses surrounding the rail line include single-family residential, the middle school, the library/community center, the senior center, and the Solano Avenue shopping district. Activity on the BART rail lines effects the ambient noise environment along the railroad alignment; however, there is no BART station in the City of Albany. The nearest BART station is located approximately ½ mile north in the City of El Cerrito.

The Union Pacific Railroad line (UPRR) is located west of Cleveland Avenue, along I-80. Land uses near the rail line include high density residential, public facilities, and commercial mixed-use. Factors that influence the overall impact of railroad noise on adjacent uses include the distance of buildings from the tracks, the intermittent nature of train noise (e.g. engine, horns, tracks), and the lack of sound walls or other barriers between the tracks and adjacent uses.

(3) Existing Airport Noise Levels. The Oakland International Airport is located approximately 13 miles south of the City. Buchanan Field Airport is located approximately 17 miles to the east. San Francisco International Airport is located approximately 22 miles southwest of the City, across the Bay. Although noise from aircraft activity is occasionally audible in the project vicinity, due to the distance of the project site from surrounding airports, no portion of the City lies within the 55 dBA CNEL noise contours of any public airport nor does any portion of the City lie within 2 miles of any private airfield or heliport.

(4) Construction Noise. Construction activities are another source of existing noise within the City. Short-term noise impacts are associated with demolition, excavation, grading, and building construction. Construction-period noise levels are often higher than background ambient noise levels, but eventually cease once construction is complete.

Construction is performed in multiple phases, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on each construction site and, therefore, would change the noise levels as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction related noise ranges to be categorized by work phase. Table IV.F-7 lists typical construction equipment noise levels recommended for noise impact assessments, based on a distance of 50 feet between the equipment and a noise receptor.

Typical noise levels range up to 91 dBA L_{max} at 50 feet during the noisiest construction phases, with multiple pieces of equipment running. The site preparation phase, which includes excavation and grading of a site, tends to generate the highest noise levels because the noisiest construction equipment is earthmoving equipment. Earthmoving equipment includes excavating machinery such as backhoes, bulldozers, draglines and front loaders, and earthmoving and compacting equipment, which includes compactors, scrapers and graders. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 to 4 minutes at lower power settings.

Construction noise impacts are evaluated for compliance with the City of Albany's Noise Ordinance, which places a restriction on the permissible hours of noise producing construction and demolition activities. Such operations are restricted to the hours of 8:00 a.m. to 6:00 p.m. weekdays and Saturdays, and from 10:00 a.m. to 6:00 p.m. on Sundays and legal holidays. In addition, all construction equipment used in the City of Albany must be equipped with appropriate sound muffling equipment, which must be properly maintained, and used at all times when such equipment is in operation.

Table IV.F-7: Typical Construction Equipment Maximum Noise Levels, L_{max}

Type of Equipment	Range of Maximum Sound Levels (dBA at 50 feet)	Suggested Maximum Sound Levels for Analysis (dBA at 50 feet)
Pile Drivers	81 to 96	93
Rock Drills	83 to 99	96
Jackhammers	75 to 85	82
Pneumatic Tools	78 to 88	85
Pumps	74 to 84	80
Scrapers	83 to 91	87
Haul Trucks	83 to 94	88
Cranes	79 to 86	82
Portable Generators	71 to 87	80
Rollers	75 to 82	80
Dozers	77 to 90	85
Tractors	77 to 82	80
Front-End Loaders	77 to 90	86
Hydraulic Backhoe	81 to 90	86
Hydraulic Excavators	81 to 90	86
Graders	79 to 89	86
Air Compressors	76 to 89	86
Trucks	81 to 87	86

Source: Bolt, Beranek & Newman, 1987. *Noise Control for Buildings and Manufacturing Plants.*

(5) Existing Stationary Noise Levels. A wide variety of existing stationary sources contribute to noise throughout the City of Albany, which include heating ventilation and cooling (HVAC) mechanical systems, delivery truck idling and loading/ unloading activities, recreational and parking lot activities (such as slamming car doors and talking). Of these noise sources, noise generated by delivery truck activity typically generate the highest maximum noise levels. Delivery truck loading and unloading activities can result in maximum noise levels from 75 dBA to 85 dBA L_{max} at 50 feet. Typical parking lot activities, such as people conversing or doors slamming, generates approximately 60 dBA to 70 dBA L_{max} at 50 feet. Other sources of noise include commercial centers and industrial zones that emit noise during operation. Domestic noise sources such as leaf blowers, gas-powered lawn equipment, etc. are common stationary noise sources and can produce noise levels measured to be 70 dBA to 75 dBA at 50 feet.[11]

(6) Existing Ambient Noise Measurements. LSA conducted ambient noise surveys in May and June of 2014. A Larson-Davis Model 720 sound level meter was used to conduct the ambient noise survey. Short-term, 20-minute, ambient noise level measurements were taken at seven representative locations within the City. Six 24-hour measurements were taken within the City. Table IV.F-8 lists the seven short-term noise monitoring results, and Table IV.F-9 describes each short-term noise monitoring location and the audible noise sources at each location. The long-term 24-hour noise monitoring results are shown in Table IV.F-10.

[11] Noise Free America. *Citizens for a Quieter Sacramento Rebuttal to the CLCA Position on Leaf Blowers.* Website: www.noisefree.org/leafblowers/sqsrebuttal.php (accessed August 6, 2015).

Table IV.F-8: Short-Term (20-minute) Ambient Noise Monitoring Results

Site Number	Date	Start Time	dBA L_{eq}	dBA L_{max}	dBA L_{min}
1	5/30/2014	11:50 a.m.	67.8	89.8	59.2
2	5/30/2014	12:11 p.m.	66.3	88.9	48.7
3	5/30/2014	12:31 p.m.	79.8	99.3	61.3
4	6/3/2014	8:45 a.m.	72.3	89.6	52.7
5	6/3/2014	9:11 a.m.	66.8	88.7	49.7
6	6/3/2014	8:23 a.m.	70.2	94.1	55.1
7	6/6/2014	10:07 a.m.	83.9	103.7	43.5

Source: LSA Associates, Inc., June 2014.

Table IV.F-9: Albany Short-Term Noise Monitoring Locations and Noise Sources

Site Number	Location	Noise Sources
1	Northeast corner of Pierce Street and Solano Avenue	Traffic, train, I-80
2	Northeast corner of Madison Street and Solano Avenue	Roadwork, traffic
3	Cleveland Avenue, near City Maintenance Center	Trucks on I-80
4	Southwest corner of Solano and Masonic Avenues	BART, traffic, people talking
5	Northeast corner of Marin and Talbot Avenues	Traffic
6	Solano Avenue west of San Pablo Avenue	Traffic on both roads
7	Northeast corner of Masonic and Brighton Avenues	BART, traffic, children

Source: LSA Associates, Inc., June 2014.

Table IV.F-10: Long-Term (24-hour) Ambient Noise Monitoring (May 22–June 6, 2014)

Site Number	Location	Time Period	L_{dn}	Sources
1	Marin Avenue	6/3/2014 – 6/4/2014	67	BART, traffic
2	Pierce Street	5/24/2014 – 5/23/2014	76	Traffic, train, I-80
3	Portland Avenue	5/30/2014 – 5/31/2014	58	Traffic, people talking, children
4	Portland Avenue	5/31/2014 – 6/1/2014	56	Traffic, people talking, children
5	Posen Avenue	6/4/2014 – 6/5/2014	56	Traffic, people
6	Safeway at Solano Avenue	6/5/2014 – 6/6/2014	63	Parking lot activities

Source: LSA Associates, Inc., June 2014.

The noise monitoring results show that existing noise levels throughout the City ranged from 66.3 to 83.9 dBA L_{eq}. The calculated L_{dn} at the long-term 24-hour noise monitoring locations ranged from 56 to 76 dBA. This noise level range is typical of an urban/suburban setting near busy roadways and active outdoor use areas. In addition to vehicular traffic, other documented audible noise sources that contribute to the ambient noise environment included construction activity, BART rail line, trucks on I-80 and I-580, people passing by, and children playing.

2. Impacts and Mitigation Measures

This section analyzes the potential noise impacts that could result from growth associated with the implementation of the Draft General Plan. This section begins with a listing of criteria of significance, which establish the thresholds for determining whether an impact is significant. The latter part of this section presents the potential noise impacts associated with implementation of the project. Mitigation measures are recommended, as appropriate.

a. Criteria of Significance. Growth associated with implementation of the Draft General Plan would be considered to result in a significant noise impact if it would:

- Expose persons to or generate noise levels in excess of standards established in the City of Albany's General Plan and Municipal Code, or applicable standards of other agencies;
- Expose persons to or generate excessive groundborne vibration or groundborne noise levels;
- Result in a substantial temporary, periodic, or permanent increase in ambient noise levels in the project vicinity about levels existing without the project (for this project an increase of 3 dBA or greater is considered significant); or
- For a project located within an airport land use plan, or where such a plan has not been adopted within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

b. Project Impacts. This section analyzes the potential noise impacts that could result from growth associated with the implementation of the Draft General Plan are discussed as follows.

(1) Noise Levels in Excess of Standards. Noise levels produced in the City of Albany that could exceed standards include stationary, rail, and traffic sources. Each potential source is included in the discussion below.

Draft General Plan Standards. Development allowed under the Draft General Plan may include installation or creation of new stationary sources of noise, or could include the development of new sensitive land uses in the vicinity of existing stationary noise sources. For commercial or industrial uses, these noise sources could include loading/unloading operations, generators, and outdoor speakers; for residential uses, stationary noise sources may include air conditioners or pool pumps. These stationary sources of noise would have the potential to disturb adjacent sensitive receptors; however, policies included in the Draft General Plan would require project-by-project environmental review to ensure that noise impacts from stationary sources are considered and mitigated for specific projects.

Implementation of Policy EH-5.2 would ensure that noise impacts from stationary sources are minimized by requiring conditions of approval for new activities with the potential to generate significant noise and require on-going or periodic monitoring to ensure conditions are met.

The policies included in the Draft General Plan would provide provisions to protect sensitive receptors from stationary noise sources in excess of acceptable levels. Therefore, implementation of the Draft General Plan would have a less than significant impact from stationary noise sources. The following policies and actions address noise and noise-related impacts and are included in the Draft General Plan.

- **Policy EH-5.2: Noise-Generating Land Uses.** Establish conditions of approval for new activities with the potential to generate significant noise, and require ongoing or periodic monitoring to ensure that these conditions are being met.
- **Action EH-5.B: Acoustical Study Requirements.** Require preparation of an acoustical study for any project which exceeds the "normally compatible" noise levels in the Land Use Compatibility table, based on ambient noise measurements and the Noise Contour Diagrams. The City may also require acoustical studies for projects that meet the noise compatibility guidelines but have the potential to create a significant adverse community response.

Implementation of the Draft General Plan is not anticipated to result in increased railroad operations within the City. Therefore, for the purposes of this analysis, noise levels associated with rail operations are anticipated to remain similar to the existing conditions with implementation of the Draft General Plan. While development allowed by the Draft General Plan could expose new sensitive land uses to excessive noise levels from existing railroad noise sources, policies included in the Draft General Plan would require project-by-project environmental review to ensure that noise impacts from railroad sources are considered in the design and planning stages for noise sensitive projects. Specifically, the Draft General Plan Policy EH-5.6 would ensure that new train noise and vibration impacts are minimized. Noise levels produced by BART trains in Albany are addressed in Policy EH-5.5 which requires noise reduction and improvements to existing BART routes.

Policy EH-5.1 requires new development and major alterations to incorporate site planning and project design strategies to achieve the applicable Noise Compatibility Guidelines. Typical design measures to reduce noise exposure include insulation, double-paned windows, siting of sensitive activities away from nearby noise sources, landscaping, sound muffling devices, and acoustical barriers.[12] The following are applicable policies that would reduce exposure of receptors to noise levels in excess of standards.

- **Policy EH-5.1: Noise-Sensitive Design.** Ensure that ambient noise levels are considered in the design and planning of new development, including new construction and major alterations. Where appropriate, require noise reduction measures to reduce the exposure of residents and workers to excessive noise levels.
- **Policy EH-5.5: BART Noise.** Continue to work with BART to reduce noise levels associated with passing trains. This should include the use of technologies and equipment that result in lower noise levels, as well as measures to absorb sound or insulate sensitive uses along the BART right-of-way.
- **Policy EH-5.6: Train Noise.** Support measures to reduce train noise and vibration associated with rail traffic along the Union Pacific Rail line on the west side of Albany.

Therefore, implementation of the Draft General Plan would not result in the exposure of sensitive receptors to excessive noise levels from railroad noise sources and this impact is less than significant; no additional mitigation measures are required.

Development allowed by the Draft General Plan may include the development of new sensitive land uses in the vicinity of existing traffic noise sources. Table IV.F-11 summarizes traffic noise levels, along major roadway segments within the City under existing conditions and for future conditions

[12] Albany, City of, 2015. *Draft General Plan.* June.

without and with implementation of the Draft General Plan. Figure IV.F-2 depicts projected noise contours under the Draft General Plan conditions. Table IV.F-11 shows projected traffic noise levels as measured at 50 feet from the outermost traveled lane along the modeled roadway segments. The model does not account for existing sound walls or terrain features that could reduce traffic noise levels at adjacent land uses, but rather assumes a worst-case direct line-of-sight over hard surface to the modeled traffic noise sources. This assumption and level of analysis is appropriate for program-level noise analysis.

In addition to the policies and actions previously identified, Policy EH-5.4 addresses traffic noise impacts. Policy EH-5.4 intends to reduce traffic noise on major streets and to encourage adequate interior noise levels in the surrounding areas.

- **Policy EH-5.4: Roadway Noise.** Continue to work with Caltrans to reduce noise associated with traffic on the I-80 and I-580 freeways and other Caltrans facilities such as San Pablo Avenue. Programs to assist residents and businesses near these highways with reducing interior noise levels should be encouraged.

Therefore, the Draft General Plan would not expose persons to noise levels in excess of previous General Plan standards and this impact would be less than significant.

Municipal Code. The City of Albany addresses noise in Chapter 8 in the Municipal Code. The primary objective of Chapter 8 is to control noise nuisances, which are not necessary to the normal function of the City, and which, because of their disturbing nature, have an adverse impact on the health and welfare of people residing within the City of Albany.[13] The Code provides exterior noise thresholds at receiving residential or public land uses. The Draft General Plan includes policies that adhere to and improve the Municipal Code.

Policy EH-5.3 requires the City to maintain a Noise Ordinance in order to continually work to reduce noise, caused by domestic sources, as part of the City's Municipal Code. Additionally, Action EH-5.C provides a basis for the interior noise standards addressed in Chapter 8-1.5.

- **Policy EH-5.3: Domestic Noise Sources.** Maintain a Noise Ordinance as part of the Albany Municipal Code to regulate and reduce sources of domestic noise in the city, such as construction, business operations, and yard maintenance.
- **Action EH-5.A: Noise Ordinance Update.** Periodically review the Albany Noise Ordinance to ensure that is consistent with best practices in noise regulation, addresses current noise issues, and is consistent with the General Plan noise compatibility guidelines in Table IV.F-12.
- **Action EH-5.C: Insulation Standards.** Continue to enforce, and update as needed, insulation standards for all new residential construction in order to maintain an interior standard of 45 dBA L_{dn} in all habitable rooms for dwelling units.

Therefore implementation of the Draft General Plan would not expose persons to noise levels in excess of the City's Municipal Code and this impact would be less than significant.

[13] City of Albany Municipal Code, op. cit.

Table IV.F-11: Summary of Traffic Noise Levels

Roadway Segment	Existing Conditions		2040[a] No Growth in Albany Conditions			2040 Plus Draft General Plan Conditions			
	ADT	L_{dn} (dBA) 50 feet from Centerline of Outermost Lane	ADT	L_{dn} (dBA) 50 feet from Centerline of Outermost Lane	Increase over 2014 Conditions (dBA)	ADT	L_{dn} (dBA) 50 feet from Centerline of Outermost Lane	Increase over 2014 Conditions	Increase over 2040 No Project Conditions (dBA)
Cleveland Avenue - north of Washington Avenue	6,600	58.5	7,800	59.2	0.7	7,900	59.3	0.8	0.1
Pierce Street - north of Washington Avenue	4,100	54.3	4,100	54.3	0.0	4,400	54.6	0.3	0.3
Eastshore Highway - south of Buchanan Street	5,500	57.7	8,200	59.5	1.8	8,600	59.7	2.0	0.2
Buchanan Street - between Fillmore and Taylor Streets	29,600	63.5	32,100	63.9	0.4	32,300	63.9	0.4	0.0
Jackson Street - between Portland Avenue and Castro Street	3,900	56.2	4,200	56.6	0.4	4,400	56.8	0.6	0.2
San Pablo Avenue - between Portland and Garfield Avenues	24,700	66.4	27,500	66.8	0.4	28,700	67.0	0.6	0.2
San Pablo Avenue - between Buchanan Street and Solano Avenue	23,500	66.2	25,000	66.4	0.2	25,700	66.6	0.4	0.2
San Pablo Avenue - between Monroe and Dartmouth Streets	23,500	66.2	27,500	66.8	0.6	27,900	66.9	0.7	0.1
Brighton Avenue - between Stannage and Cornell Avenues	3,500	55.8	3,800	56.1	0.3	3,900	56.2	0.4	0.1
Solano Avenue - between Stannage and Cornell Avenues	10,400	60.5	10,900	60.7	0.2	11,100	60.8	0.3	0.1
Marin Avenue - between Stannage and Cornell Avenues	19,000	64.4	19,300	64.4	0.0	20,100	64.6	0.2	0.2
Masonic Avenue - between Dartmouth Street and Marin Avenue	3,800	56.1	4,100	56.4	0.3	4,200	56.6	0.5	0.2
Key Route Boulevard - between Portland Avenue and Thousand Oaks Boulevard	5,200	51.1	5,900	51.7	0.6	6,000	51.7	0.6	0.0
Solano Avenue - between Santa Fe Avenue and Curtis Street	9,700	60.2	10,100	60.4	0.2	10,200	60.5	0.2	0.0
Marin Avenue - between Santa Fe Avenue and Curtis Street	17,600	62.2	18,800	62.5	0.3	19,200	62.6	0.4	0.1
I-80 - south of Buchanan Street	193,100	80.5	235,300	81.3	0.8	235,600	81.4	0.9	0.1
I-80 - north of Buchanan Street	118,900	78.4	140,100	79.1	0.7	140,100	79.1	0.7	0.0
I-580 - north of Buchanan Street	76,500	77.1	103,500	78.4	1.3	130,700	79.4	2.3	1.0

[a] While the General Plan horizon is 2035, the traffic analysis was completed for 2040 to align with the latest Alameda CTC model, and the analysis of traffic noise is based on the traffic analysis.

Notes: ADT = Average Daily Traffic

Source: LSA Associates, Inc., August 2015.

Table IV.F-12: Draft 2035 General Plan Noise Compatibility Guidelines for Albany

Land Uses	Interior L_{dn} (dBA)	Exterior Noise Exposure, L_{dn} (dBA) 55 60 65 70 75 80
Residential-Low Density Single-Family, Duplex, Mobile Homes	45*	
Residential-Multiple Family	45*	
Transient Lodging, Motels, Hotels	45*	
Schools, Libraries, Churches, Hospitals, Nursing Homes	45*	
Auditoriums, Concert Halls, Amphitheaters	--	
Sports Arena, Outdoor Spectator Sports	--	
Playgrounds, Neighborhood Parks	--	
Golf Courses, Riding Stables, Water Recreation, Cemeteries	--	
Office Buildings, Businesses, Commercial and Professional	50	
Industrial, Manufacturing, Utilities, Agricultural	--	

Normally Acceptable:
Specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Normally Unacceptable:
New construction or development should generally be discouraged. If new construction does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Conditionally Acceptable:
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and the needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Clearly Unacceptable:
New construction or development generally should not be undertaken.

* Noise level requirement with closed windows, mechanical ventilation, or other means of ventilation shall be provided per Chapter 12 Section 1205 of the Building Code.

Source: State of California, *General Plan Guidelines*, 2003; City of Albany, *2035 Draft General Plan*, June 2015.

NOTE: 2035 contours have been calculated using 2040 traffic volumes to align with Alameda CTC traffic model, and thus are conservative estimates, based on slightly higher traffic volumes than would be expected in 2035.

LSA

LEGEND

- Albany City Limit
- Freeway
- BART Tracks
- Railroad Tracks
- Building
- 60 dBA L_{dn} Roadway Noise
- 65 dBA L_{dn} Roadway Noise
- 70 dBA L_{dn} Roadway Noise
- 60 dBA L_{dn} Rail/BART Noise
- 65 dBA L_{dn} Rail/BART Noise
- 70 dBA L_{dn} Rail/BART Noise

N

0 660 1320
FEET

FIGURE IV.F-2

City of Albany General Plan EIR

2035 Projected Noise Contours

SOURCES: CITY OF ALBANY; LSA ASSOCIATES, INC., 2015.

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(2) Generate Excessive Groundborne Vibration. Common sources of groundborne vibration and noise include trains and construction activities such as blasting, pile driving and operating heavy earthmoving equipment. Potential groundborne vibration and noise impacts may occur should the Draft General Plan locate future residents near existing UPRR and BART lines. In addition, construction activities associated with projects that could occur under the Draft General Plan could result in exposure of sensitive land uses to excessive groundborne vibration and noise levels. Impacts associated with groundborne vibration and noise produced by rail and construction are usually contained to areas within about 100 feet from the vibration source. Typically, the main effect of groundborne vibration and noise is to cause annoyances for occupants of nearby buildings. The Draft General Plan would provide up to 815 new residential units; however, the locations of these units have not been specifically identified.

As discussed above, potential noise impacts associated with rail activities would be minimized through the implementation of Draft General Plan policies EH-5.5 and EH-5.6. These policies utilize the Noise Compatibility Guidelines (Table IV.F-12) as a guide for planning and development decisions. These policies would also minimize groundborne vibration.

- **Policy EH-5.5: BART Noise.** Continue to work with BART to reduce noise levels associated with passing trains. This should include the use of technologies and equipment that result in lower noise levels, as well as measures to absorb sound or insulate sensitive uses along the BART right-of-way.
- **Policy EH-5.6: Train Noise.** Support measures to reduce train noise and vibration associated with rail traffic along the Union Pacific Railroad line on the west side of Albany.

With implementation of these policies, the Draft General Plan would not result in the exposure of sensitive receptors to excessive groundborne vibration or noise levels and this impact would be less than significant.

(3) Substantial Permanent Increase in Ambient Noise Levels. The following sections address possible noise level increases in the project vicinity resulting from implementation of the Draft General Plan. Potential sources of increased noise level include traffic-related noise and construction-related noise.

Traffic Noise. It is projected that traffic volumes on some streets within the City would increase due to growth envisioned in the Draft General Plan as shown in Table IV.F-11. This increase in traffic volumes will result in increased traffic noise levels compared to existing conditions. See Section IV.C, Transportation and Circulation, for a description of the assumptions included in the noise analysis.

The significance criteria defines a significant impact to occur if the project would result in a substantial (3 dBA or greater) permanent increase in ambient noise levels in the project vicinity above levels existing without the project. As noted in the setting section, increases of 3 dBA or more are generally considered the smallest increase in noise levels to be readily perceptible in suburban or urban outdoor environments. As shown in Table IV.F-11, traffic noise levels under 2040 Plus Draft General Plan conditions would increase between 0.2 and 2.3 dBA from existing conditions. Therefore, the roadway segments within the City would not have significantly higher traffic noise when compared to existing noise levels. Additionally, when compared to the 2040 No Growth in Albany conditions, the 2040 Plus Draft General Plan conditions would result in a minimal increase in traffic noise.

With the exception of I-580, roadway segments under future Draft General Plan traffic conditions would show slight increases (less than 0.5 dBA) above those expected under the 2040 No Growth in Albany conditions. These increases are less than the substantial increase of 3 dBA defined in the significance criteria. However, any project-related increase in ambient noise levels for noise environments currently exposed to noise levels in excess of conditionally acceptable levels for noise sensitive land uses would be considered a cumulatively considerable contribution to the significant cumulative impact of regional noise and mitigation must be considered. According to the proposed Noise Compatibility Guidelines for Albany conditionally acceptable noise levels would be less than 70 dBA for residential uses and other sensitive land uses.

As shown in Table IV.F-11, noise levels for roadways adjacent to noise sensitive uses range from 52 to 67 dBA L_{dn}. Because the increases in noise associated with implementation of the project are minor (between 0.2 and 2.3 dBA), the project would not be expected to result in a substantial project level or cumulative increase in ambient noise.

Construction. Construction activities associated with development allowed under the Draft General Plan could result in substantial temporary or periodic increases in ambient noise levels near project sites throughout the City.

Two types of short-term noise impacts would occur during demolition, site preparation, and construction of proposed projects. The first type would result from the increase in traffic flow on local streets, associated with the transport of workers, equipment, and materials to and from the project site. The transport of workers, construction equipment, and materials to the project site would incrementally increase noise levels on access roads leading to the site.

The second type would result from equipment use and activities associated with demolition, site preparation, and construction of proposed projects. Construction is performed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These phases would change the character of the noise generated on project sites and, therefore, the noise levels surrounding sites as construction progresses.

Table IV.F-7 lists typical maximum noise levels for various pieces of construction equipment, as measured at a distance of 50 feet from the operating equipment. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. The site preparation phase, which includes excavation and grading, tends to generate the highest noise levels, because the noisiest construction equipment is earthmoving equipment. Earthmoving equipment includes excavating machinery such as backhoes, bulldozers, draglines, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full-power operation followed by 3 or 4 minutes at lower power settings. Typical maximum noise levels during the site preparation phase of construction can range up to 91 dBA L_{max} at 50 feet from multiple pieces of operating equipment.

Implementation of Draft General Plan Policy EH-5.3 would ensure that noise impacts from construction activities associated with development that could occur with implementation of the Draft General Plan would be minimized by following the guidelines and requirements of the Municipal Code and the City's Noise Ordinance. In addition, Action EH-5.A requires the City to update the

Noise Ordinance to include noise performance standards for stationary noise sources per the noise compatibility guidelines.

The following are the applicable policies and actions identified above.

- **Policy EH-5.3: Domestic Noise Sources.** Maintain a Noise Ordinance as part of the Albany Municipal Code to regulate and reduce sources of domestic noise in the city, such as construction, business operations, and yard maintenance.
- **Action EH-5.A: Noise Ordinance Update.** Periodically review the Albany Noise Ordinance to ensure that it is consistent with best practices in noise regulation, addresses current noise issues, and is consistent with the General Plan noise compatibility guidelines in Table 1 (Table IV.F-12).

(4) Excessive Airport Noise. As noted in the existing conditions discussion above, aircraft noise in the City of Albany is primarily related to aircraft operations at the Oakland International Airport, Buchanan Field Airport, or the San Francisco International Airport. Aircraft noise is occasionally audible within the City, due to the distance to surrounding airports, but no portion of the City lies within the 55 dBA CNEL noise contours of any public airport nor does any portion of the City lie within 2 miles of any private airfield or heliport. Therefore, the Draft Albany General Plan would not result in the exposure of sensitive receptors to excessive noise levels from aircraft noise sources.

c. Cumulative Impacts. Any project-related increase in ambient noise levels for noise environments currently exposed to noise levels in excess of conditionally acceptable levels for noise sensitive land uses would be considered a cumulatively considerable contribution to the significant cumulative results shown in Table IV.F-11. Land uses along the modeled roadway segments were not found to experience traffic noise levels in excess of existing noise levels under cumulative conditions with the project, compared to cumulative traffic noise levels that would exist without the project.

Additionally, as shown in the traffic noise impact discussion above, implementation of Draft General Plan Policies EH-5.1, EH-5.2, and Actions EH-5A, EH-5B would minimize traffic noise impacts. implementation of Draft General Plan Policies EH-5.4., EH-5.5, and EH-5.6 would aim to minimize noise associated with Caltrans facilities (e.g., I-80, I-580, and San Pablo Avenue), BART and rail traffic.

These policies would require the City to consider noise and land use compatibility issues when evaluating individual development proposals, and to take steps to reduce noise impacts. As described above, the Draft General Plan would not result in a substantial cumulative increase in noise. Therefore, under cumulative conditions the proposed project impacts would be considered less than significant.

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G. GEOLOGY, SEISMICITY, AND MINERAL RESOURCES

This section describes the existing geologic and seismic conditions, including mineral resources, for the City of Albany. Background information for this section is based on regional geologic reports and maps from the United States Geological Survey (USGS), the California Geological Survey (CGS), the U.S. Department of Agriculture (USDA), and other sources. The impacts and mitigation measures section defines the criteria of significance and identifies potential impacts and mitigation measures related to geology, seismicity, and mineral resources for future development in the City of Albany.

1. Setting

The setting section describes existing conditions in the City of Albany and pertinent federal, State, and local agency laws, regulations, and programs related to geology and seismicity.

a. Geologic Conditions. The City of Albany has an incorporated area of approximately 5.5 square miles (including land and water).[1] The majority of the land area is located on a gentle, westward-sloping alluvial plain on the eastern margin of San Francisco Bay.[2] The underlying Quaternary alluvial sediments mainly consist of unconsolidated gravel, sand, silt, and clay deposits that have been subject to redistribution by fluvial (stream) processes. These materials were shed from the Berkeley Hills which rise as a series of ridges east of the City. The westernmost portion of the City, bordering San Francisco Bay, is underlain by artificial fill which includes a heterogeneous mixture of clay, silt, sand, rock fragments, organic matter, and man-made debris.

Two isolated outcrops of Franciscan Complex sandstone (Late Cretaceous) are located in the western portion of the City near the boundary of San Francisco Bay. Albany Hill, a distinctive hilltop in the northwest corner of the City, and Fleming Point, located under and west of Golden Gate Fields, are underlain by this sandstone. Table IV.G-1 describes the geologic units in the City of Albany and Figure IV.G-1 shows the generalized geology and Figure IV.G-2 shows the location of earthquake faults.

Table IV.G-1: Geologic Units in the City of Albany

Symbol	Unit Name	Age	Description
Qhaf	Alluvium	Quaternary - Holocene	Young alluvial fan deposits: fine-grained sand and silt, minor gravel
Qpaf	Alluvium	Quaternary - Pleistocene	Young alluvial fan deposits: fine-grained sand and silt, minor gravel
Kfn	Franciscan Complex	Jurassic to Cretaceous	Sandstone with smaller amounts of shale, chert, limestone, and conglomerate
af	Artificial fill	Historic	Clay, silt, sand, rock fragments, organic matter, and man-made debris

Source: California Department of Conservation, 2001. *Oil, Gas, and Geothermal Fields in California.* Map S-1.

[1] United States Census Bureau, 2010. Albany, California. Website: quickfacts.census.gov/qfd/states/06/0600674.html.

[2] Graymer, R.W., et al., 2000. *Geologic Map and Map Database of the Oakland Metropolitan Area, Alameda, Contra Costa and San Francisco Counties, California.*

(1) Soils. Soil is generally defined as the unconsolidated mixture of mineral grains and organic material which mantles the land surfaces of the earth. Soils can develop on unconsolidated sediments, such as alluvium, and weathered bedrock. The characteristics of soil reflect the five major influences on their development: topography, climate, biological activity, parent material, and time.

Soil surveys from the USDA indicate that City soils consist of five basic soil mapping units that are summarized in Table IV.G-2, including the area of the individual soil units, their shrink-swell potential, and whether the soils are corrosive to steel or concrete. The extent of the soil units are shown on Figure IV.G-3.

Table IV.G-2: Soils in the City of Albany

Soil Association/Name	Approximate Acreage within Albany	Linear Extensibility (shrink-swell)	Corrosivity (uncoated steel)	Corrosivity (concrete)
Los Osos-Millsholm Complex[a]	106	Moderate to High	Moderate	Low
Millsholm Silt Loam	64	Low	Moderate	Low
Urban Land	312	N/A	N/A	N/A
Urban Land-Clearlake Complex	223	N/A	N/A	N/A
Urban Land-Tierra Complex[b]	167	Low to High	Moderate	Moderate
Clear Lake Clay	12	High to Very High	High	Moderate
Tierra Loam	251	Low to High	High	Moderate

[a] The Los Osos component makes up 60 percent of the map unit and is used to describe the shrink-swell and corrosivity potential.

[b] The Tierra component makes up 50 percent of the map unit and is used to describe the shrink-swell and corrosivity potential.

Source: U.S. Department of Agriculture, 2015. Natural Resources Conservation Service. *Web Soil Survey*. Website: websoilsurvey.sc.egov.usda.gov/App/HomePage.htm (accessed May 18, 2015).

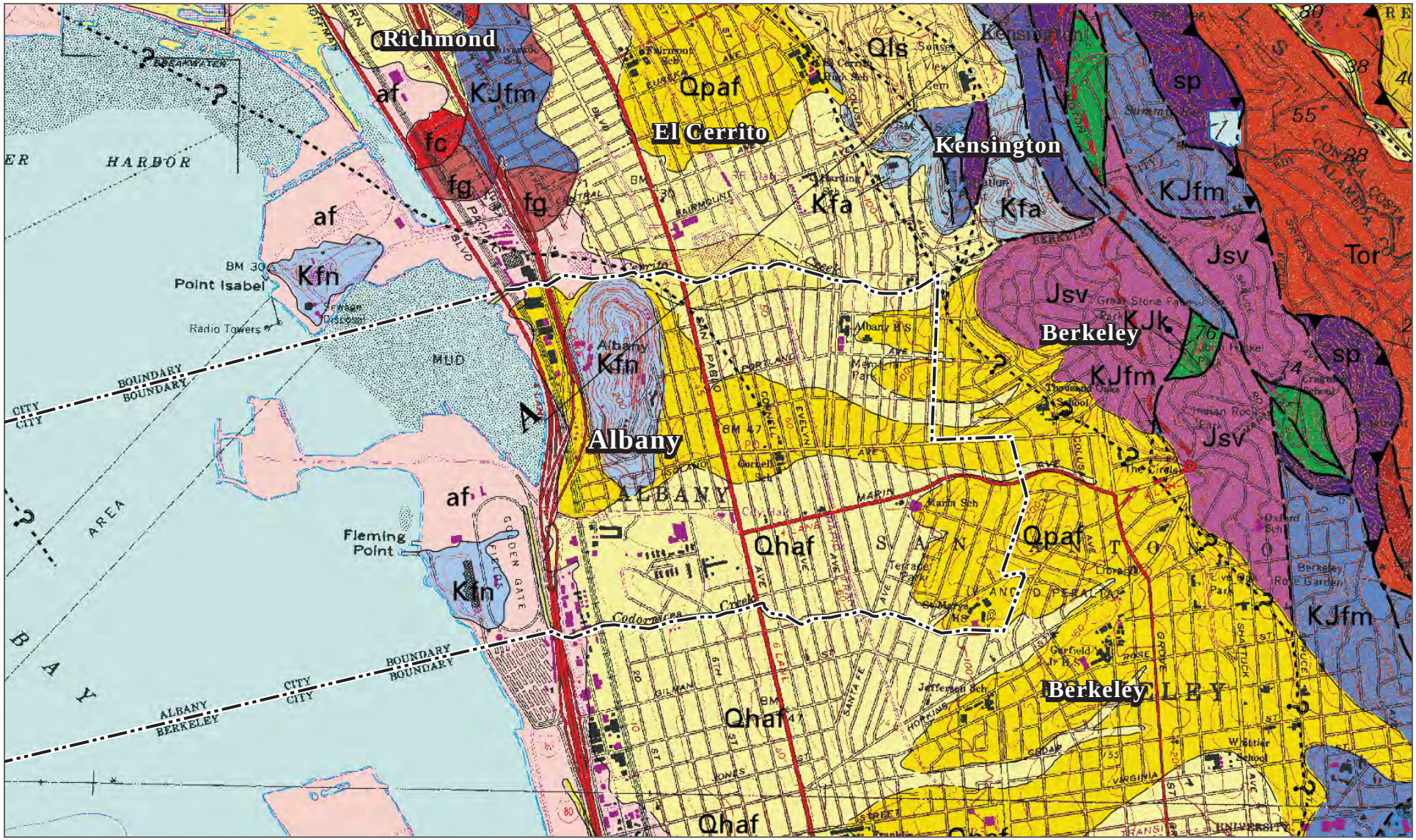
(2) Mineral Resources. Statewide mapping of mineral resources classified the majority of the City of Albany as MRZ-1, "areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for the presence."[3] Albany Hill, composed of Franciscan Complex sandstone, is classified as MRZ-2, "areas where adequate information indicates that significant deposits are present, or where it is judged that high likelihood for the presence exists."[4] Historic mining of the sandstone has occurred at both Albany Hill and at Fleming Point; there are no active or permitted mining operations within the City. There have been no natural gas, oil, or geothermal resources identified in or adjacent to the City.[5,6]

[3] California Division of Mines and Geology, 1987. *Mineral Land Classification: Aggregate Materials in the San Francisco – Monterey Bay Area.* Special Report 146, part II.

[4] Ibid.

[5] California Department of Conservation, 2000. *Energy Map of California, Map S-2, 3rd Edition.*

[6] California Department of Conservation, 2001. *Oil, Gas, and Geothermal Fields in California.* Map S-1.



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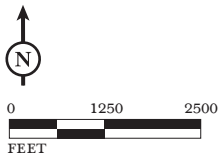

af	Artificial Fill (Historic)	Jsv	Keratophyre/Quartz Keratophyre (Late Jurassic)	KJsv	Volcanoclastic breccia
fc	Serpentinite blocks	Kfa	Sandstone of Alcatraz terrane of Blake & others (1984)(Cretaceous)	Qhaf	Alluvial fan and fluvial deposits (Holocene)
fg	Greenstone blocks	Kfn	Sandstone of Novato Quarry terrane of Blake & others (1984)(Late Cretaceous)	Qpaf	Alluvial fan and fluvial deposits (Pleistocene)
sp	Chert blocks	KJfm	Franciscan complex mélange (Cretaceous Late Jurassic), includes mapped locally: Graywacke & meta-graywacke blocks	Qls	Landslide deposits (Pleistocene)
					Albany City Limits

SOURCES: R.W. GRAYMER, 2000; BASELINE; LSA ASSOCIATES, INC., 2015.

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FIGURE IV.G-1

City of Albany General Plan EIR

City of Albany Geology

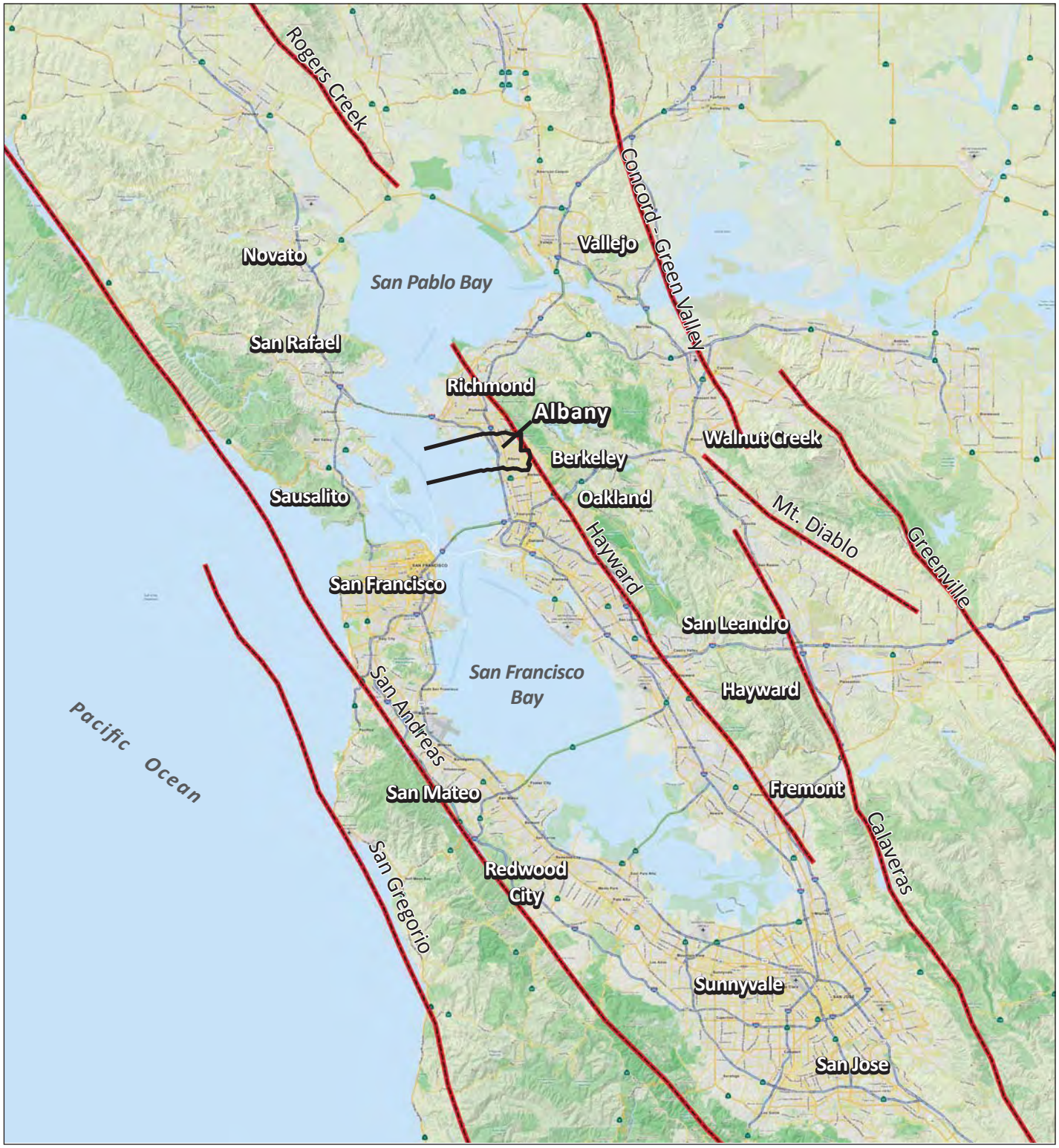

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FIGURE IV.G-2

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Albany City Limits

Fault Lines

0 5 10

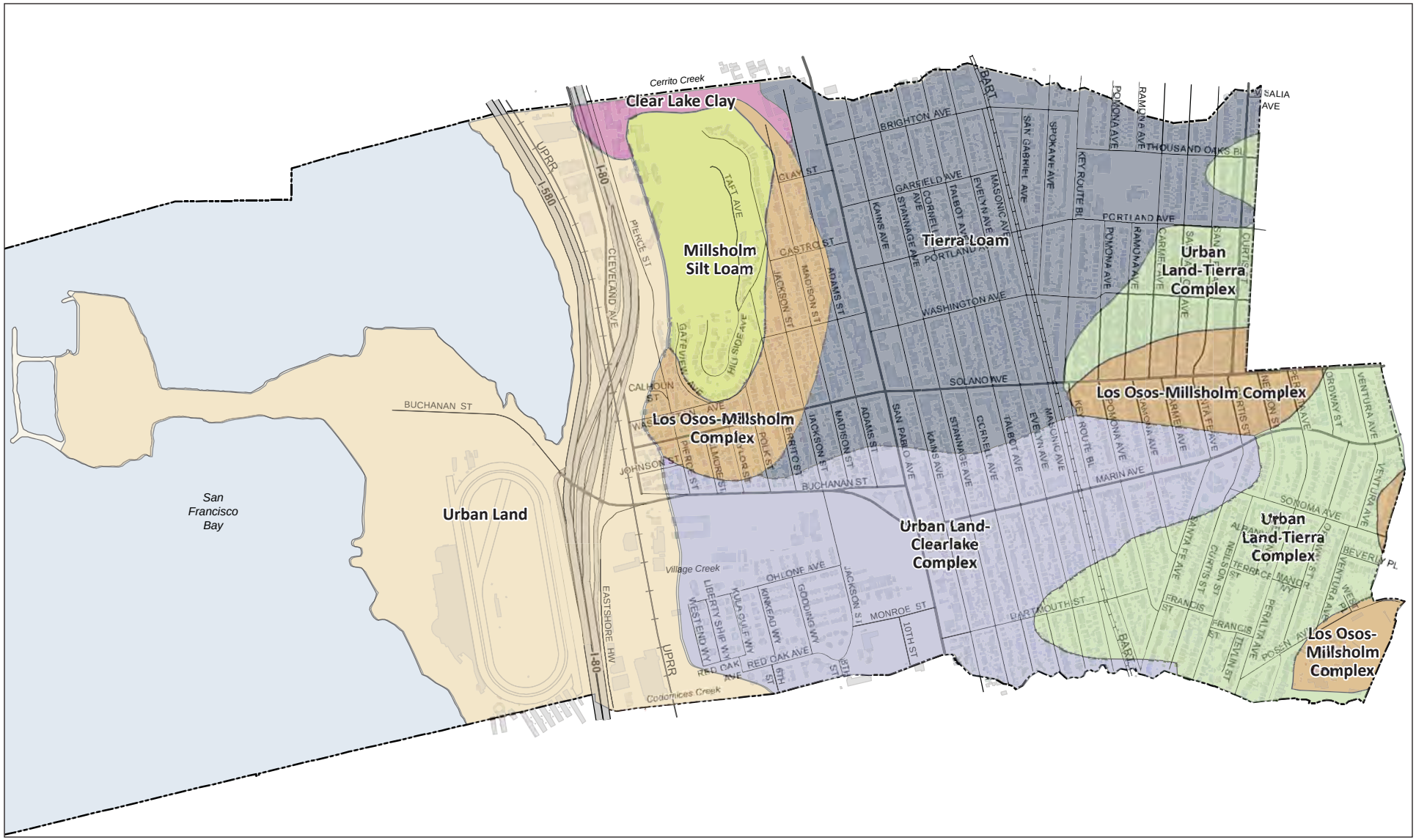
MILES

City of Albany General Plan EIR

San Francisco Bay Area Fault Map

SOURCES: MAPQUEST; UNITED STATES GEOLOGICAL SURVEY, 2015.

I:\ABY1301 Albany GP\figures\DEIR\Fig_IVG2.ai (11/3/15)



LSA

LEGEND

- Albany City Limit
- Freeway
- BART Tracks
- Railroad Tracks
- Building
- Urban Land
- Urban Land: Clearlake Complex
- Urban Land: Tierra Complex
- Millsholm Silt Loam
- Tierra Loam
- Los Osos-Millsholm Complex
- Clear Lake Clay

N

0 0.125 0.25
MILES

SOURCE: SOIL CLASSIFICATIONS (USDA, NATURAL RESOURCES CONSERVATION SERVICE, 2015)

I:\ABY1401 Albany GP\figures\Fig_IVG3.ai (8/24/15)

FIGURE IV.G-3

City of Albany General Plan EIR

Soil Classifications

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(3) Topography. The City of Albany is in an area with relatively modest topographic relief with an elevation of zero feet NGVD[7] along the shores of San Francisco Bay and rising to approximately 200 feet NGVD 1.5 miles to the east, at the eastern edge of the City near the corner of Ventura and Sonoma Avenues. A relatively large physical landmark, Albany Hill, is located near the northwest boundary of the City and rises more than 250 feet above the surrounding grade and covers an area of over 40 acres.[8]

(4) Slope Stability. Slope failure can occur as either rapid movement of large masses of soil ("landslide") or slow, continuous movement ("creep"). The primary factors influencing the stability of a slope are: 1) the nature of the underlying soil or bedrock; 2) the geometry of the slope (height and steepness); 3) rainfall; and 4) the presence of previous landslide deposits. Landslides are commonly triggered by unusually high rainfall and the resulting soil saturation, earthquakes, or a combination of these conditions.

Based on old debris flow (i.e., mudslide) deposits, CGS has mapped the side slopes of Albany Hill as a seismic hazard zone for earthquake-induced landslides.[9] The flatland areas located west of San Pablo Avenue and adjacent to the Bay have gentle slopes with little or no potential for landslides. Few landslides, if any, have be mapped on the east side of the City.[10] Overall, the City has a relatively low susceptibility to landslides and creep due to the low to moderate relief of the local topography, with the exception of localized areas around Albany Hill.

(5) Expansive Soils. Expansion and contraction of volume can occur when expansive soils undergo alternating cycles of wetting (swelling) and drying (shrinking). During these cycles, the volume of the soil changes markedly. The most commonly referenced measure of expansion potential is linear extensibility. As a consequence of such soil volume changes, structural damage to building and infrastructure may occur if the potentially expansive soils were not considered in building design and during construction. The soils of the City range from low to very high shrink-swell potential (i.e., low to very high linear extensibility) (Table IV.G-2). Moderate to very high shrink-swell potential soils are classified as expansive soils, which can pose geotechnical hazards to subsurface utilities and building foundations.[11]

(6) Subsidence. Subsidence is the lowering of the land-surface elevation. The mechanism for subsidence is generally related to groundwater pumping and subsequent consolidation of loose aquifer sediments. The primary hazards associated with subsidence are increased flooding hazards and damage to underground utilities as well as above-ground structures. Other effects of subsidence include changes in the gradients of stormwater and sanitary sewer drainage systems in which the flow is gravity-driven. The City is very nearly built out and water is provided via the water supply utility,

[7] National Geodetic Vertical Datum of 1929, which is roughly equivalent to mean sea level.

[8] United States Geological Survey, 2012. *Richmond Quadrangle 7.5' series Topographic Map.*

[9] California Geological Survey, 2003. *State of California Seismic Hazard Zones; Richmond Quadrangle.* February 14.

[10] United States Geological Survey, 1998. *San Francisco Bay Region Landslide Information: Summary Distribution of Slides and Earth Flows. USGS Open-File Report 97-745.*

[11] U.S. Department of Agriculture, 2015. Natural Resources Conservation Service. *Web Soil Survey*. Website: websoilsurvey.sc.egov.usda.gov/App/HomePage.htm (accessed May 18, 2015).

East Bay Municipal Utility District. There are no significant agricultural or industrial activities that result in the substantial pumping withdrawal of water from the underlying aquifer that would contribute to subsidence in the City.

(7) Settlement and Differential Settlement. Differential settlement could occur if buildings or other improvements were built on low-strength foundation materials (including imported fill) or if improvements straddle the boundary between different types of subsurface materials (i.e., a boundary between native material and fill or between bedrock and unconsolidated sediments). Although differential settlement generally occurs slowly enough that its effects are not dangerous to inhabitants, it can cause significant building damage over time. Portions of the City that contain loose or uncontrolled (non-engineered) fill or recent alluvial sediments may be susceptible to differential settlement.

b. Seismic Conditions. The City of Albany is located in the seismically active San Francisco Bay Area. The main geologic condition which generates the seismic activity in the region is movement along the tectonic plate boundary between the North American and Pacific plates. Locally, this boundary is referred to as the San Andreas Fault Zone (SAFZ) and includes numerous active faults found by the California Geological Survey under the Alquist-Priolo Earthquake Fault Zoning Act to be "active" (i.e., to have evidence of fault rupture in the past 11,000 years). Albany City Hall is located approximately 1.6 miles west of the Hayward Fault, approximately 13.8 miles west of the northern terminus of the Mt. Diablo Fault, and 16.7 miles east of the San Andreas Fault (Figure IV.G-2).[12]

(1) Fault Rupture Damage. Surface rupture occurs when the ground surface is broken due to fault movement during an earthquake. Regional faults identified by the CGS are shown in Figure IV.G-2. The location of surface rupture generally can be assumed to be along an active major fault trace. CGS has mapped areas susceptible to surface fault rupture by delineating Alquist-Priolo Earthquake Fault Zones, which have up to an approximately 0.25-mile buffer around surface traces of active faults. The nearest Alquist-Priolo Earthquake Fault Zone to the City of Albany is mapped along the northern section of the Hayward Fault, which generally follows along the base of the foothills of the Berkeley Hills. No known active faults are present within the City and therefore hazards associated with surface fault rupture in the City are considered negligible.[13]

(2) Seismic Shaking. Seismic shaking (or ground shaking) is a general term referring to all aspects of motion of the earth's surface resulting from an earthquake, and is normally the major cause of damage in seismic events. The extent of ground shaking is controlled by the magnitude and intensity of the earthquake, distance from the epicenter, and local geologic conditions. Magnitude is a measure of the energy released by an earthquake; it is assessed by seismographs that measure the amplitude of seismic waves. Intensity is a subjective measure of the perceptible effects of seismic energy at a given point and varies with distance from the epicenter and local geologic conditions. The Modified Mercalli Intensity Scale (MMI) is the most commonly used scale for measurement of the subjective effects of earthquake intensity and is further described in Table IV.G-3.

[12] California Division of Mines and Geology, 1988. *Fault Map of California, with locations of Volcanoes, Thermal Springs, and Thermal Wells, California Department of Conservation.*

[13] California Geological Survey, 1982. *State of California Special Study Zones; Richmond.* January 1.

Table IV.G-3: Modified Mercalli Scale

M[a]	Category	Definition
	I	Not felt except by a very few under especially favorable circumstances.
3	II	Felt only by a few persons at rest, especially on upper floors of buildings. Delicately suspended objects may swing.
	III	Felt quite noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibration like passing of truck. Duration estimated.
4	IV	During the day felt indoors by many, outdoors by few. At night some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
	V	Felt by nearly everyone, many awaken. Some dishes, windows, etc., broken; a few instances of cracked plaster; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop.
5	VI	Felt by all, many frightened and run outdoors. Some heavy furniture moved; a few instances of fallen plaster or damaged chimneys. Damage slight.
6	VII	Everybody runs outdoors. Damage negligible in building of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving motor cars.
	VIII	Damage slight in specially designed structures; considerable in ordinary substantial buildings, with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving motor cars disturbed.
7	IX	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.
8	X	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from river banks and steep slopes. Shifted sand and mud. Water splashed (slopped) over banks.
	XI	Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.
	XII	Damage total. Practically all works of construction are damaged greatly or destroyed. Waves seen on ground surface. Lines of sight and level are distorted.

[a] Richter magnitude correlation.

Source: California Geological Survey, 2002. How Earthquakes and Their Effects are Measured.

Geologic and soil conditions in an area can influence the shaking effects of an earthquake. The Association of Bay Area Governments (ABAG) earthquake hazard mapping indicates a magnitude 7.0 event on the Hayward Fault would result in very strong to violent (MMI-VIII to MMI-IX, see Table IV.G-3) shaking in the City. This level of ground shaking could cause considerable damage to structures constructed in accordance with CBC standards (including seismically retrofitted unreinforced masonry buildings) and great damage in ordinary buildings that have not been built to CBC standards (e.g., soft-story residential buildings). Strong to very strong ground shaking would

also be felt during large seismic events from the San Andreas Fault, Concord-Green Valley Fault, Calaveras Fault, and San Gregorio Fault (Figure IV.G-1).[14]

(3) Liquefaction and Lateral Spreading. Liquefaction is the rapid transformation of saturated, loose, fine-grained sediment to a fluid-like state because of high pore-water pressure developed in the sediment usually caused by earthquake ground shaking. In the process, the soil undergoes transient loss of strength, which commonly causes ground displacement or ground failure to occur. Since saturated soils are a necessary condition for liquefaction, soil layers in areas where the groundwater table is near the surface have higher liquefaction potential than those in which the water table is located at greater depths. Liquefaction potential increases in the vicinity of the San Francisco Bay and locally near creeks where loose, granular recently deposited sediments have accumulated as a result of stream processes. The potential for liquefaction also depends on soil conditions and groundwater levels, which may fluctuate.

Liquefaction has resulted in substantial loss of life, injury, and damage to property. In addition, liquefaction increases the hazard of fires because of explosions induced when underground gas lines break, and because the breakage of water mains substantially reduces fire suppression capability. In general, where there is any potential for liquefaction, site-specific studies are needed to determine the extent of the hazard if development were to occur in the area.

Lateral spreading is a form of horizontal displacement of soil toward an open channel or other "free" face, such as an excavation boundary. Lateral spreading can result from either the slump of low cohesion unconsolidated material or more commonly by liquefaction of either the soil layer or a subsurface layer underlying soil material on a slope, resulting in gravitationally driven movement.[15] Lateral spreading (lurching) may also occur where open banks and unsupported cut slopes provide a free face. Ground shaking, especially when inducing liquefaction, may cause lateral spreading toward unsupported slopes. Areas most prone to lateral spreading are those that consist of fill material that has been improperly engineered, that have steep, unstable banks, and that have high groundwater tables. Damage caused by liquefaction and lateral spreading is generally most severe when liquefaction occurs within 15 to 20 feet of the ground surface.

In the City of Albany, CGS has mapped a seismic hazard zone for liquefaction that requires additional investigation to determine the extent and magnitude of potential ground failure. The zone extends from the banks of Codornices Creek along the south boundary of the City to the lowlands area adjacent the San Francisco Bay (including the area west of San Pablo Avenue and south of Buchanan Street).[16] Specifically, the zone shows an area "where historic occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693 (c) would be required."

[14] Association of Bay Area Governments, 2015. *Future Earthquake Shaking Scenarios*. Website: resilience.abag.ca.gov/earthquakes (accessed May 18, 2015).

[15] Rauch, Alan F., 1997. *EPOLLS: An Empirical Method for Predicting Surface Displacements due to Liquefaction-Induced Lateral Spreading in Earthquakes*, Ph. D. Dissertation, Virginia Tech, Blacksburg, VA.

[16] California Geological Survey, 2003, op. cit.

c. Regulatory Framework. This section describes the applicable federal, State and local regulations that pertain to the City of Albany.

(1) Federal Regulations. The National Earthquake Hazards Reduction Program (NEHRP) was established by the U.S. Congress when it passed the Earthquake Hazards Reduction Act of 1977, Public Law (PL) 95–124. In establishing NEHRP, Congress recognized that earthquake-related losses could be reduced through improved design and construction methods and practices, land use controls and redevelopment, prediction techniques and early-warning systems, coordinated emergency preparedness plans, and public education and involvement programs. The four basic NEHRP goals remain unchanged:

1. Develop effective practices and policies for earthquake loss reduction and accelerate their implementation.
2. Improve techniques for reducing earthquake vulnerabilities of facilities and systems.
3. Improve earthquake hazards identification and risk assessment methods, and their use.
4. Improve the understanding of earthquakes and their effects.

Several key federal agencies contribute to earthquake mitigation efforts. There are four primary NEHRP agencies:

1. National Institute of Standards and Technology of the Department of Commerce
2. National Science Foundation
3. USGS of the Department of the Interior
4. Federal Emergency Management Agency (FEMA) of the Department of Homeland Security

Implementation of NEHRP priorities is accomplished primarily through original research, publications, and recommendations to assist and guide State, regional, and local agencies in the development of plans and policies to promote safety and emergency planning.

(2) State Regulations. State regulations described below include the California Building Code, earthquake protections laws, Alquist-Priolo Earthquake Fault Zoning Act, Seismic Hazards Mapping Act, regulations pertaining to oil, gas, and geothermal wells, and the Surface Mining and Reclamation Act of 1975.

California Building Code. The 2013 California Building Code (CBC), which refers to Part 2 of the California Building Standards Code in Title 24 of the California Code of Regulations, is based on the 2012 International Building Code. The 2013 CBC covers grading and other geotechnical issues, building specifications, and non-building structures. The CBC requires that a site-specific geotechnical investigation report be prepared by a licensed professional for proposed developments of one or more buildings greater than 4,000 square feet to evaluate geologic and seismic hazards. Buildings less than or equal to 4,000 square feet also are required to prepare a geologic engineering report, except for one-story, wood-frame and light-steel-frame buildings of Type V construction that are located outside of the Alquist-Priolo Earthquake Faults Zones.

The purpose of a site-specific geotechnical investigation is to identify seismic and geologic conditions that require project mitigation, such as surface fault ruptures, ground shaking, liquefaction, differential settlement, lateral spreading, expansive soils, and slope stability. Requirements for the geotechnical investigation are presented in Chapter 16 "Structural Design" and Chapter 18 "Soils and Foundation" of the 2013 CBC.

Earthquake Protection Laws. There are two State laws that address buildings and their resistance to earthquakes. The first is known as the Earthquake Protection Law, the portion of the Health and Safety Code in Division 13, Part 3 commencing with Section 19100. The law establishes the requirement that all buildings be designed to resist lateral forces from seismic motion, and allows local government to enact local requirements to mitigate the risk from existing buildings, such as unreinforced masonry buildings and others not designed in consideration of seismic motion.

The other State law regarding earthquake safety is in Government Code, Title 2, Chapter 12.2, commencing with Section 8875. This law requires cities and counties to identify potentially hazardous buildings, as defined, and establish a local mitigation program. Further, the owner of a building identified as a potentially hazardous building must post a written notice in a conspicuous location to warn the public as to the potential hazard during an earthquake.

Alquist-Priolo Earthquake Fault Zoning Act. Surface rupture is the most easily avoided seismic hazard. The Alquist-Priolo Earthquake Fault Zoning Act (APEFZA) was passed in December 1972 to mitigate the hazard of surface faulting to structures for human occupancy. As required by the Act, the CGS has delineated Earthquake Fault Zones along known active faults in California. There are no Earthquake Fault Zones located within the City.

Seismic Hazards Mapping Act. In 1990, following the 1989 Loma Prieta earthquake, the California Legislature enacted the Seismic Hazards Mapping Act (SHMA) to protect the public from the effects of strong ground shaking, liquefaction, landslides and other seismic hazards. The SHMA established a State-wide mapping program to identify areas subject to violent shaking and ground failure; the program is intended to assist cities and counties in protecting public health and safety. The SHMA requires the State Geologist to delineate various seismic hazard zones and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones. As described above, CGS has mapped seismic hazard zones for liquefaction and earthquake-induced landslides within the City of Albany.

Surface Mining and Reclamation Act of 1975. The principal legislation addressing mineral resources in California is the State Surface Mining and Reclamation Act of 1975 (SMARA) (Public Resources Code Sections 2710–2719), which was enacted in response to land use conflicts between urban growth and essential mineral production.[17] SMARA specifies that lead agencies require financial assurances of each mining operation to ensure reclamation is performed in accordance with the approved reclamation plan. The financial assurances may take the form of surety bonds, irrevocable letters of credit, trust funds, or similar mechanism.

[17] California Geological Survey, 2008. *Mineral Resources and Mineral Hazards Mapping Program.* Website: www.consrv.ca.gov/cgs/minerals/Pages/Index.aspx.

(3) Local Regulations. Applicable local regulations are described below.

City of Albany 1992 General Plan. The following policies from the 1992 General Plan address geology, seismicity, and minerals.

- **Policy CHS 1.2**: Review and revise City Codes and regulations to ensure that future construction of critical facilities (schools, police stations, fire stations, etc.) in Albany will be able to resist the effects of an earthquake of M7.5 on the Hayward Fault and sustain minor structural damage, remain operative, safe, and quickly be able to be restored to service.
- **Policy CHS 1.3**: Develop a seismic safety structural inventory and assessment program which reviews the structural integrity of all existing critical facilities and identifies what reconstruction would be necessary to meet a seismic safety standard. After this survey is completed, the City should evaluate the safest places to locate critical services and facilities.
- **Policy CHS 1.4**: Require that a geological investigation be conducted on new construction of critical facilities in areas identified on the Environmental Hazards Map as having medium-high to high susceptibility to ground failure during an earthquake.
- **Policy CHS 1.6**: Require review of the Environmental Hazards Map at the time a development is proposed. Assure implementation of appropriate mitigation measures if hazards are identified.

These policies will soon be superseded by a more robust set of policies and action programs in the Draft General Plan. The new policies carry forward the same basic principles, with the goal of protecting life and property from damage associated with geological events such as earthquakes and landslides.

2. Impacts and Mitigation Measures

This section provides an assessment of the potential geology, seismicity, and mineral resources impacts related to implementation of the Draft General Plan. This section begins with the criteria of significance, which establishes the thresholds for determining whether an impact is significant. The latter part of this section identifies potential impacts and evaluates how they relate to policies and actions of the Draft General Plan. Where potentially significant impacts are identified, mitigation measures are recommended.

a. Criteria of Significance. Implementation of the Draft General Plan would result in a significant geology, soils or seismicity impact if it would:

- Expose people or structures to potential substantial risk of loss, injury, or death involving:
  - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map or Seismic Hazards Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;
  - Strong seismic ground shaking;
  - Seismic-related ground failure, including liquefaction; or
  - Landslides;
- Result in substantial soil erosion or the loss of top soil;

- Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse; or
- Be located on expansive or corrosive soil, creating substantial risks to life or property.

b. Impact Analysis. The growth and changes to land use in Albany resulting from implementation of the Draft General Plan could result in increased development and population in the City of Albany. Implementation of the Draft General Plan would therefore result in additional people and structures being exposed to geohazards, including seismic risks, liquefaction, slope instability, soil settlement or compaction, and adverse soil conditions (e.g., expansive soils, corrosive soils). Some of these geohazards, particularly those related to seismic shaking, could result in injuries and/or fatalities; all of the geohazards discussed could result in damage to structures and property. The following section provides an evaluation and analysis for the potential impacts of the Draft General Plan for each of the criteria of significance listed above.

(1) Adverse Effects from Seismic Events. The State Geologist has not mapped any Earthquake Fault Zones within the City; therefore future developments under the Draft General Plan would not expose people to adverse effects associated with surface fault rupture. However, the major regional faults located near Albany are capable of producing strong to violent ground shaking in the City; these faults include the San Andres Fault, the Hayward Fault, the San Gregorio Fault, the Calaveras Fault, and the Concord-Green Valley Fault (shown in Figure IV.G-2). Strong to violent seismic shaking could cause considerable damage in specially designed structures and great damage in ordinary buildings that have not be built to comply with the current CBC, and could cause extensive non-structural damage to buildings in the City of Albany. CGS has also mapped seismic hazard zones where ground shaking from a seismic event could trigger liquefaction and/or landslides.

Existing federal and State regulations, programs, and standards, including the NEHRP, APEFZA, SHMA, and CBC, are designed to provide current information detailing seismic hazards, impose regulatory requirements regarding geotechnical and soils investigations, provide limitations on the locations of structures for human habitation, impose requirements for hazard notices to potential users, and establish structural standards and/or requirements for buildings and grading projects. The following policies and actions of the Draft General Plan would guide new development and reduce impacts relative to seismic hazards:

- **Policy EH-1.1: Hazard-Sensitive Planning**. Ensure that future development is sited, designed, and constructed to minimize risks associated with earthquakes, flooding, landslides, and other natural hazards. Appropriate mitigation measures should be required to reduce hazard risks.
- **Policy EH-1.3: Retrofits**. Strongly encourage the retrofitting of existing structures to reduce the risk of collapse and/or major damage and injury in an earthquake. As appropriate, the City may require seismic upgrading of structures when they are substantially rehabilitated or remodeled.
- **Policy EH-1.5: Building Codes**. Periodically update local building codes and regulations to incorporate emerging technologies and methods which reduce earthquake-related hazards.
- **Action EH-1.A: Soil and Geological Reports**. Require soils and/or geologic reports for proposed development in areas with high susceptibility to ground failure during an earthquake, and in other areas with the potential risk of slope failure, landslides, liquefaction, or other geologic hazards.

- **Action EH-1.B: Unreinforced Masonry Buildings**. Continue efforts to retrofit the remaining Unreinforced Masonry Buildings in Albany. Various financing options and programs should be explored to assist private property owners in meeting current Building Code requirements.
- **Action EH-1.C: Soft-Story Buildings**. Prepare an updated inventory of Albany's soft-story buildings and develop incentives and other programs to assist owners in retrofitting such structures to improve their performance in a major earthquake.
- **Action EH-1.D: Assessing Critical Facilities**. As part of the City's emergency preparedness planning, assess the structural integrity of critical public facilities and identify what additional measures might be needed to meet current seismic safety standards.
- **Action EH-1.F: Building Code Enforcement**. Require review of all development and construction proposals by the City of Albany to ensure conformance to current and applicable building code standards.

Soft-story buildings, as described in Action EH-1.C, are typically two to three story multi-family buildings with ground floor carports and other ground floor openings which require additional stability to withstand a major earthquake. Such structures have been identified as a vulnerable component of the City's building stock and would benefit from the installation of shear walls and other improvements to reduce the risk of collapse.

Compliance with federal and State requirements and the Draft General Plan policies and actions would reduce potential impacts related to seismic events to a less-than-significant level and no further mitigation would be required.

(2) Substantial Soil Erosion or the Loss of Top Soil. Development or redevelopment under the Draft General Plan would include construction activities that could potentially result in substantial erosion. Soil erosion could affect stormwater quality and the quality of receiving waters.

As discussed in Section IV.H, Hydrology and Water Quality, the State Board adopted an NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ, NPDES No. CAS000002, as amended in 2011 (Construction General Permit). To obtain coverage under the Construction General Permit, a project applicant must submit various documents, including a Notice of Intent and a SWPPP. Activities subject to the Construction General Permit include clearing, grading, and disturbances to the ground, such as grubbing or excavation. The purpose of the SWPPP is to identify the sources of sediment and other pollutants that could affect the quality of stormwater discharges and to describe and ensure the implementation of Best Management Practices to reduce or eliminate sediment and other pollutants in stormwater, as well as non-stormwater, discharges resulting from construction activity.

The following policies of the Draft General Plan would also reduce impacts relative to soil erosion:

- **Policy CON-1.2: Erosion and Soil Management**. Require that construction, grading, retaining walls, infrastructure maintenance, and other earth moving activities use best management practices to reduce erosion, sedimentation, and soil loss.
- **Policy W-1.9: Hazard Remediation**. Remediate environmental hazards which may be present as park areas are improved for public access and use. This could include mitigation of geologic hazards, such as settlement, slope stability, and erosion. Additional testing and geotechnical studies may be warranted prior to excavation, grading, removal or reuse of filled soils, and other construction activities.

- **Policy EH-1.4: Soil-Related Hazards**. Use best management practices to reduce risks to structures, roads, and utilities associated with erosion, shrink-swell potential, subsidence, and other soil-related hazards.

Compliance with the Draft General Plan policies and State requirements would reduce erosion and topsoil impacts from the Draft General Plan to a less-than significant level and no further mitigation would be required.

(3) Unstable Geologic Unit or Soil. This section discusses potential impacts of the Draft General Plan related to unstable soils, landslides, lateral spreading, liquefaction, or collapse.

Landslides. Earthquake induced slope failure is generally not an issue in Albany due to the low relief of the local topography, with the exception of localized areas around Albany Hill. CGS has mapped the soils around Albany Hill as a seismic hazard zone susceptible to earthquake-induced landslides.

The following policies and action of the Draft General Plan would guide new development and reduce impacts relative to landslide hazards:

- **Policy EH-1.1: Hazard-Sensitive Planning**. Ensure that future development is sited, designed, and constructed to minimize risks associated with earthquakes, flooding, landslides, and other natural hazards. Appropriate mitigation measures should be required to reduce hazard risks.
- **Action EH-1.A: Soil and Geological Reports**. Require soils and/or geologic reports for proposed development in areas with high susceptibility to ground failure during an earthquake, and in other areas with the potential risk of slope failure, landslides, liquefaction, or other geologic hazards.
- **Policy W-1.9: Hazard Remediation**. Remediate environmental hazards which may be present as park areas are improved for public access and use. This could include mitigation of geologic hazards, such as settlement, slope stability, and erosion. Additional testing and geotechnical studies may be warranted prior to excavation, grading, removal or reuse of filled soils, and other construction activities.

Compliance with the Draft General Plan policies and action would reduce potential impacts related to landslides to a less-than-significant level and no further mitigation is required.

Subsidence. Groundwater removal is not proposed as a component of the Draft General Plan. Therefore, subsidence under the Draft General Plan would have no impact and further mitigation would not be required.

Liquefaction and Lateral Spreading. CGS has mapped a seismic hazard zone for liquefaction that extends from the banks of Codornices Creek along the south boundary of the City to the lowland areas adjacent the San Francisco Bay (including the area west of San Pablo Avenue and south of Buchanan Street). Lateral spreading toward unsupported slopes can be caused by ground shaking and resulting liquefaction. The following action of the Draft General Plan would guide new development and reduce impacts relative to liquefaction and lateral spreading:

- **Action EH-1.A: Soil and Geological Reports**. Require soils and/or geologic reports for proposed development in areas with high susceptibility to ground failure during an earthquake, and in other areas with the potential risk of slope failure, landslides, liquefaction, or other geologic hazards.

Compliance with the Draft General Plan action would reduce potential impacts related to liquefaction and lateral spreading to a less-than-significant level and no further mitigation is required.

(4) Soil-Related Hazards. Soils within the City of Albany have been identified as having a low to very high shrink/swell potential as well as low to high corrosion potential. Structural damage of buildings or rupture of utilities may occur if the potentially expansive and corrosive soils are not considered in the design and construction of future redevelopment projects. The following policies of the Draft General Plan would guide new development and reduce impacts relative to expansive and corrosive soils:

- **Policy EH-1.4: Soil-Related Hazards**. Use best management practices to reduce risks to structures, roads, and utilities associated with erosion, shrink-swell potential, subsidence, and other soil-related hazards.
- **Policy W-1.9: Hazard Remediation**. Remediate environmental hazards which may be present as park areas are improved for public access and use. This could include mitigation of geologic hazards, such as settlement, slope stability, and erosion. Additional testing and geotechnical studies may be warranted prior to excavation, grading, removal or reuse of filled soils, and other construction activities.

Compliance with the Draft General Plan policies would reduce potential soil-related impacts to a less-than-significant level and no further mitigation is required.

c. Cumulative Impacts. Implementation of the Draft General Plan would not affect the seismic or geologic environment in the vicinity of the City. However, the seismic and geologic conditions in the City of Albany could affect future development; such effects are related to site-specific hazards and would be mitigated on a development-by-development basis. The site-specific impacts from geologic and seismic hazards on developments are not transferable to other sites. Therefore, the Draft General Plan would not contribute to a cumulative impact that would be considerable, since other developments on the vicinity of the City would similarly be affected by site-specific geologic and seismic conditions.

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H. HYDROLOGY AND WATER QUALITY

This section provides a discussion of the existing water resources and hydrology conditions in the City, including the extent and quality of surface water and groundwater, runoff and drainage patterns, and flood conditions. Following the existing conditions discussion is a summary of the regulatory framework related to water resources. Finally, potential impacts to the water resources and hydrology of the City that could result from implementation of the policies and actions of the Draft General Plan are assessed and mitigation measures identified, as necessary.

1. Setting

The setting section describes existing conditions in the City of Albany and pertinent federal, State, and local agency laws, regulations, and programs related to hydrology and water quality.

a. Climate. The City of Albany has a Mediterranean climate, with distinct wet and dry seasons. The climate is characterized by long, dry, mild summers and mild, relatively wet winters. The mean annual precipitation is approximately 23.4 inches, with most of the rainfall occurring between November and March.[1] Analysis of long-term precipitation records indicates that wetter and drier cycles lasting several years are common in the region.

b. Hydrology and Storm Drainage. The City of Albany is located within the Codornices Creek and Cerrito Creek watersheds.[2] Codornices Creek is a perennial stream that originates on the west-facing slopes of the Berkeley Hills east of the City. The creek channel defines the Albany/Berkeley border. Codornices Creek has a channel length of approximately 2.9 miles and drains an area of about 1.1 square miles.[3] The watershed is heavily urbanized and has been highly modified. One of the main tributaries and associated sub-watersheds, Marin Creek, flows completely underground from the Berkeley Hills, roughly following the same path as Marin Avenue until discharging into San Francisco Bay. Another tributary, Village Creek, just south of Marin Creek, flows primarily through underground culverts until discharging into Codornices Creek approximately 0.4 miles before reaching San Francisco Bay.[4] Codornices Creek is one of the few East Bay creeks that support a native steelhead population.

Portions of Albany are also located within the Cerrito Creek watershed. Cerrito Creek defines the northern border of the City and stretches approximately 2.4 miles from the Berkeley Hills to San

[1] Western Regional Climate Center, 2013. Climate summary for Berkeley, California. Website: www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca0693.

[2] San Francisco Bay Regional Water Quality Control Board, 2013. *San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan)*. Interim final June 29.

[3] Codornices Creek Watershed Council, 2011. *Codornices as a Resource and Asset.* Website: www.codornicescreekwatershed.org/watershed.htm.

[4] Oakland Museum of California, 2010. *Creek and Watershed Map of Oakland and Berkeley*. Website: museumca.org/creeks/1130-OMCodornices.html.

Francisco Bay.[5] The Cerrito Creek watershed is part of a series of subbasins that cover an area of 1,322 acres.[6]

Like the Codornices Creek watershed, Cerrito Creek is heavily urbanized, with more than half the surface area covered by impervious surfaces (e.g., roadways, parking lots, and buildings). Most reaches of Cerrito Creek have been placed in underground pipes and culverts or in modified concrete or earthen channels.[7] The main tributary and associated sub-watershed, Middle Creek, flows underground until discharging into Cerrito Creek near Yosemite Avenue and Creekside Park, approximately one-half mile east of San Francisco Bay. Blackberry Creek, just north of Marin Avenue, historically was a main tributary of Codornices Creek, but has since been redirected by storm drains into the culverted Middle Creek.[8]

The City of Albany's storm drainage system consists of a combination of underground concrete, corrugated metal, and vitreous clay piping networks, street gutters, shallow cross street drains, and creek channels. Stormwater generally flows east to west before discharging untreated into San Francisco Bay. The City uses 10-year storm events as the basis of its storm drain system design, however, they use 25-year storm events for primary facilities and 100-year events for areas within Federal Emergency Management Agency (FEMA) zones, which is consistent with nearby municipalities. This criterion corresponds to the flow level that would allow standing water but prevents flooding of streets and private properties when runoff is collected and conveyed unobstructed by ditches, storm drain inlets, and pipes.

c. Groundwater Resources. The City's groundwater resources are located within the Santa Clara Valley-East Bay Plain subbasin (Subbasin No. 2-9.04), as defined in the San Francisco Bay Basin Water Quality Control Plan (Basin Plan). The subbasin extends from the Suisun Bay border with Richmond approximately 25 miles to the southern border of the City of Hayward, and from San Francisco Bay east to the Berkeley Hills, with an approximate surface area of 77,800 acres.[9] Total available capacity for groundwater storage of the basin is estimated at about 2,500,000 acre-feet.[10] However, salt water intrusion affects much of the groundwater in areas near San Francisco Bay.[11] Groundwater is not currently a source of drinking water in the City of Albany.[12] Water is provided by the water supply utility, East Bay Municipal Utility District (EBMUD). EBMUD's water supply delivery system begins at the Mokelumne River watershed in the Sierra Nevada and extends 90 miles to serve the East Bay.

[5] Contra Costa County Community Development Department, 2004. *Contra Costa County Watershed Atlas: Baxter, Cerrito and West Richmond Watersheds.*

[6] Ibid.

[7] Ibid.

[8] Oakland Museum of California, 2010, op. cit.

[9] California Department of Water Resources, 2004. *Santa Clara Valley Groundwater Basin, East Bay Plain Subbasin.* California's Groundwater Bulletin 118.

[10] Ibid.

[11] Ibid.

[12] San Francisco Bay Regional Water Quality Control Board, 1999. *East Bay Plain Groundwater Basin Beneficial Use Evaluation Report: Alameda and Contra Costa Counties, CA.* RWQCB San Francisco Bay Region Groundwater Committee.

d. Flooding. Portions of the City are within the 100-year and 500-year flood hazard zone as mapped by FEMA. Flood zones are shown on Figure IV.H-1. Most of the flooding that occurs in the City is near San Francisco Bay and around Codornices Creek.

(1) San Francisco Bay Shoreline and Albany Bulb. The shoreline areas west of Interstate 80 (I-80) are FEMA-designated 100-year flood hazard areas (i.e., areas with a 1 percent chance of flooding during any given year), susceptible to coastal flooding with velocity hazard (wave action) at an elevation of 9 feet (North American Vertical Datum [NAVD] 88).[13] The westernmost region of the Albany Bulb has been designated Zone X, an area with 1-percent-chance-flood with average depths of less than 1 foot, with drainage areas less than 1 square mile, and/or an area protected by levees from 1 percent annual chance flood.[14]

(2) Codornices Creek. The area along Codornices Creek is a FEMA-designated 100-year flood hazard zone (Zone AO - area of alluvial fan flooding to a depth of two feet).[15] Flooding associated with the creek stretches from the City's eastern border, approximately 1.4 miles, until the terminus at San Francisco Bay. The inundation zone includes the area 2 feet in elevation above the creek. Codornices Creek flows through a culvert under I-80 and is directed north adjacent to the highway. All of the area west of I-80 and east of Golden Gate Fields Race Track along the channel is also within the FEMA 100-year flood hazard zone. The area between approximately the Union Pacific Railroad and I-80 near the Cornices Creek is a FEMA-designated 500-year flood hazard zone (i.e., area with a 0.2 percent chance of flooding during any given year).

(3) Cerrito Creek. The area along Cerrito Creek is a FEMA-designated 100-year flood hazard zone (Zone AE - area subject to inundation by the 1-percent-annual-chance flood event determined by detailed methods). This area encompasses the channel banks from Adams Street to approximately 0.5 miles to the east near the creek terminus at San Francisco Bay. This area is surrounded by a FEMA-designated 500-year flood hazard zone.[16]

e. Dam Inundation. Association of Bay Area Governments (ABAG) hazard mapping indicates limited areas of possible inundation in the City of Albany following dam failure. The Berryman Reservoir, located near Codornices Park in Berkeley at the Codornices Road/Euclid Avenue intersection, has the potential to flood the areas westward, following Cedar and Virginia Streets in Berkeley.[17] The flood waters are expected to disperse north and south along I-80, affecting a small portion of the City of Albany between I-80 and the Eastshore Highway until reaching Buchanan Street.

f. Surface Water Quality. In 2005, the water quality near the mouths of the Codornices and Cerrito Creeks was monitored by the State Water Resources Control Board (SWRCB) and the San Francisco Bay Regional Water Quality Control Board (RWQCB) under the Surface Water Ambient

[13] Federal Emergency Management Agency, 2009a. *Flood Insurance Rate Map, Alameda County, California, Panel 0014G, Map No. 06001C0014G.*

[14] Ibid.

[15] Federal Emergency Management Agency, 2009b. *Flood Insurance Rate Map, Alameda County, California, Panel 0018G, Map No. 06001C0018G.*

[16] Ibid.

[17] Association of Bay Area Governments, 1995. *Hazard Map: Dam Failure Inundation Areas for the City of Albany*.

Monitoring Program (SWAMP). SWAMP is a statewide monitoring effort designed to assess the conditions of surface waters throughout California. Sediment and water samples were collected and analyzed for the following: metals, pesticides, polycyclic aromatic hydrocarbons, polychlorinated biphenyls, dissolved oxygen, temperature, pH, and toxicity to aquatic organisms. In 2004, a Rapid Trash Assessment was also performed by SWAMP along both creeks. Based on the monitoring results, the SWRCB and RWQCB have determined that beneficial uses in both Codornices and Cerrito Creeks have been impacted due to water quality degradation and are consequently both on the Clean Water Act Section 303(d) List.[18] The 303(d) list identifies water temperature and trash as pollutants of concern for Codornices Creek.[19] Loss of riparian vegetation, habitat modification and channelization are potential sources of increased water temperature. Illegal dumping and storm runoff are the main contributors of trash within the creek channel. Cerrito Creek is also listed for trash, with illegal dumping and urban runoff/storm sewers as the potential sources of contamination.[20]

g. Groundwater Quality. Within the East Bay Plain subbasin, groundwater found within the upper 200 feet of the surface is classified as calcium bicarbonate waters.[21] Most contamination of groundwater within the subbasin occurred at depths less than 50 feet of the subsurface. No contamination areas having plumes of at least 1,000 feet in length have been identified within the City of Albany.[22] Section IV.I, Hazards and Hazardous Materials, includes a more detailed discussion of water quality impacts related to hazardous materials release sites.

h. Sea Level Rise. The earth has gone through several cycles of cooling and warming over recent geologic time, resulting in periods of glaciation with an associated sea level lowering, and climate warming with sea level rise. The most recent cycle of global climate change is a warming trend of the earth's atmosphere (an increase of approximately 1.8 degrees Fahrenheit in the past 100 years), which has resulted in sea level rise. Rates of sea level rise may vary at specific locations as local subsidence or uplift affects the relative change in sea level between land masses and the ocean. In the San Francisco Bay Area, the background rate of sea level rise has been estimated to be approximately 0.079 inch per year over the past 100 years.[23] An increased rate of sea level rise is anticipated in the near future due to projected global climate change. Although the rate of increase has not been precisely modeled and cannot be known with certainty, several projections predict a rise in sea level between about 20 inches and 80 inches by the year 2100.[24] Under medium-high climate-warming scenarios, the mean sea level along the California coast is projected to rise about 55 inches by the year 2100. The areas of expected inundation by 55 inches of sea level rise above the current FEMA-designated 100-year coastal flood hazard zone are shown on FigureIV.H-2.

[18] San Francisco Bay Regional Water Quality Control Board, 2010. *2010 Integrated Report (Clean Water Act Section 303(d) List/305(b) Report)*. USEPA approved November 10.

[19] Ibid.

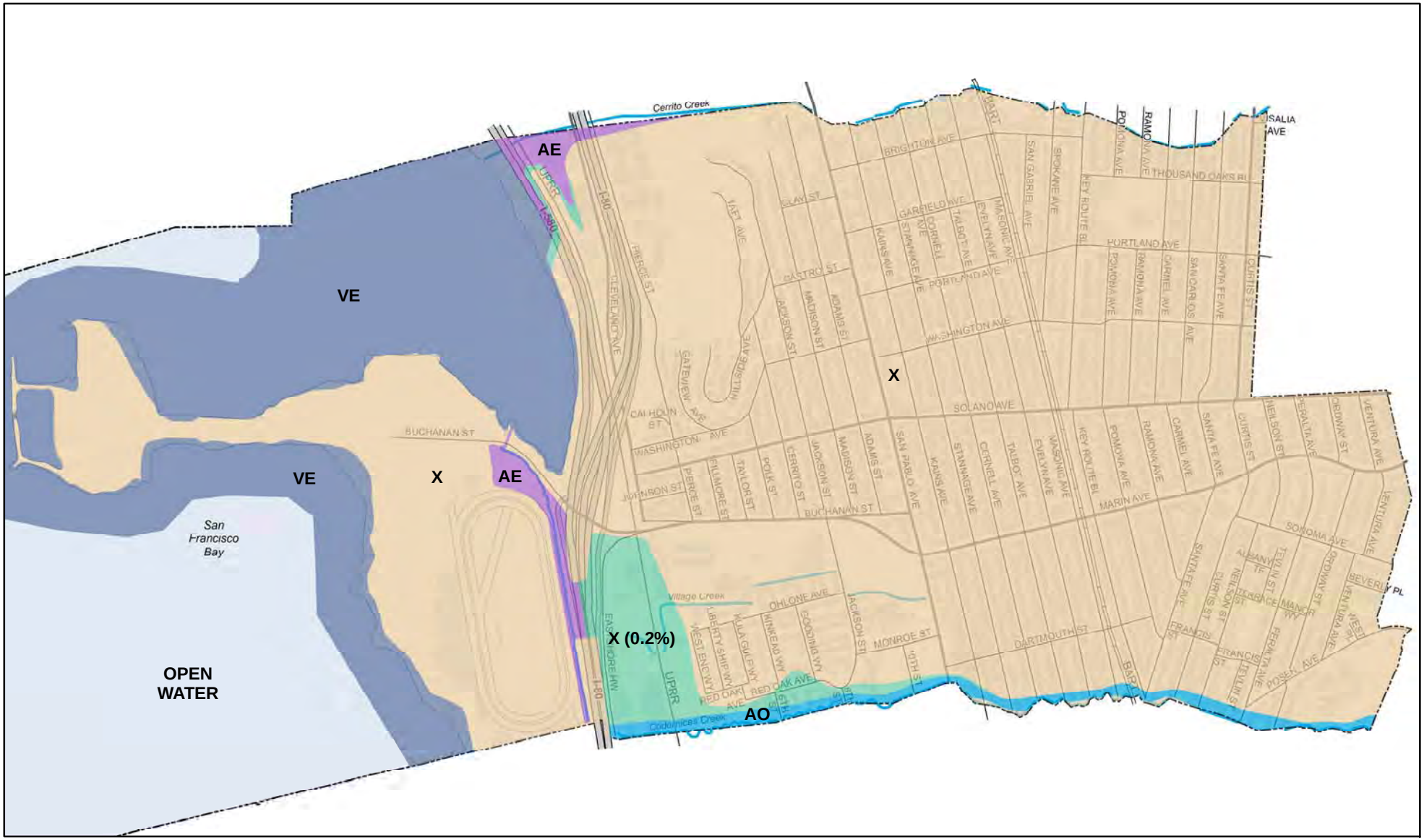
[20] Ibid.

[21] California Department of Water Resources, 2004, op. cit.

[22] Ibid.

[23] National Oceanic & Atmospheric Administration, 2007. *Mean Sea Level Trend (station) 9414290 San Francisco, California*. Website: tidesandcurrents.noaa.gov/sltrends/sltrends_station.shtml?stnid=9414290.

[24] Knowles, Noah, 2010. Potential Inundation Due to Rising Sea Levels in the San Francisco Bay Region. *San Francisco Estuary and Watershed Science, 8(1)*. U.S. Geological Survey.



LSA

LEGEND

- Albany City Limit
- Creek
- Open Water

FEMA FIRM and Flood Hazard Area

AE	(= 1% annual chance determined by detailed methods)
AO	(= 1% annual chance shallow flooding/sheet flow 1-3 feet)
VE	(= tidal areas with a 1% annual chance with additional storm wave hazards)
X (0.2%)	(= areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 sq. mi.; and areas protected by levees from 1% annual chance flood)
X	(= areas outside 1% annual chance or 1% chance with depths less than 1 ft, drainages less than 1 sq mi, or levee protected areas)

0 0.125 0.25
MILES

SOURCE: FEMA National Flood Hazard Layer (08/2009).

FIGURE IV.H-1

City of Albany General Plan EIR
Flood Hazards

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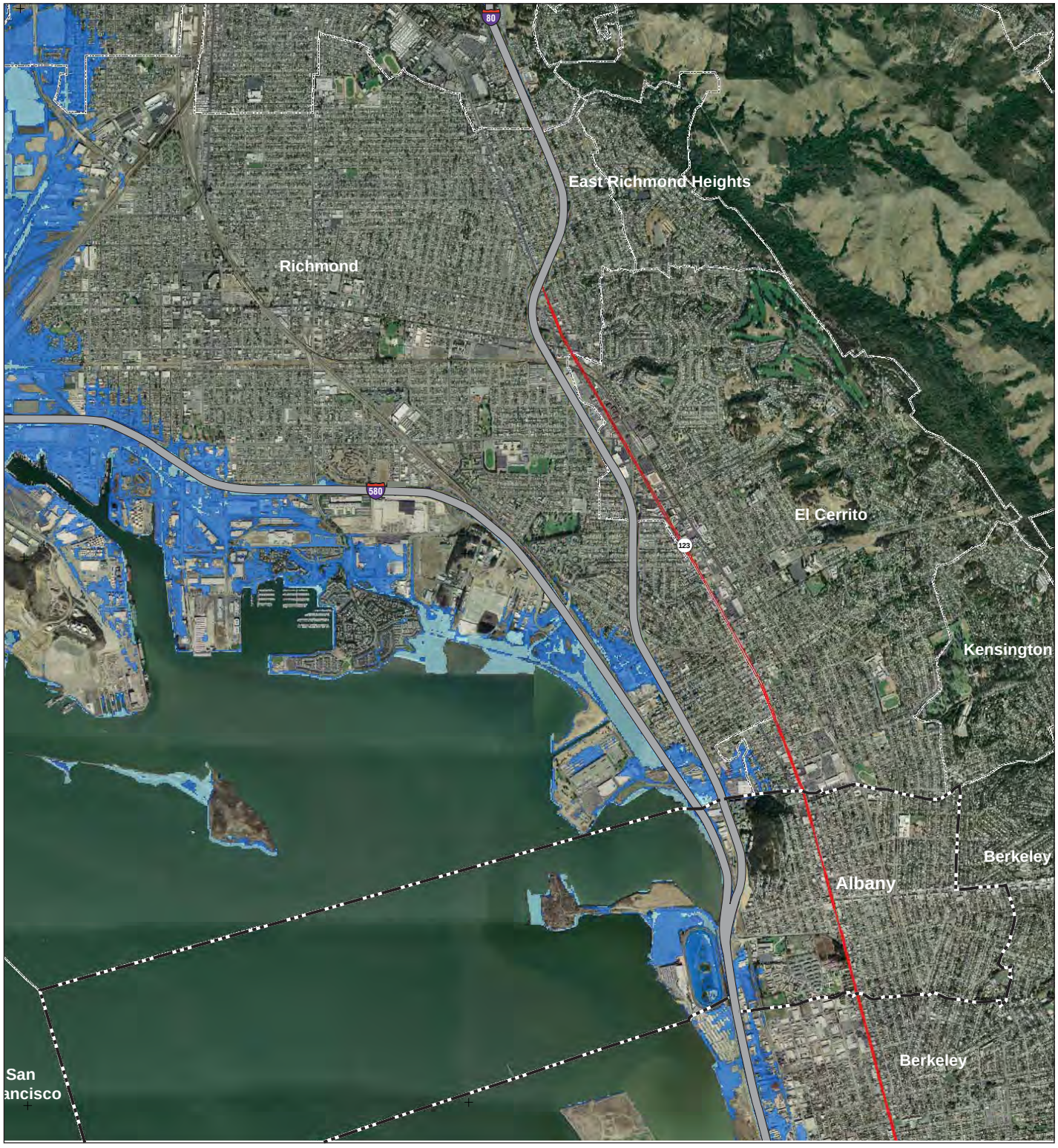

LSA

FIGURE IV.H-2

Current Coastal Base Flood
(approximate 100-year flood extent)

Sea Level Rise Scenario
Coastal Base Flood + 1.4 meters (55 inches)

Albany City Limits

N

0 0.25 0.5
MILES

Data Sources: US Geological Survey, Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Coastal ServicesCenter (CSC), Scripps Institution of Oceanography, Phillip WIlliams and Associates, Inc. (PWA), US Department of Agriculture (USDA), California Coastal Commission, and National Aeronautics and Space Administration (NASA). Imagery from ESRI and i-cubed.

City of Albany General Plan EIR

Sea Level Rise - Richmond Quadrangle

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i. Seiche. A seiche is the oscillation of a body of water at its natural period. Seiches occur most frequently in enclosed or semi-enclosed basins such as lakes, bays, or harbors and may be triggered by strong winds, changes in atmospheric pressure, earthquakes, tsunami, or tides. Coastal measurements of sea level often show seiches with amplitudes of a few centimeters and periods of a few minutes due to oscillations of the local harbor, estuary, or bay, superimposed on the normal tidal changes. Due to the basin geometry and dimensions of San Francisco Bay, seiches pose a negligible hazard to the City of Albany.[25]

j. Tsunami. Tsunamis are long-period water waves caused by underwater seismic events, volcanic eruptions, or undersea landslides. Tsunamis affecting the San Francisco Bay Area would originate west of the Bay in the Pacific Ocean. Areas that are highly susceptible to tsunami inundation tend to be low-lying coastal areas, such as tidal flats, marshlands, and former Bay margins that have been artificially filled. A tsunami entering the Bay through the relatively narrow Golden Gate would tend to dissipate as the wave energy spreads out as the Bay becomes wider and shallower.[26] The California Geological Survey designated everything west of I-80, including all of the Albany Bulb and Golden Gate Fields, as being at risk to inundation in the event of a tsunami (Figure IV.H-3).[27,28]

k. Regulatory Framework. Responsibility for water resource and flood protection in the City of Albany is distributed among many agencies at various levels of government, as described below.

(1) Federal Regulations. Federal Regulations are described below.

Federal Clean Water Act of 1972. The Federal Clean Water Act of 1972 (CWA) is the primary federal law that protects the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. It is administered by the U.S. Environmental Protection Agency (USEPA). The CWA operates on the principle that all discharges into the nation's waters are unlawful unless specifically authorized by a permit. The USEPA has delegated its authority to implement and enforce most of the applicable water quality provisions of these sections to the individual states. In California, the provisions are enforced by nine Regional Water Boards under the auspices of the SWRCB (described below under State Regulations).

Federal Flood Insurance Program. In 1968, Congress created the National Flood Insurance Program (NFIP) in response to the rising cost of taxpayer funded disaster relief for flood victims and the increasing amount of damage caused by floods. The NFIP makes federally-backed flood insurance available for communities that agree to adopt and enforce floodplain management ordinances to reduce future flood damage. FEMA manages the NFIP and creates Flood Insurance Rate Maps (FIRMs) that designate 100-year floodplain zones and delineate other flood hazard areas.

[25] Borrero, Jose, et al., 2006. *Numerical Modeling of Tsunami Effects at Marine Oil Terminals in San Francisco Bay*. Report for the Marine Facilities Division of the Californian State Lands Commission, June 8.

[26] Houston, J. R., and A.W. Garcia, 1975. *Type 16 Flood Insurance Study: Tsunami Predictions for Monterey and San Francisco Bays and Puget Sound*, Technical Report H-75-17.

[27] Borrero, et al., 2006, op. cit.

[28] California Geological Survey, 2009. *Tsunami Inundation Map for Emergency Planning: Richmond Quadrangle*. July 31.

A 100-year floodplain zone is the area that has a 1-in-100 (1 percent) chance of being flooded in any one year based on historical data.

(2) State Regulations. State regulations related to water quality are described below.

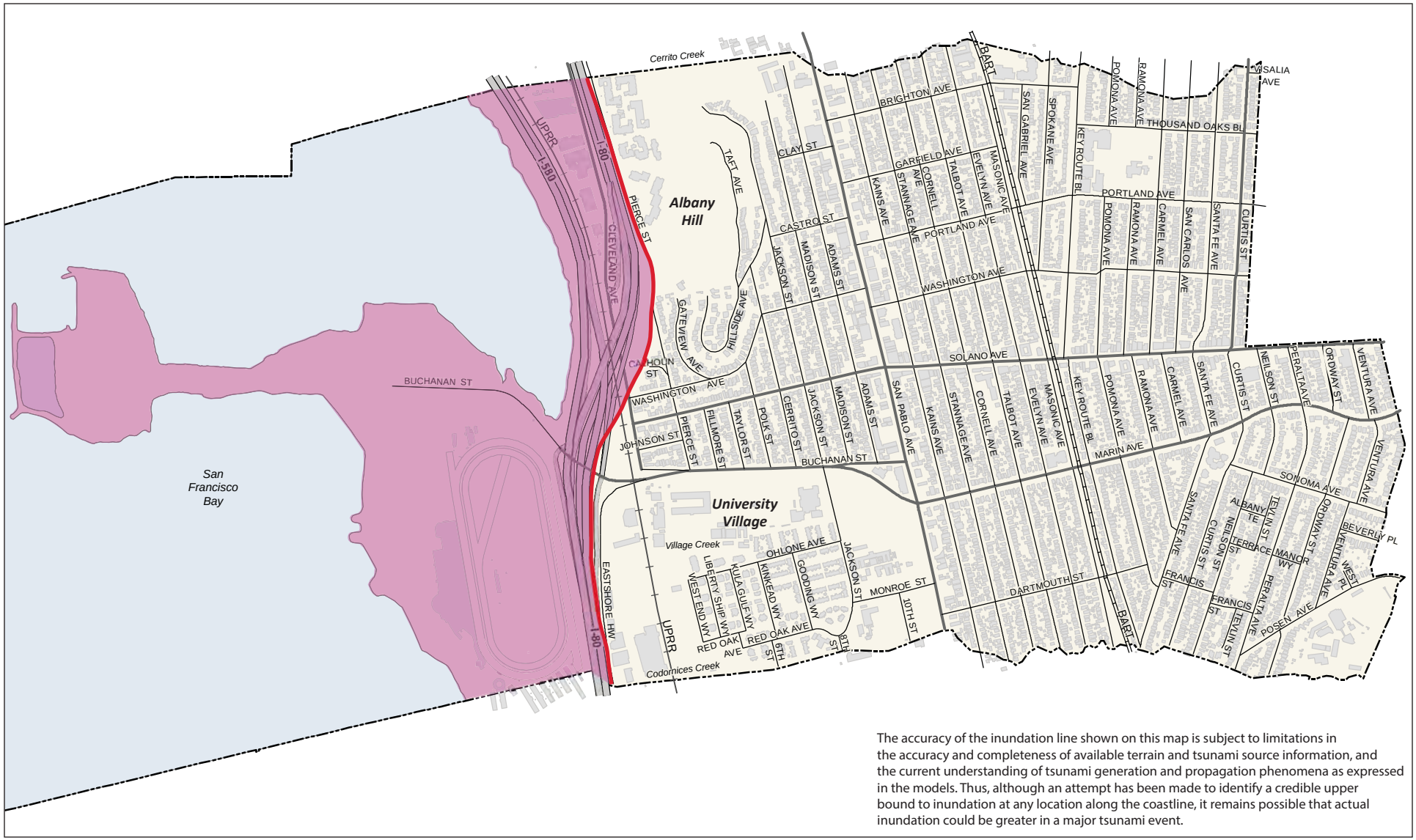
Porter-Cologne Act and State Implementation of Clean Water Act Requirements. The Porter-Cologne Water Quality Control Act (California Water Code, Division 7, Water Quality) was promulgated in 1969. It established the SWRCB and divided the State into nine hydrologic regions, each overseen by a Regional Water Board. The SWRCB is the primary State agency responsible for protecting the quality of the State's surface and groundwater supplies, but much of its daily implementation authority is delegated to the nine Regional Water Boards. The Porter-Cologne Act also provides for the development and tri-annual review of Water Quality Control Plans (Basin Plans) that designate beneficial uses of California's major rivers and groundwater basins and establish narrative and numerical water quality objectives for those waters. The City of Albany lies within the jurisdiction of the RWQCB which enforces compliance with water quality objectives for beneficial uses of surface waters.

Construction General Permit Program. Projects disturbing more than 1 acre of land during construction are required to file a Notice of Intent (NOI) with the SWRCB to be covered under the state NPDES Construction General Permit for Discharges of Stormwater Associated with Construction Activity (Water Quality Order No. 2009-0009-DWQ, NPDES General Permit No. CAS000002) (Construction General Permit). The project proponent must propose control measures that are consistent with the Construction General Permit. A Stormwater Pollution Prevention Plan (SWPPP) must be developed and implemented and it must include Best Management Practices (BMPs) designed to reduce potential impacts to surface water quality through the construction period. Additional measures, which may include document reviews and site inspections during construction, are required under the Municipal Program's Performance Standards for Construction Site Controls.

Industrial General Permit Program. The control of runoff from industrial sources and associated pollutants is regulated in California by the SWRCB under the statewide General Permit for Stormwater Discharges Associated with Industrial Activities (Industrial General Permit No. CAS000001).[29] The Industrial General Permit presents the requirements for compliance of certain industries with the NPDES program. A wide range of industries are covered under the Industrial General Permit (coverage is determined by Standard Industrial Classification [SIC] code) including mining operations, lumber and wood products facilities, petroleum refining, metal industries, and some agricultural product facilities, such as dairies. The Industrial General Permit requires a SWPPP, monitoring, and annual reporting to the Water Board

(3) Local Regulations and Programs. Local hydrology and water quality regulations and programs are described below.

[29] The new Industrial General Permit was adopted April 1, 2014, and will become effective July 1, 2015.



The accuracy of the inundation line shown on this map is subject to limitations in the accuracy and completeness of available terrain and tsunami source information, and the current understanding of tsunami generation and propagation phenomena as expressed in the models. Thus, although an attempt has been made to identify a credible upper bound to inundation at any location along the coastline, it remains possible that actual inundation could be greater in a major tsunami event.

LSA

LEGEND

- Albany City Limit
- Freeway
- BART Tracks
- Railroad Tracks
- Building
- Tsunami Inundation Line
- Tsunami Inundation Area

N

0 660 1320
FEET

FIGURE IV.H-3

City of Albany General Plan EIR
Tsunami Inundation Map

SOURCE: STATE OF CALIFORNIA; CA EMERGENCY MANAGEMENT AGENCY, ET AL, JULY 31, 2009.

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Municipal Stormwater Management Requirements. Pursuant to Section 402 of the CWA[30] and the Porter-Cologne Act, municipal stormwater discharges in the City of Albany are regulated under the San Francisco Bay Region Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit, Order No. R2-2009-0074, NPDES Permit No. CAS612008, adopted October 14, 2009 (MRP). The MRP is overseen by the RWQCB. MRP Provision C.3 addresses post-construction stormwater management requirements for new development and redevelopment projects that add and/or replace 10,000 square feet or more of impervious area. Provision C.3 requires the City to require incorporation of site design, source control, and stormwater treatment measures into development projects, to minimize the discharge of pollutants in stormwater runoff and non-stormwater discharges, and to prevent increases in runoff flows. The MRP requires that Low Impact Development (LID) methods are to be the primary mechanism for implementing such controls.

Provision C.3.g, Hydromodification Management, of the MRP requires that stormwater discharges not cause an increase in the erosion potential of the receiving stream over the existing condition. Increases in runoff flow and volume must be managed so that the post-project runoff does not exceed estimated pre-project rates and durations, where such increased flow and/or volume is likely to cause increased potential for erosion of creek beds and banks, silt pollutant generation, or other adverse impacts on beneficial uses due to increased erosive force.

Clean Water Program Alameda County. The Clean Water Program Alameda County (CWPAC) was formed in 1991 and coordinates with the Bay Area Stormwater Management Agencies Association and the California Stormwater Quality Association to assist in implementation of the NPDES stormwater mandates of the CWA. CWPAC works to educate the public about stormwater pollution and prevention, to eliminate illegal dumping, to monitor water quality, and to reduce the amount of runoff pollution by applying BMPs to new development, redevelopment, and industrial and commercial sites.

City of Albany Municipal Code. The following are chapters of the Municipal Code that are relevant to hydrology and water quality.

Drainage and Flood Control. Chapter 20 (Flood Damage Prevention Regulations) Section 20.52.040 of the Municipal Code pertains to drainage and flood control. The Article identifies areas of flood hazard and requires that a flood development permit shall be obtained before any construction or other development begins within any area of special flood hazard.[31] This section also establishes permit review procedures, designates and identifies the duties of the floodplain administrator (the Director of Community Development), provides provisions for flood hazard reduction (such as standards of construction) and identifies variance procedures.

[30] Federal regulations for controlling discharges of pollutants from municipal separate storm sewer systems (MS4s), construction sites, and industrial activities were incorporated into the National Pollutant Discharge Elimination System (NPDES) permit process by the 1987 amendments to the Clean Water Act (CWA) and by the subsequent 1990 promulgation of federal stormwater regulations issued by the USEPA. In California, the USEPA delegated its authority to the SWRCB to issue NPDES permits.

[31] Albany, City of, 2010. *City of Albany, County of Alameda, State of California, Charter*. Amended November 2.

Storm Water System and Watercourse Protection, Chapter 15, Storm Water Management. Section 15.4.7 of the Municipal Code pertains to sewer service and sewage disposal.[32] The section prohibits unlawful discharges to the storm drain system, including, but not limited to, spills, illicit connections and illegal dumping incidents. Other provisions in the section include:

- Dischargers are to implement BMPs, such as keeping sidewalks and parking strips free of dirt, debris and liter to the maximum extent possible; provide filter materials at catch basins to retain any debris and dirt from entering the City's storm sewer system;
- All discharges of material (other than storm water) must be in compliance with a NPDES permit issued for the discharge (other than NPDES permit No. CA0029831);
- Filling, obliterating, obstructing, or interfering with any natural watercourse or natural drain, swale, gully, or other depression in the surface of the land which carries off at any time of the year any storm water or ant surface water which has been precipitated by rains is strictly prohibited;
- Watercourses must be maintained and kept reasonably free of trash, debris, excessive vegetation, and other obstacles which would pollute, contaminate, or significantly retard the flow of the watercourse; structures within or adjacent to a watercourse must be maintained as to not become an obstruction or hazard; healthy bank vegetation beyond that actually necessary for maintenance shall not be removed to prevent increased erosion; and
- Prior to any construction project that is specifically designed or may potentially affect storm water conveyance, project plans, specifications, and design calculations must be submitted to the City Engineer for review and approval, in addition to any permit required by CDFW.

Watercourse Overlay District. Section 20.12.080(b)(6) of the Albany Municipal Code establishes a Watercourse Overlay District (WOD) covering areas within 75 feet of the centerlines of Codornices and Cerrito Creeks, as well as Special Flood Hazard areas designated on the Federal Insurance Rate Maps. The purpose of the WOD is to regulate land uses to prevent property damage due to floodwaters and the transportation of wreckage and debris. Standards within this District include a prohibition on structures within 20 feet from top-of-bank, with some exceptions that may be granted with a Use Permit by the Planning and Zoning Commission.

Albany Watershed Management Plan. In 1998, the City of Albany prepared a Watershed Management Plan (Plan).[33] The primary goal of the Plan was to develop an approach to managing the City's engineered drainage structures and natural creek channels, focusing on the integration of these two types of drainage features. The Plan identifies two main deficiencies in the City's drainage system: 1) the engineered system did not take into account future upstream development, and therefore has capacity limitations; and 2) the system has little or no built-in water quality treatment capacity. The Plan provides recommendations to improve the overall drainage system, including a list of specific projects organized by watershed that would: 1) remove culverts and other obstructions to fish and animal migration; 2) use creek corridors as transportation routes for pedestrians and bicyclists; 3) eliminate conditions that pollute rainwater as it flows to creeks and eliminate conditions

[32] Albany, City of, 2010, op. cit.

[33] Albany, City of, 1998. *City of Albany Watershed Management Plan*. October.

that prevent rainwater from soaking into the ground; and 4) instill widespread public awareness of the value of developing infrastructure along lines that promote healthier watersheds.

Storm Drain Trash Program. As part of the City's compliance with the municipal NPDES permit (R2-2009-0074), it recently prepared and submitted to the RWQCB a Trash Long-Term Reduction Plan and Progress Assessment Strategy (Long-Term Plan) document.[34] The goal of the Long-Term Plan is to solve trash problems in receiving waters by reducing the impacts associated with trash in discharges from Albany's municipal separate storm sewer system that are regulated by NPDES permit requirements. Among other things, the Long-Term Plan includes time schedules for implementing control measures and an assessment strategy. Depending on the area within the City, various trash control measures are proposed, including street sweeping, on-land trash cleanups, trash container and anti-litter campaigns, and improved trash bin management.

City of Albany 1992 General Plan. The following goals and policies from the previous City of Albany 1992 General Plan specifically addressed hydrology and water quality.

- **Policy LU 7.2B:** Protect and enhance the creeks running through and adjacent to the U.C. Village property.
- **Policy LU 9.2:** Develop policies to protect existing riparian habitat within the Creek Conservation Zone and restrict development in this Zone appropriately (see Conservation, Recreation and Open Space Element Policies).
- **Goal CROS 1:** Enhance the natural features of the City's creeks and increase public access to them.
- **Policy CROS 1.1:** Develop a comprehensive program to sponsor restoration and public access improvements for Albany's creeks. Continue to implement the 1977 Albany Creek Restoration Program. As part of this effort, continue to recognize that these areas have important wildlife and vegetation values.
- **Policy CROS 1.2:** Pursue funding for the restoration of Codornices and Cerrito Creeks through the Department of Water Resources Urban Stream Restoration Program, and the Coastal Conservancy.
- **Policy CROS 1.3:** Support the efforts of the Codornices Creek Association to restore Codornices Creek.
- **Policy CROS 1.4:** Develop policies to be included in the Watercourse Combining District to protect riparian habitat within the Creek Conservation Zone where practically feasible and applicable.
- **Goal CROS 4:** Strive to maintain and improve the quality of Albany's natural environment and cultural resources, and natural resources in general.
- **Policy CROS 4.2:** Publicize the adverse water quality impacts of dumping residential toxics into domestic waste systems.
- **Policy CHS 1.1:** Conserve riparian and littoral habitat within the area 100 feet from creek centerline in appropriate areas both for its importance in reducing flood impacts and for its aesthetic value.

The goals and policies listed above are being replaced by a new set of goals, policies and action programs in the Draft General Plan. The new policies incorporate aspects of the Clean Water Program

[34] Albany, City of, 2014. *Trash Long-Term Reduction Plan and Program Assessment Strategy*. February 1.

that are missing in the existing General Plan, and expand the scope of water-related policies to address topics such as creek daylighting and water conservation.

2. Impacts and Mitigation Measures

This section provides an assessment of the potential adverse impacts related to hydrology and water quality within the City of Albany. It begins with the criteria of significance, which establishes the thresholds for determining whether an impact is significant. The latter part of this section identifies potential impacts and evaluates how they relate to policies and actions of the Draft General Plan. Where potentially significant impacts are identified, mitigation measures are recommended.

a. Criteria of Significance. Implementation of the Draft General Plan would result in a significant impact related to hydrology and water quality if it would:

- Violate any water quality standards or waste discharge requirements;
- 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 pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- Substantially alter the existing drainage pattern of the site or area, including 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;
- Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river or a substantial increase in the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff;
- Otherwise substantially degrade water quality;
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows;
- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; or
- Expose people or structures to a substantial risk of inundation by seiche, tsunami, extreme high tides, and/or sea level rise.

b. Impact Analysis. The following section provides an evaluation and analysis for the potential impacts of the Draft General Plan for each of the criteria of significance listed above and potential cumulative impacts.

(1) Violate Water Quality Standards. Growth and new development associated with the Draft General Plan would be subject to existing water quality regulations and programs, as described in the Regulatory Framework section above. These programs establish water quality standards and enforcement procedures; specific new development projects would be required to comply with these programs. In addition, implementation of several policies and actions in the Draft General Plan would strengthen enforcement of surface water and groundwater quality standards and waste discharge requirements:

- **Policy CSF-6.3: Achieving Water Quality Goals.** Continue to prevent illicit discharges to the sanitary sewer and storm drain systems and make improvements which reduce sanitary sewer overflows. These improvements are essential to meet local and regional water quality goals and ensure the effective operation of the sanitary sewer and storm drainage systems.
- **Policy CON-1.9: Riparian Corridors.** Maintain special development regulations for areas within 100 feet of Codornices Creek, Cerrito Creek, and Village Creek which ensure that riparian and littoral habitat is conserved, flood impacts are reduced, and the creeks are enhanced for their aesthetic and ecological value. Watercourses on private property should be kept free of trash, debris, excessive vegetation, and obstacles to the flow of water.
- **Policy CON-4.1: Stormwater Control.** Eliminate non-stormwater discharges to the municipal storm sewer, and control potential discharges from spills, dumping, and urban runoff. Activities with the potential to cause or contribute to stormwater pollution shall comply with best management practices, guidelines, or requirements to reduce water quality impacts.
- **Policy CON-4.2: Water Quality Education.** Increase public awareness of the sources of water pollution in Albany's creeks, such as dumping into storm drains, oil and grease runoff, and improper disposal of household chemicals.
- **Policy CON-4.3: Low Impact Development.** Support the use of pervious pavement, rain gardens, bioswales, cisterns, roof drains directed to pervious areas, and other "low impact development" (LID) measures which capture and filter rainwater and reduce runoff to local creeks and the Bay.
- **Policy CON-4.4: Municipal Regional Permit.** In compliance with the Clean Water Act, participate in the Alameda Countywide Clean Water Program and NPDES Municipal Regional Permit (MRP) to reduce stormwater discharges to local waterways and San Francisco Bay. In accordance with the MRP, ensure that post-runoff conditions on any development site shall not exceed pre-project rates and durations, where such increased runoff is likely to cause increased potential for erosion of creek beds and banks, silt pollutant generation, or other adverse impacts on beneficial uses due to increased erosive force.
- **Policy CON-4.5: Watershed-Level Planning.** Recognize local watersheds as a logical basis for planning and implementing water quality improvements. Increase awareness of watershed boundaries and the location of creeks and drainage courses in and around Albany.
- **Action CON-4.A: Trash Reduction Plan.** Implement a Trash Long-Term Reduction Plan and Progress Assessment Strategy to reduce trash discharges to the storm sewer and carry out trash control measures such as street sweeping, litter control, and improved trash bin management.
- **Action CON-4.B: Stormwater Management Plans.** Implement Provision C.3 of the Municipal Resources Permit which requires stormwater management plans, runoff control measures, and stormwater treatment on large development sites.

- **Action CON-4.C: Alameda Countywide Clean Water Program.** Work collaboratively with Alameda County and nearby cities to implement the County Clean Water Program, including water quality monitoring, regulation of construction runoff, cleaning of storm drain inlets, education and outreach, enforcement of illicit discharge regulations.
- **Policy W-5.6: Water Quality.** Design all drainage, water, and wastewater systems to maximize the potential for environmental benefits. This should include minimizing the area of impervious surface, using drought-tolerant landscaping, and incorporating bio-swales and other features which minimize water runoff. In areas where landscape irrigation is required, water systems should be designed for the eventual delivery of reclaimed water.

Implementation of these policies and actions, in conjunction with compliance with existing regulatory programs, would ensure that water quality impacts related to growth under the Draft General Plan would be less than significant and no additional mitigation measures are required.

(2) Deplete Groundwater Supplies or Recharge. The City's water supply is provided by EBMUD. While growth and new development under the Draft General Plan would not interfere with groundwater recharge of the EBMUD's water supply, additional water demands could increase pressure on the overall sustainability of the water supply. The Draft General Plan includes policies and actions addressing water conservation, including:

- **Policy CON-6.2: Energy and Water Audits.** Promote the use of energy audits and water audits by Albany residents and businesses to identify and eliminate sources of waste, conserve resources, and reduce utility costs. Lead by example by performing such audits on municipal buildings and properties, and undertaking appropriate improvements to address energy and water inefficiencies in City facilities.
- **Policy CON-6.8: Water Conservation Measures.** Conserve water in City facilities and new development by maintaining requirements for bay-friendly landscaping and water-conserving plumbing fixtures, and by continuing to support EBMUD's public information campaigns to reduce water consumption.
- **Policy CON-6.9: Reducing Water Usage.** Partner with EBMUD, PG&E, Stopwaste.org and other organizations to achieve water efficiency and reduced usage and support indoor and outdoor conservation practices.
- **Policy CON-6.10: Reclaimed Water.** Support the use of reclaimed water, both on an individual basis (e.g., gray water recycling for private residences) and on a citywide basis for landscaping and irrigation.
- **Action CON-6.A: Green Building Code.** Require new construction to meet or exceed California Green Building Code standards for energy and water efficiency. Albany's building codes should be regularly reviewed and periodically amended to meet or exceed state requirements.
- **Action CON-6.E: Irrigation Efficiency.** As funding allows, replace existing City irrigation infrastructure with more efficient infrastructure that reduces losses from evapotranspiration and creates the opportunity for the future application of reclaimed water.

Implementation of these policies and actions would ensure that impacts on groundwater resources under the Draft General Plan would be less than significant and no additional mitigation measures are required.

(3) Increase Erosion or Siltation. Development under the Draft General Plan has the potential to increase and alter impervious surfaces, which could increase stormwater runoff volumes, potentially resulting in hydromodification impacts (degradation of water quality in creeks related to higher erosive flows). Existing stormwater regulations regarding construction and post-construction stormwater requirements under the NPDES Construction General Permit and MRP, respectively, include extensive requirements for new development. Requirements for implementation of a SWPPP address potential construction-phase stormwater impacts. Potential impacts related to stormwater quality and increased runoff volumes during operation of new developments are addressed by provisions of the MRP. In addition, the following Draft General Plan policies and actions provide additional measures to control stormwater runoff and minimize the potential for associated erosion and siltation effects: Policy CON-4.3; Policy CON-4.4; Action CON-4.B; Action CON-4.C; and Policy W-5.6 (listed under subsection 2.b(1) above).

Implementation of these policies and actions, in conjunction with compliance with existing regulatory programs, would ensure that potential impacts related to erosion and siltation from stormwater under the Draft General Plan would be less than significant and no additional mitigation measures are required.

(4) Increase flooding. Development under the Draft General Plan has the potential to increase and alter impervious surfaces, which could increase stormwater runoff volumes, potentially resulting in localized flooding impacts. Existing stormwater regulations regarding post-construction stormwater requirements under the NPDES MRP include extensive requirements for new development. Potential impacts related to stormwater quality and increased runoff volumes during operation of new developments are addressed by provisions of the MRP. In addition, the following Draft General Plan policies and actions provide additional measures to control stormwater runoff and minimize the potential for associated flooding effects: Policy CON-1.9; Policy CON-4.3; Policy CON-4.4; Action CON-4.B; Action CON-4.C; and Policy W-5.6 (listed under subsection 2.b(1) above).

Implementation of these policies and actions, in conjunction with compliance with existing regulatory programs, would ensure that potential impacts related localized flooding from stormwater under the Draft General Plan would be less than significant and no additional mitigation measures are required.

(5) Contribute Runoff Water or Polluted Runoff. Development under the Draft General Plan has the potential to increase and alter impervious surfaces, which could increase stormwater runoff volumes, potentially resulting in hydromodification impacts (degradation of water quality in creeks related to higher erosive flows). Construction activities, operation of new development, and associated changes in runoff patterns also have the potential to introduce contaminants to stormwater.

In areas of active construction, soil erosion may result in discharges of sediment-laden stormwater runoff into the City stormwater system. If not properly controlled, this stormwater runoff could contribute to degradation of downstream water quality and impairment of beneficial uses. Sediment can also be a carrier for other pollutants, such as heavy metals, nutrients, pathogens, oil and grease, fuels and other petroleum products. In addition to sediment, other pollutants associated with the various phases of construction, such as trash, paint, solvents, sanitary waste from portable restrooms, and concrete curing compounds, can discharge into and impair receiving waters if released during construction.

Development under the Draft General Plan may result in new sources of various stormwater pollutants that may be deposited on impervious surfaces, such as sediment; metals; organic compounds such as pesticides, polynuclear aromatic hydrocarbons and oil and grease; pathogens; nutrients; and trash and debris. Such pollutants may also be present in non-stormwater discharges, such as runoff from irrigation and residential car washing. If not properly controlled, the discharge of these pollutants into receiving waters could adversely affect water quality and beneficial uses.

The existing NPDES Construction General Permit and MRP include extensive requirements for new development. In addition, the following Draft General Plan policies and actions provide additional measures to control stormwater runoff and minimize the potential for associated pollution effects: Policy CSF-6.3; Policy CON-4.1; Policy CON-4.3; Policy CON-4.4; Action CON-4.A; Action CON-4.B; Action CON-4.C; and Policy W-5.6 (listed under subsection 2.b(1) above).

Implementation of these policies and actions, in conjunction with compliance with existing regulatory programs, would reduce impacts from potential stormwater runoff contributions and pollution under the Draft General Plan to a less-than-significant-level and no additional mitigation measures are required.

(6) Substantially Degrade Water Quality. Development under the Draft General Plan could result in water quality degradation, as described above. Compliance with NPDES permit requirements, and the Draft General Plan policies and actions identified above, would reduce this impact to a less-than-significant level and no additional mitigation measures are required.

(7) Place Housing Within a 100-Year Flood Hazard Area. Development under the Draft General Plan could place new construction within the 100-year flood hazard zone mapped by FEMA (Figure IV.H-1). The City's Municipal Code requires that a flood development permit be obtained before any construction or other development begins within any area of special flood hazard. This section also establishes permit review procedures, designates and identifies the duties of the floodplain administrator (the Director of Community Development), provides provisions for flood hazard reduction such as standards of construction, and identifies variance procedures. Implementation of these programs in conjunction with the following Draft General Plan policies would reduce this impact to less-than-significant level:

- **Policy EH-1.6: Flood Plain Management.** Avoid development of structures in the 100-year flood zone. Where no other feasible alternative exists, use construction measures which reduce safety risks and minimize the potential for structure damage.
- **Policy EH-1.7: Flood Control and Conservation.** Ensure that future projects to reduce flooding are compatible with and advance local conservation policies, including those to restore creeks and protect riparian habitat. Flood control measures should strive for solutions which restore natural features and protect the area extending 100 feet back on each side of creek centerlines, rather than replacing such features with engineered channels.

(8) Failure of Levee or Dam. A catastrophic failure of the Berryman Reservoir would have the potential to flood a small portion of the City between I-80 and the Eastshore Highway south of Buchanan Street. The reservoir was initially built in the 1880s by the Alameda Water Company and was acquired by EBMUD in 1923. The Berryman Reservoir is located in close proximity to the Hayward fault and engineering studies showed that the earthen dam, which formed the old reservoir, could be seriously damaged by fault rupture during a major earthquake. The State Department of Water Resources, Division of Safety of Dams, directed EBMUD to strengthen the reservoir to protect

it from major damage in the event of an earthquake, or remove it from service. In 2010, EBMUD replaced the old Berryman Reservoir with a new steel tank that is designed to withstand catastrophic failure during a major seismic event. In the unlikely event of a tank rupture, the water in the tank would be contained within the existing reservoir bowl.[35] Therefore, flooding impacts in the City of Albany from a catastrophic failure of the Berryman Reservoir are considered to be less than significant.

(9) Seiche, Tsunami, Extreme High Tide, or Sea Level Rise Exposure. As described previously, seiches would not be expected to affect areas developed as part of the Draft General Plan; therefore, impacts related to this phenomena are considered less than significant.

The California Geological Survey has designated everything west of I-80, including all of the Albany Bulb and Golden Gate Fields, at risk of inundation in the event of a tsunami (Figure IV.H-3). The extreme high tide elevation with a 1 percent chance of occurring during any given year is represented by the FEMA-designated 100-year coastal flood hazard zone (Figure IV.H-1). The areas of expected inundation by 55 inches of sea level rise above the current FEMA-designated 100-year coastal flood hazard zone include portions of the Albany Bulb, Golden Gate Fields, and the lowland area immediately east of I-80 and south of Buchanan Street (Figure IV.H-1). Implementation of the following Draft General Plan policies would reduce the impact of tsunamis and the combined impacts of extreme high tides and sea level rise on future developments to a less-than-significant level:

- **Policy EH-1.9: Sea Level Rise and Tsunamis.** Consider the effects of sea level rise and tsunamis on the long-term safety and viability of structures, utilities, and other improvements built in low-lying areas.
- **Policy W-5.5: Sea Level Rise and Tsunamis.** Ensure that all structural and recreational improvements along the waterfront incorporate sea level rise and tsunamis as a design factor.

c. Cumulative Impacts. New development in the City may alter local drainage and runoff characteristics; however, such changes would be localized and would not have an impact on a regional scale. Increased cumulative urbanization would be expected to increase vehicle traffic and related releases of automobile-related pollutants, including petroleum hydrocarbons, metals, and sediment, that drain from roads into surface waters and which could have a regional impact. As described in this section, new development is required to implement BMPs to treat stormwater runoff, prior to its discharge, to the maximum extent practicable. However, there could be a significant cumulative impact related to the water quality of surface drainages based on the cumulative amount of growth that would occur within the Santa Clara Valley-East Bay Plain subbasin and by build-out of the Draft General Plan area. On-going compliance with the NPDES requirements by the City and other jurisdictions in the Santa Clara Valley-East Bay Plain subbasin, including participation with CWPAC, is considered adequate mitigation for this potential cumulative impact (including the project's contribution) and would reduce the impact to a less-than-significant level.

[35] Parsons Engineering Science, Inc., 1997. *Berryman Reservoir Replacement Draft EIR*. December.

Build-out of the Draft General Plan and development in the East Bay would increase demand for water resources provided by EBMUD. Due to the limited nature of water resources in the Bay Area and California, the additional population envisioned by the Draft General Plan, along with future growth in the region and the effects of global climate change, could cumulatively lead to future water shortages and depletion of existing groundwater and surface water supplies. As discussed within this section, implementation of the Draft General Plan policies and actions for water conservation are considered adequate to mitigate potential impacts related to groundwater overdraft. These policies and actions would also reduce the potential cumulative impacts to a less-than-significant level.

I. HAZARDS AND HAZARDOUS MATERIALS

This section describes hazards and hazardous materials[1] related to future development in the City of Albany that could pose a significant threat to human health or the environment. The setting section describes the existing conditions and regulatory framework. The impacts and mitigation measures section defines the criteria of significance and identifies potential impacts and mitigation measures related to hazards and hazardous materials for future development in the City of Albany.

1. Setting

The setting section describes existing conditions in the City of Albany and pertinent federal, State, and local agency laws, regulations, and programs related to hazards and hazardous materials.

a. Accidental Hazardous Materials Releases. In California, all handlers of hazardous materials are required to immediately notify the Governor's Office of Emergency Services (Cal OES) Warning Center and the local Certified Unified Program Agency (CUPA) in the event of an accidental hazardous material release or threat of a release. Between 2005 and 2014, there were 36 accidental release events in the City of Albany reported to the Cal OES Warning Center (Table IV.I-1). The majority of the releases (27 of the 36) were related to an overflow or leak of sewer/stormwater pipelines. Two of the incidents involved train collisions with pedestrian trespassers and no chemicals were spilled. Only 5 of the 36 releases reported involved a hazardous material. The hazardous materials were released from either a highway/roadway incident or other sources (e.g., residence or unknown). Over the 10-year period, the average number of hazardous material releases was 0.5 per year. The hazardous material releases were either contained or did not require remediation under the supervision of the State Water Resources Control Board (SWRCB) or Department of Toxic Substances Control (DTSC).

Table IV.I-1: Summary of Accidental Release Events Reported in the City of Albany Between 2005 and 2014

Source	Non-Hazardous Material Releases	Hazardous Material Releases	Total Releases
Commercial/Industrial Facility	1	0	1
Highway/Roadway	1	2	3
Railroad	2	0	2
Sewer/Stormwater	27	0	27
Other	0	3	3
Totals	**31**	**5**	**36**

Source: Cal OES Warning Center spill release archive files from 2005 to 2014. Accessed by Baseline Environmental Consulting May 2015.

The Albany City Council passed Resolution No. 2015-10 on March 3, 2015 opposing transportation of fossil fuel materials, including crude oil, coal, and petroleum coke through the City of Albany. The

[1] The California Health and Safety Code defines a hazardous material as "... any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety, or to the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, radioactive materials, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment." (Health and Safety Code, Section 25501).

resolution states that the City strongly urges State and federal agencies to adopt regulations for petroleum product shipments, including disclosure requirements and increasing design and operation regulations. Subsequently the City sent a letter to the federal Secretary of Transportation with these recommendations.[2] No railroad incidents involving the release of hazardous materials have been reported in the City of Albany.

b. Hazardous Materials Release Sites. The status and location of all hazardous materials release sites requiring regulatory oversight for assessment and/or remediation actions are reported on the SWRCB's GeoTracker database and the DTSC's EnviroStor database. According to these databases, the majority of hazardous materials release sites in the City of Albany are related to leaking petroleum underground storage tanks (USTs).

As of May 2015, the SWRCB database[3] and DTSC database[4] records identify 47 hazardous materials release sites in the City of Albany; 9 of those sites are under active regulatory agency oversight for remediation and monitoring activities and the remaining 38 have been closed. The primary contaminants of concern at the active hazardous materials release sites include petroleum hydrocarbons, chlorinated solvents, volatile organic compounds, and metals. The active hazardous materials release sites are summarized in Table IV.I-2. Land use redevelopment on or near an active hazardous materials release site could pose a potential health risk to future construction workers, residents, and/or others who may come into contact with the hazardous materials.

Table IV.I-2: Summary of Active Hazardous Materials Release Sites

	Facility Name	Address
1	Exxon	990 San Pablo Avenue
2	Firestone #3655	969 San Pablo Avenue
3	Albany 1-Hour Cleaners	1187 Solano Avenue
4	Albany Hill Mini Mart	800 San Pablo Avenue
5	Plaza Car Wash	400 San Pablo Avenue
6	Bridgewater Condominiums	545 Pierce Street
7	Western Forge & Flange Co	540 Cleveland Avenue
8	Curoco Steel Systems (Toxic)	536 Cleveland Avenue
9	Albany Solid Waste Disp	Buchanan Street Extension

Note: Facility names derived directly from SWRCB and DTSC regulatory databases.

Source: State Water Resources Control Board, GeoTracker Database; Department of Toxic Substances Control, EnviroStor Database. Accessed by Baseline Environmental Consulting March 2014.

c. Radioactive Waste. Between about 1988 and 1997, radioactive materials were used for agricultural research and experimentation at the Gill Tract, a 10-acre plot owned by the University of California, Berkeley. The Gill Tract is located on San Pablo Avenue south of Marin Avenue.

[2] Mass, Peter, City of Albany Mayor, 2015. Letter to the Honorable Anthony R. Foxx Secretary of Transportation, RE: Rail Safety – Expedited Action Requested. March 16.

[3] State Water Resources Control Board, 2015. GeoTracker Database. Website: geotracker.swrcb.ca.gov (accessed on May 28).

[4] Department for Toxic Substances Control, 2015. EnviroStor Database. Website: www.envirostor.dtsc.ca.gov/public (accessed on May 28).

Historical research has shown that the use of radioactive materials was limited to the Hybridoma Laboratory. A comprehensive radiation survey conducted in 2009 determined that there was no evidence of radiological contamination on the Gill Tract. Based on the findings of the survey, the Radiological Health Branch of the California Department of Public Health removed the Gill Tract from UC Berkeley's radioactive materials license and authorized the location for unrestricted use.[5]

d. Hazardous Building Materials. Hazardous materials are commonly found in building materials that may be affected during demolition and renovation activities. Building materials such as thermal system insulation, surfacing materials, and asphalt and vinyl flooring materials installed in buildings prior to 1981 may contain asbestos.[6] Lead compounds may be present in interior and exterior paints used for commercial buildings, regardless of construction date.[7] Lead and asbestos are State-recognized carcinogens.[8] Demolition or renovation activities in Albany could release asbestos fibers and lead particles into the air, which then may be inhaled by construction workers and the general public. In addition, other common items present in buildings, such as electrical transformers, fluorescent lighting, electrical switches, heating/cooling equipment, and thermostats could contain hazardous materials, which may pose a health risk if not handled and disposed of properly.

e. School Receptors. Children are more susceptible to adverse health effects from hazardous materials than the general population. As of May 2015, there are seven schools in the City of Albany that are managed under the Albany Unified School District, one private high school and multiple private preschool facilities within the City, as well as schools located near Albany in adjacent jurisdictions.

f. Emergency Response. The Albany Fire Department is responsible for responding to and preparing for emergencies and disasters in the City of Albany. The City's Emergency Operations Center, located at 1000 San Pablo Avenue, serves as the primary location for internal operational, planning, and logistical activities in the event of a localized or regional disaster impacting Albany. In the event of an emergency response or evacuation, the primary access routes through the City would include San Pablo Avenue, Marin Avenue, Solano Avenue, and Buchanan Street.

g. Wildland Fire Hazards. The California Department of Forestry and Fire Protection (CAL FIRE) has mapped areas in Alameda County with significant fire hazards based on fuels, terrain, and other relevant factors. These zones, referred to as Very High Fire Hazard Severity Zones, are classified by the CAL FIRE Director in accordance with Government Code Sections 51175-51189 to assist responsible local agencies, such as the Albany Fire Department, identify measures to reduce the potential for losses of life, property, and resources from wildland fire. CAL FIRE has determined that

[5] University of California, Berkeley, 2012. Office of Environment, Health & Safety. FAQ Index, *Gill Tract: Radiation Safety*. June 11.

[6] California Code of Regulations, Title 8 Industrial Relations, Section 5208 Asbestos.

[7] Department for Toxic Substances Control, 2006. Interim Guidance Evaluation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers. June 9 (Revised).

[8] California Environmental Protection Agency, 2014. Office of Environmental Health Hazard Assessment. *Safe Drinking Water and Toxic Enforcement Act of 1986, Chemicals Known to the State to Cause Cancer or Reproductive Toxicity*. January 31.

there are no Very High Fire Hazard Severity Zones in the City of Albany.[9] However, the City of Albany has determined that the eucalyptus forest on top of Albany Hill poses a wildland fire hazard that could impact the surrounding community.

h. Regulatory Agency Framework. Products as diverse as gasoline, paint, solvents, household cleaning products, refrigerants, and radioactive substances are categorized as hazardous materials. The proper management of hazardous materials is a common concern for all communities. Beginning in the 1970s, governments at the federal, State, and local levels became increasingly concerned about the effects of hazardous materials on human health and the environment. Numerous laws and regulations were developed to investigate and mitigate these effects. As a result, the storage, use, generation, transport, and disposal of hazardous materials are highly regulated by federal, State, and local agencies. These agencies and information about the laws, regulations, and programs they administer are summarized below.

(1) Federal Regulations. The U.S. Environmental Protection Agency (USEPA) is the lead agency responsible for enforcing federal laws and regulations governing hazardous materials that affect public health or the environment. The major federal laws and regulations enforced by the USEPA that could potentially relate to future developments in the City of Albany include: the Resource Conservation and Recovery Act (RCRA); the Toxic Substances Control Act (TSCA); the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA); the Superfund Amendments and Reauthorization Act (SARA); the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA); and the Hazardous Material Transportation Act (HMTA).

In 1976, RCRA was enacted to provide a general framework for the USEPA to regulate hazardous waste from the time it is generated until its ultimate disposal. In accordance with RCRA, facilities that generate, treat, store, or dispose of hazardous waste are required to ensure that the wastes are properly managed from "cradle to grave" by complying with the federal waste manifest system.

In 1976, TSCA was enacted to provide the USEPA authority to regulate the production, importation, use, and disposal of chemicals that pose a risk of adversely impacting public health and the environment. TSCA, and subsequent amendments, regulate contaminants such as polychlorinated biphenyls (PCBs), ACMs, and LBP. TSCA also gives the USEPA authority to regulate the cleanup of sites contaminated with specific chemicals, such as PCBs.

In 1980, CERCLA, commonly known as the Superfund, was enacted to ensure that a source of funds was available for the USEPA to clean up uncontrolled or abandoned hazardous materials release sites that pose a risk of adversely impacting public health and the environment. Prohibitions and requirements regarding closed or abandoned hazardous waste sites and liability standards for responsible parties were also established by CERCLA. In 1986, SARA amended CERCLA to increase the Superfund budget, modify contaminated site cleanup criteria and schedules, and revise settlement procedures.

[9] California Department of Forestry and Fire Protection, 2009. *Very High Fire Hazard Severity Zones in LRA; Alameda County*. Recommended by CAL FIRE on September 8.

In 1972, an amendment to FIFRA provided the USEPA authority to regulate the manufacture, distribution, and import of pesticides. The USEPA approves registered uses of a pesticide based on an evaluation of its potential adverse effects to human health and the environment. The USEPA has granted the California Department of Pesticide Regulation (DPR) authority to enforce federal laws pertaining to the proper and safe use of pesticides.[10] The DPR can also designate pesticides as "restricted material" based on potential adverse effects to public health, applicators, farm workers, domestic animals, honeybees, the environment, wildlife, or crops other than those being treated.

In 1990 and 1994, the HMTA was amended to improve the protection of life, property, and the environment from the inherent risks of transporting hazardous material in all major modes of commerce. The U.S. Department of Transportation (DOT) developed hazardous materials regulations, which govern the classification, packaging, communication, transportation, and handling of hazardous materials, as well as employee training and incident reporting.[11] The transportation of hazardous materials is subject to both RCRA and DOT regulations.

The Occupational Health and Safety Administration (OSHA) is the federal agency responsible for enforcement and implementation of federal laws and regulations pertaining to worker health and safety. Under OSHA jurisdiction, the Hazardous Waste Operations and Emergency Response regulations require training and medical supervision for workers at hazardous waste sites.[12] Additional regulations have been developed for construction workers regarding exposure to lead[13] and asbestos[14] during construction activities.

(2) State Regulations. In California, the USEPA has granted most enforcement authority of federal hazardous materials regulations to the California Environmental Protection Agency (Cal/EPA). Under the authority of Cal/EPA, the SWRCB and DTSC are responsible for overseeing the remediation of contaminated soil and groundwater sites. The provisions of Government Code 65962.5 (also known as the Cortese List) require the SWRCB, DTSC, the California Department of Health Services, and the California Department of Resources Recycling and Recovery to submit information pertaining to sites associated with solid waste disposal, hazardous waste disposal, and/or hazardous materials releases to Cal/EPA.

The California Highway Patrol, the California Department of Transportation (Caltrans), and DTSC are responsible for enforcing federal and State regulations pertaining to the transportation of hazardous materials. If a discharge or spill of hazardous materials occurs during transportation, the transporter is required to take appropriate immediate action to protect human health and the environment (e.g., notify local authorities and contain the spill), and is responsible for the discharge cleanup.[15]

[10] California Code of Regulations, Title 3 Food and Agriculture, Division 6 Pesticides and Pest Control Operations.

[11] Code of Federal Regulation, Title 49 Transportation, Parts 171-180.

[12] Code of Federal Regulation, Title 29 Labor, Section 1910.120 Hazardous Waste Operations and Emergency Response.

[13] Code of Federal Regulation, Title 29 Labor, Section 1926.62 Lead.

[14] Code of Federal Regulation, Title 29 Labor, Section 1926.1101 Asbestos.

[15] California Code of Regulations, Title 22 Social Security, Section 66260.10 et seq.

State worker health and safety regulations related to construction activities are enforced by the California Division of Occupational Safety and Health (Cal/OSHA). Regulations include exposure limits and requirements for protective clothing and training to prevent exposure to hazardous materials. Cal/OSHA also enforces occupational health and safety regulations specific to lead and asbestos investigations and abatement, which equal or exceed their federal counterparts.[16]

Under the California Education Code and Public Resource Code, prospective school sites must be assessed to determine if any former or current hazardous materials release sites or hazardous materials pipelines are present on the proposed site.[17] Local hazardous materials agencies and air quality districts must also be consulted to ensure that no sites within 0.25 miles of a school that handle or emit hazardous substances would potentially endanger future students or workers at the prospective school site. All school districts receiving State funds must prepare a Phase I environmental site assessment on prospective school sites. The Phase I environmental site assessment would detail the historical uses of the property and indicate any potential for contamination. DTSC must review this assessment and make one of the following findings: 1) that no further action is required; or 2) that concerns about contamination exist and the district must conduct a Preliminary Endangerment Assessment (PEA). The PEA entails site sampling and the development of a detailed risk assessment of any contaminants present on the proposed school property.

(3) Regional and Local Regulations. The Bay Area Air Quality Management District (BAAQMD) oversees the protection of air quality in the San Francisco Air Basin, which includes the City of Albany. Hazardous and acutely hazardous emissions during construction (e.g., demolition of buildings containing asbestos) and facility operations (e.g., petroleum vapors from gas stations) are subject to health risk assessment regulations and permitted conditions of operation to protect nearby sensitive receptors.

The SWRCB supports the San Francisco Bay Regional Water Quality Control Board (RWQCB), which is responsible for overseeing the protection of water quality in the Bay Area. Under authority from the RWQCB, the Alameda County Department of Environmental Health (ACDEH) implements a Local Oversight Program (LOP) to oversee the investigation and remediation of leaking underground fuel tanks in Alameda County.

The routine management of hazardous materials in California is administered under the Unified Program.[18] Most of the City of Albany's hazardous materials programs are administered and enforced under the Unified Program. The Cal/EPA has granted responsibilities to ACDEH for implementation and enforcement of hazardous material regulations in the City of Albany under the Unified Program as a CUPA. The ACDEH issues fee-based permits for all of the hazardous materials programs. In addition, a household hazardous waste (HHW) disposal program for Albany residents is administered by the Alameda County Waste Management Authority. A summary of the hazardous materials

[16] California Code of Regulations, Title 8 Industrial Relations, Sections 1529 Asbestos, 1532.1 Lead, and 5192 Hazardous Waste Operations and Emergency Response.

[17] California Education Code, Section 17210 et seq. and Public Resource Code, Sections 21151.2, 21151.4, and 21151.8.

[18] California Health and Safety Code, Chapter 6.11 Unified Hazardous Waste and Hazardous Materials Management Regulatory Program, Sections 25404-25404.9.

programs administered by the ACDEH CUPA and Alameda County Waste Management Authority are provided below.

Hazardous Materials Business Plan Program. The ACDEH requires any facility that uses, handles, or stores aggregate quantities of any hazardous materials equal to or greater than 55 gallons of liquid, 500 pounds of solid, and/or 200 cubic feet of compressed gas to report their chemical inventories to ACDEH by preparing a Hazardous Materials Business Plan (HMBP). The HMBP must be submitted electronically to the ACDEH through the California Environmental Reporting System (CERS)[19] for review. An HMBP must include measures for safe storage, transportation, use, and handling of hazardous materials. The HMBP must also include a contingency plan that describes the facility's response procedures in the event of a hazardous materials release.

California Accidental Release Prevention Program. Under the California Accidental Release Prevention (CalARP) Program, the ACDEH requires facilities that handle more than a threshold quantity of a regulated hazardous substance (listed in Tables 1-3, 19 CCR 2770.5), such as federally-listed extremely hazardous toxic and flammable substances and State-listed acutely hazardous materials, to prepare a risk management plan (RMP). An RMP must analyze the potential for an accidental release and provide measures that can be implemented to reduce this potential. ACDEH's review of the RMP includes a public notification process.

Underground Storage Tank Program. Hazardous materials stored in underground storage tanks (USTs), such as gasoline, could potentially leak over time and pose a risk of adversely affecting public health and the environment. The UST Program implemented by ACDEH requires facilities to acquire a five-year operating permit that includes conditions describing how to install, monitor, operate, and maintain USTs to protect public health and the environment. Tanks must be constructed with primary and secondary levels of containment and be designed to protect public health and the environment for the lifetime of the installation. The USTs must be monitored for leaks and built such that a leak from the primary container into the secondary container will be detected. When USTs are proposed for removal or modification, additional permit applications must be submitted to ACDEH. The ACDEH oversees UST removal activities to identify potential evidence of leakage.

Aboveground Storage Tank Program. The Aboveground Petroleum Storage Act (APSA) requires facilities in California storing petroleum products in aboveground tanks greater than or equal to 55 gallons and having an aggregate aboveground storage capacity greater than or equal to 1,320 gallons to prepare and implement a Spill Prevention, Countermeasure, and Control (SPCC) Plan (40 CFR 112). An SPCC Plan must be kept onsite at all times and address prevention, preparation, and response measures to prevent petroleum discharges into navigable water and adjoining shorelines.

Hazardous Waste Generator Program. Once a hazardous material has been used or processed, what remains may be considered a hazardous waste. Facilities that generate any quantity of hazardous waste are required to submit a Hazardous Waste Generator Survey to the ACDEH electronically through CERS. All facilities must obtain a waste manifest identification number from the DTSC and facilities that generate more than 100 kilograms of hazardous waste per month, or more than 1 kilogram of acutely hazardous waste, must also register with USEPA RCRA program.

[19] California Environmental Reporting System, 2014. Website: cers.calepa.ca.gov.

Hazardous Waste Tiered-Permitting Program. The Unified Program regulates a Tiered-Permitting Program for authorizing facilities that generate hazardous waste to treat eligible waste streams onsite. The tiers include the following permits: Permit by Rule (PBR), Conditionally Authorized (CA), and Conditionally Exempt (CE). PBR Tiered-Permitting facilities can treat any volume of hazardous waste, including hazardous wastes with more than one hazard. CA Tiered-Permitting facilities are only authorized to treat less than 5,000 gallons or 45,000 pounds per month of hazardous wastes with only one characteristic or hazard. CE Tiered-Permitting facilities are only authorized to treat less than 55 gallons per month of hazardous waste.

All Tiered-Permitting facilities in the City of Albany must notify the ACDEH of their permit status. All Tiered-Permitting facilities must characterize waste streams prior to treatment, and PBR Tiered-Permitting facilities must prepare a waste analysis plan. Instructions must be maintained onsite for operating treatment equipment, evaluating the efficacy of treatment operations, implementing a contingency plan in the event of a hazardous material release, and documenting daily inspections of tanks and weekly inspections of containers.

Household Hazardous Waste Program. Many Albany residents routinely store and dispose of hazardous materials, such as paints and thinners, cleaning products, motor oil, batteries, electronics, and other such items. Long-term storage of hazardous products in residences poses an unnecessary risk of accidentally poisoning children and/or pets. When residents discard these kinds of hazardous materials, they become household hazardous waste (HHW). Pouring HHW down the drain, into storm sewers, or on the ground and placing HHW in the trash could potentially contaminate soil, ground-water, or surface water.

In California, it is illegal to dispose of HHW in the trash, down the drain, or by abandonment.[20] The Alameda County Waste Management Authority provides disposal options for HHW to residents of the City of Albany. Drop-off services for HHW are available to Albany residents at the Alameda County Waste Management Authority's Oakland Facility on 2100 East 7th Street in Oakland.

City of Albany General Plan. The following policies from the 1992 Albany General Plan addressed hazards and hazardous materials:

- **Policy CHS 3.1:** Evaluate and map the presence of hazardous materials at any development or redevelopment sites filled prior to 1974, or sites historically devoted to uses which may have involved hazardous wastes.
- **Policy CHS 3.2:** Continue to participate and cooperate with the Alameda County Hazardous Waste Management Authority and the County Department of Environmental Health in their efforts to require proper storage and disposal of hazardous materials.

These policies will soon be superseded by a more robust set of policies and action programs in the Draft General Plan. The new policies reflect the broader regulatory framework and heightened awareness of hazardous materials issues in the state, as well as best practices in policy planning.

[20] California Health and Safety Code, Article 10.8 Household Hazardous Waste and Small Quantity Generator Waste, Sections 25218-25218.13.

2. Impacts and Mitigation Measures

This section provides an assessment of the potential adverse impacts related to hazards and hazardous materials within the City of Albany. It begins with the criteria of significance, which establishes the thresholds for determining whether an impact is significant. The latter part of this section identifies potential impacts and evaluates how they relate to policies and actions of the Draft General Plan. Where potentially significant impacts are identified, mitigation measures are recommended.

a. Criteria of Significance. Implementation of the Draft General Plan would result in a significant hazard or hazardous materials impact if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Include hazardous materials sites compiled pursuant to Government Code Section 65962.5 and as a result, create a significant hazard to the public or the environment;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

b. Impact Analysis. The following section provides an evaluation and analysis of the potential impacts of the Draft General Plan for each of the criteria of significance listed above and potential cumulative impacts.

(1) Routine Transport, Use, Handling or Disposal of Hazardous Materials. New development or redevelopment in the City of Albany could involve the routine management of hazardous materials that could pose a significant threat to human health or the environment if not properly managed. The storage, use, handling, generation, transport, and disposal of hazardous materials during site construction and operation activities is addressed by federal, State, and local laws, regulations, and programs. On the local level, the ACDEH implements regulatory programs for sites that routinely manage hazardous materials to ensure the safe storage, management, and disposal of hazardous materials in accordance with the Unified Program. Furthermore, the following specific policies and actions of the Draft General Plan would be applicable:

- **Policy EH-3.2: Design of Storage and Handling Areas**. Ensure that hazardous material storage and handling areas are designed and operated to minimize the risk of environmental contamination and the potential for adverse health effects.
- **Policy EH-3.3: Interagency Coordination**. Continue to work with Stopwaste.org, the Alameda County Waste Management Authority, the Alameda County Environmental Health Department, and state and federal agencies to ensure the safe storage, handling, and disposal of hazardous materials within Albany.

- **Policy EH-3.6: Household Hazardous Waste**. Support expanded public education on household hazardous waste and the locations where such waste can be safely and properly disposed in Alameda and Contra Costa Counties.
- **Action EH-3.A: Public Education and Outreach**. Provide links from the City of Albany's website to the websites of the County, State and federal agencies that regulate hazardous materials management. This should include a link to the SWRCB's, DTSC's, and ACDEH's databases that include archived reports on hazardous materials clean-up by address, and other databases indicating where the use of hazardous materials has been permitted.
- **Action EH-3.B: CUPA Programs**. Continue to work with the Alameda County Department of Environmental Health in its capacity as the Certified Unified Program Agency (CUPA) for hazardous materials management programs in Albany, including implementation of requirements for Hazardous Materials Business Plans, Risk Management Plans, and hazardous waste permitting.
- **Action EH-3.C: Household Hazardous Waste Day**. Work with Stopwaste.org to establish an annual household hazardous waste (HHW) collection day in Albany, or alternatively to establish a partnership with nearby cities that enables Albany residents to more easily dispose of household hazardous waste.

Compliance with federal, State, and local requirements and the Draft General Plan policies and actions would reduce this potential impact to a less-than-significant level and no further mitigation is required.

(2) Accidental Releases of Hazardous Materials. Potential upset and accident conditions associated with construction activities, building demolition, and hazardous material handlers (e.g., facilities and transporters) are discussed below.

Construction Activities. Project construction activities in the City of Albany would include the management of hazardous materials, such as motor fuels, oils, solvents, and lubricants. Common construction activities, such as fueling, maintenance, and operation of construction equipment, could result in an accidental release of hazardous materials into the environment. The use of hazardous materials would be subject to existing hazardous materials laws and regulations, and adherence to these standards would reduce the potential occurrence of an accidental release. In addition, a Storm-water Pollution Prevention Plan (SWPPP) must be prepared for coverage under the Construction General Permit in accordance with the requirements of the SWRCB. The SWPPP requires implementation of Best Management Practices for hazardous materials storage and soil stockpiles, inspections, maintenance, training of employees, and containment of releases to prevent runoff into existing stormwater collection systems or waterways.

Since compliance with existing regulations is mandatory, accidental hazardous materials releases during construction activities would have a less-than-significant impact on the public or the environment, and no additional mitigation is required.

Building Demolition. Demolition of buildings containing hazardous building materials could potentially release hazardous materials into the environment. The removal of hazardous building materials prior to demolition is governed by federal and state laws and regulations. Section 19827.5 of the California Health and Safety Code requires that local agencies not issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding hazardous air pollutants.

In the City of Albany, the BAAQMD oversees the removal of regulated ACMs.[21] All friable (crushable by hand) ACMs or non-friable ACMs subject to damage must be abated prior to demolition in accordance with applicable requirements. Friable ACMs must be disposed of as an asbestos waste at an approved facility. Non-friable ACMs may be disposed of as non-hazardous waste at landfills that will accept such wastes. Workers conducting asbestos abatement must be trained in accordance with State and federal OSHA requirements.

Loose and peeling LBP must be disposed of as a State and/or federal hazardous waste if the concentration of lead equals or exceeds applicable waste thresholds. State and federal OSHA regulations require a supervisor who is certified to identify existing and predictable lead hazards to oversee air monitoring and other protective measures during demolition activities where LBP may be present. Special protective measures and notification to Cal/OSHA are required for highly hazardous construction tasks related to lead, such as manual demolition, abrasive blasting, welding, cutting, or torch burning of structures where LBP is present.[22]

Fluorescent lighting tubes and ballasts, mercury thermometers, and several other common items containing hazardous materials are regulated under the California Universal Waste Rule,[23] which is less stringent than most other federal and State hazardous waste regulations. To manage universal waste in accordance with the streamlined requirements for the State of California, generators must relinquish the waste to a universal waste transporter, another universal waste handler, or a universal waste destination facility.

The following Draft General Plan policy would be applicable to this potential impact:

- **Policy EH-3.5: Hazardous Building Materials.** Coordinate with appropriate regulatory agencies and building owners to reduce potential hazards related to exposure to hazardous building materials, such as lead, mercury, and asbestos. Ensure that any hazardous materials removed during home renovations are properly handled and disposed.

Implementation of the Draft General Plan policy, as well as existing regulatory requirements, would reduce the potential risk of impacts related to the reasonably foreseeable upset or accident conditions involving hazardous building materials to a less-than-significant level, and no additional mitigation is required.

Hazardous Materials Handlers. Common sources of accidental hazardous materials releases during project operations include transport along highways/roadways and railroads, or from commercial/industrial facilities. Between 2005 and 2014, the average number of accidental hazardous material releases in Albany was 0.5 per year. The hazardous material releases were either contained or did not require remediation under the supervision of the SWRCB or DTSC; therefore, the risk of a significant hazard to the public or the environment through reasonably foreseeable upset and accident

[21] Bay Area Air Quality Management District, 1998. *Regulation 11, Rule 2; Asbestos Demolition, Renovation, and Manufacturing.* October 7.

[22] California Code of Regulations, Title 8 Industrial Relations, Section 1532.1 Lead.

[23] California Code of Regulations, Title 22 Social Security, Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Chapter 23 Standards for Universal Waste Management.

conditions is relatively low. Furthermore, the following Draft General Plan policy would be applicable to transporters of hazardous materials:

- **Policy EH-3.4: Transportation Safety.** Support state and federal legislation which strengthens safety requirements for the transportation of hazardous waste by truck and rail through Albany and nearby cities.

Implementation of the Draft General Plan policy, in addition to the existing low risk of accidental hazardous material releases in the City of Albany and regulatory requirements for the routine management of hazardous materials, as described above, would reduce the potential risk of impacts related to reasonably foreseeable upset or accident conditions involving hazardous materials handlers to a less-than-significant level, and no additional mitigation is required.

(3) Existing and Proposed School Sites. The handling or emission of hazardous or acutely hazardous materials near schools must consider potential health effects to children, who are considered sensitive receptors. Prospective school sites must be reviewed to determine that such sites are not contaminated by hazardous materials or located within 0.25 miles of land uses that manage substantial quantities of hazardous materials. California Education Code Sections 21151.2, 21151.4, and 21151.8 specifically require investigation of prospective school sites in accordance with DTSC guidance.

Future developments of potential concern could include the siting of new commercial and/or industrial facilities that would emit or handle hazardous or acutely hazardous materials, renovation or demolition of buildings containing hazardous materials, and/or redevelopment of an existing hazardous materials release site. The primary exposure pathway of concern is commonly the inhalation of air contaminants, such as particulate matter. As discussed above, hazardous materials used during project construction activities and operations would be managed in accordance with applicable laws and regulations. The following policy of the Draft General Plan would also apply to this potential impact:

- **Policy EH-3.7: Development Review.** Consider proximity to hazardous materials in the development review process. Zoning regulations and standards should ensure safe distances between businesses using hazardous materials and sensitive land uses such as housing.

This policy, in coordination with existing regulatory requirements, would reduce the potential for school children to be exposed to hazardous or acutely hazardous materials to a less-than-significant level, and no additional mitigation is required.

(4) Hazardous Material Sites. As of May 2015, there are nine active hazardous material release sites in the City of Albany with regulatory oversight from either the RWQCB or DTSC. Some of these sites are included on the Cortese List in accordance with Government Code section 65962.5. There may be other hazardous material release sites that are not active, but have deed/land-use restrictions associated with a former hazardous materials release, that would also be included on the Cortese List. Contamination from hazardous material release sites on the Cortese List can potentially affect human health and the environment. Direct contact, inhalation, or ingestion of hazardous materials could potentially cause adverse health effects to construction workers and future site users. The severity of health effects would depend on the contaminant(s), concentration, use of personal protective equipment for construction workers, institutional controls, and/or engineering controls, and duration of exposure. The disturbance of hazardous materials on these sites during earthwork activities could pose a hazard to construction workers, nearby receptors, and the environment. Future

site users who come into contact with contaminated media could also experience adverse health effects. The following Draft General Plan policy addresses this potential impact:

- **Policy EH-3.1: Consideration of Prior Uses.** As part of the development review and approval process, consider potential risks associated with the previous uses of property that may have involved hazardous material handling, storage, or disposal. Require remediation where such hazards exist to ensure the health and safety of future residents and workers.

Continued regulatory oversight for the cleanup of existing hazardous materials release sites, adherence with existing deed/land-use restrictions, and implementation of Policy EH-3.1 would reduce potential impacts related to hazardous materials release sites, including those on the Cortese List, to a less-than-significant level and no additional mitigation is required.

(5) Emergency Response and Evacuation Plans. The Draft General Plan contains the following policies and actions regarding emergency response plans:

- **Policy EH-1.2: Critical Facilities.** Ensure that critical public facilities such as City Hall, schools, the police station, and the fire station are designed and maintained in a manner that ensures their resilience and ability to function during and after a natural disaster.
- **Policy EH-4.1: Response and Recovery Program.** Maintain an active and effective City of Albany emergency response and recovery program that provides direction and identifies responsibilities following a disaster.
- **Policy EH-4.2: Resident and Business Preparedness**. Develop and expand local efforts to organize and train area residents and employees so they can assist themselves and others during the first 72 hours following an earthquake or major disaster.
- **Policy EH-4.3: Emergency Operations Center.** Maintain a dedicated Emergency Operations Center to serve as the command point for emergency service delivery and communication. As directed by the Emergency Response Plan, identify supplemental sites (such as schools and/or the Library) where emergency services can be delivered and supplies can be stored.
- **Policy EH-4.4: Utility Resilience.** Work with local gas, electric, cable, water, sewer, and other utility providers to maintain and retrofit their facilities and ensure their ability to function or be quickly restored following a disaster.
- **Policy EH-4.5: Responding to the Needs of a Diverse Community.** Ensure that emergency preparedness information is available in the primary non-English languages spoken in Albany, and that preparedness programs recognize the special needs of seniors and persons with disabilities. The City and Fire Department should work with local cultural institutions and special needs service providers to improve preparedness.
- **Policy EH-4.6: Long-Term Recovery**. Incorporate provisions for long-term post-disaster recovery in local emergency preparedness plans. Such provisions should address the period beyond the initial 72 hours following a disaster and should identify strategies for rebuilding, structural repairs, restoration of services, and economic recovery.
- **Action EH-4.A: Updated Emergency Preparedness Plan.** Update and revise Albany's emergency preparedness planning documents. As part of this effort, review current data and information on hazard levels, existing emergency response protocol, and the preparedness plans of major employers in the community. Emergency plans should be consistent with federal Standard Emergency Management System (SEMS) guidelines, and the standards used to determine funding eligibility for emergency planning, relief, and recovery.

- **Action EH-4.B: Upgrades to Critical Facilities.** Continue efforts to upgrade the City's schools and essential service facilities to ensure that they remain functional after a major disaster.
- **Action EH-4.C: CERT Training.** Continue the City of Albany and Albany Fire Department Community Emergency Response Team (CERT) and Albany Local Emergency Response Training (ALERT) training programs for residents.
- **Action EH-4.D: Emergency Supplies.** Regularly acquire, and as needed replace, emergency equipment, supplies, and communication systems, consistent with local emergency response plans.
- **Action EH-4.E: Drills.** Conduct periodic training exercises and disaster drills to test the effectiveness of local emergency response procedures.

Increased traffic as a result of new development in the City of Albany could impair existing and future emergency response and evacuation procedures. However, the following policies and actions require adequate access for emergency vehicle:

- **Policy T-4.10: Emergency Vehicles.** Provide adequate access for emergency vehicles as development takes place and as road modifications are completed. The Albany Police and Fire Departments should participate in development review and transportation planning to ensure that adequate access is provided. Painted curbs should be used as needed to limit parking in areas where emergency vehicle access is needed or where vehicle parking would impede traveler safety.

The policies and actions of the Draft General Plan would reduce potential impacts related to impairment or interference with emergency response plans or emergency evacuation plans to a less-than-significant level, and no additional mitigation is required.

(6) Wildland Fire Hazards. According to CAL FIRE, there are no Very High Fire Hazard Severity Zones within or adjacent to the City of Albany. However, the City of Albany has determined that the eucalyptus forest on top of Albany Hill poses a wildland fire hazard that could impact the surrounding community. The following Draft General Plan policies and actions address both general fire hazards concerns in Albany and the risk of wildland fire on Albany Hill:

- **Policy EH-2.1: Vegetation Management.** Implement vegetation management and fuel reduction programs in the highest hazard areas on Albany Hill, including areas adjacent to homes and areas of heavy recreational use.
- **Policy EH-2.3: Mutual Aid Agreements.** Work collaboratively with other jurisdictions to reduce wildfire hazards and respond to wildfire emergencies in the East Bay and elsewhere in California.
- **Policy EH-2.4: Defensible Space.** Ensure that private property owners in areas such as Albany Hill control weeds and other flammable vegetation around their homes in a manner that minimizes the risk of structure fires and threats to nearby properties.
- **Action EH-2.A: Albany Hill Eucalyptus Forest Management.** Manage the eucalyptus forest on Albany Hill to reduce the threat of wildfire. Consistent with the Albany Creekside Master Plan, this should include a combination of removing accumulated ground debris, managing ground cover and shrubs, removing loose or hanging bark, removing the growth of previously cut stumps, removing non-native trees such as acacia where they act as ladder fuels, maintaining the canopy to prevent invasive shrubs, and selectively thinning out denser stands.
- **Action EH-2.B: Peak Load Water Supply.** Work with EBMUD to ensure that peak load water supply and water pressure is sufficient to respond to local fire emergencies.

Based CAL FIRE's assessment of wildland fire hazards risks in the City of Albany and the Draft General Plan policies and actions, impacts related to wildland fire hazards on new development or redevelopment in the City of Albany would be less than significant and no additional mitigation is required.

c. Cumulative Impacts. Hazardous materials and other public health and safety issues are generally site-specific and would not contribute to impacts associated with other contaminated sites in Alameda County. For example, investigation and possible subsequent remediation of a development or redevelopment site in the City of Albany would not affect other investigation and remediation sites within Alameda County (or even other sites in the City of Albany). Therefore, the City's contribution to countywide impacts related to hazards and hazardous materials with implementation of the Draft General Plan would not be cumulatively considerable.

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J. BIOLOGICAL RESOURCES

This section describes the existing biological resources and habitats within the City of Albany. The impacts and mitigation measure section defines the criteria of significance and identifies potential biological resource impacts related to implementation of the Draft General Plan.

1. Setting

The setting section describes the biological resources methodology, existing resources within the City, and the regulatory context.

a. Methods. Prior to conducting fieldwork, LSA reviewed the 1992 General Plan, particularly the Vegetation and Wildlife, Albany Creeks, Albany Waterfront, Albany Hill, and Conservation Goals and Policies sections.[1] Information from this report was used to gain familiarity with the vegetation types and habitats present within the City and to identify areas of interest for future site visits. Additional sources of information on vegetation, habitat types, and special-status species included the *Albany Beach Restoration and Public Access Feasibility Study*,[2] the *University Village at San Pablo Avenue Project Environmental Impact Report*,[3] and the Animal Life and Habitat Issues sections in the *Eastshore Park Project Resource Inventory*.[4,5] Concurrent with this review, LSA developed an aerial photograph map of the planning area using imagery from U.S. Geological Survey (USGS) and geographic information system (GIS) layers depicting the planning area. Given the large geographic scope of the City, its urban setting, and the planning context of the General Plan process, LSA determined that a broad level of habitat analysis was appropriate for this report. As such, the habitat types identified in this section have been customized for the planning area and rely on general habitat characteristics and land use patterns rather than plant species composition.

LSA collected information on special-status species known to occur or potentially occurring in the City by searching the California Natural Diversity Database[6] (CNDDB) and California Native Plant Species (CNPS) Inventory of Rare and Endangered Plants[7] for records within the Richmond and nine surrounding USGS 7.5-minute quadrangles. Additional sources of information included the Biological Assessment Report for the Lower Codornices Creek Improvement Plan,[8] the Alameda

[1] Albany, City of, 1992. *City of Albany General Plan and Final EIR.* Adopted December 7.

[2] LSA Associates, Inc., 2011. *Albany Beach Restoration and Public Access Feasibility Study*. January.

[3] LSA Associates, Inc., 2009. *University Village at San Pablo Avenue Project Environmental Impact Report.* July.

[4] LSA Associates, Inc., 2002a. *Habitat Issues - Animal Life Section in Eastshore Park Project Resource Inventory*. Prepared for California Department of Parks and Recreation, East Bay Regional Park District and California State Coastal Conservancy, January 2002.

[5] LSA Associates, Inc., 2002c. *Habitat Issues - Plant Life Section in Eastshore Park Project Resource Inventory*. Prepared for California Department of Parks and Recreation, East Bay Regional Park District and California State Coastal Conservancy, February 2002.

[6] California Department of Fish and Wildlife, 2015a*. California Natural Diversity Database (CNDDB),* commercial version dated May 31, 2015. Biogeographic Data Branch, California Department of Fish and Wildlife, Sacramento.

[7] California Native Plant Society, 2014. *Inventory of rare and endangered plants in California* (online edition, v8-02). California Native Plant Society, Sacramento. Website: www.cnps.org/inventory. March 19.

[8] Environmental Collaborative, 2001. *Biological Assessment Report for the Lower Codornices Creek Improvement Plan Project*. Prepared for Design Community and Environment, Berkeley, California.

County Breeding Bird Atlas,[9] and LSA biologists' personal knowledge of species occurrences in the planning area vicinity.

For the purposes of this report, special-status species are defined as follows:

- Species that are listed, formally proposed, or designated as candidates for listing as threatened or endangered under the Federal Endangered Species Act (FESA);
- Species that are listed, or designated as candidates for listing, as rare, threatened, or endangered under the California Endangered Species Act (CESA);
- Plant species given the California Rare Plant Ranking (CRPR) of 1A, 1B, and 2;[10]
- Animal species designated as Species of Special Concern or Fully Protected by the California Department of Fish and Wildlife (CDFW);[11]
- Species that meet the definition of rare, threatened, or endangered under Section 15380 of the California Environmental Quality Act (CEQA) Guidelines; and
- Taxa considered species of special concern by the relevant local agencies.

LSA wildlife biologist Dan Sidle and botanist/arborist Tim Milliken conducted a reconnaissance-level survey of the planning area on February 24, 2014. The purpose of this visit was to map habitat conditions and assess the potential for such habitats to support special-status plant and animal species. Although covering the entire City on foot was not feasible, representative sites supporting each habitat type were identified prior to fieldwork and visited during the site visits (e.g., University Village for grassland; Albany waterfront for tidal marsh; Cerritos, Middle, Village, and Codornices Creeks for creeks and riparian woodland; and Albany Hill for oak and eucalyptus woodland).

Basic information on dominant plant species and animal species were collected at each site. Due to the broad level of habitat mapping for this study, most habitat type boundaries were easily identified on the aerial photograph map prior to fieldwork. No focused rare plant or special-status animal surveys were conducted for this study, nor was a formal jurisdictional delineation of waters of the United States (i.e., wetlands) conducted. Vegetation and cover types were manually digitized in ArcView 10.1, based on aerial photography taken in April 2011 by the USGS.

Plant taxonomy and nomenclature in this chapter follows Baldwin et al.[12] Common and scientific names for special-status species or subspecies conform to the CNDDB.[13] Common and scientific

[9] Richmond, B., H. Green, and D.C. Rice, 2011. *Alameda County Breeding Bird Atlas.* Golden Gate Audubon Society. Berkeley, California.

[10] Rare plant rankings assigned by a collaborative group of over 300 botanists in government, academia, non-governmental organizations, and the private sector. This group is sanctioned and jointly managed by the California Department of Fish and Wildlife and the CNPS.

[11] California Department of Fish and Wildlife, 2015b. *Special Animals List.* Natural Diversity Database. Periodic Publication. 51 pp. March 2015.

[12] Baldwin, B. G., et al., editors, 2012. *The Jepson Manual: Vascular Plants of California.* Second Edition. University of California Press, Berkeley.

names for fish, reptiles, amphibians, birds, and mammals conform to Nelson and others,[14] Crother,[15] the American Ornithologists' Union (AOU) *Check-list of North American Birds*,[16] and Baker and others,[17] respectively.

b. Biological Resources within Albany. The following section provides a description of the geography of the City, habitat types, wildlife habitat values, special-status species, and sensitive habitats.

The City comprises approximately 3,121 acres (including water) in the northwestern corner of Alameda County, which is bounded to the west by San Francisco Bay, to the north by the Cities of Richmond and El Cerrito, to the south of the City of Berkeley, and to the east by the City of Berkeley, Contra Costa County, and the Berkeley Hills. The primary watersheds within the City are associated with Cerrito, Codornices, Middle, and Village Creeks, which mostly drain from springs in the East Bay Hills. Much of Cerrito Creek and Middle Creek have been diverted into culverts beneath the City of Albany, except for portions near the north and northeast sides of Albany Hill. The eastern reaches of Codornices Creek consist of a cement-lined flood control channel until it flows west of San Pablo Avenue and becomes a more natural creek channel within University Village. Village Creek is a shorter creek that occurs within University Village and merges with Codornices Creek immediately west of Interstate 80 (I-80) (along the eastern edge of Golden Gate Fields) and then flows north to the Albany Mudflats Ecological Reserves and San Francisco Bay.

(1) Vegetation/Cover Types. LSA identified 14 vegetation/cover types within the City: urban, grassland, coast live oak woodland, eucalyptus woodland, mixed riparian woodland, salt marsh, freshwater/brackish marsh/seasonal wetland, beach/sand dune, tidal mudflat, ruderal, agriculture, open water (Bay and pond), and creek. Figure IV.J-1 identifies the locations of these habitat types. Table IV.J-1 summarizes the approximate acreage of each habitat type. Although discussed in this report, the freshwater/brackish marsh/seasonal wetland vegetation/cover type is not depicted in Figure IV.J-1 or on Table IV.J-1 because these areas are too small to map within the City. The acreages listed in Table IV.J-1 were calculated from polygons that were manually digitized using GIS software (i.e., ArcView 10.1) and based on habitat boundaries that were hand-drawn on aerial imagery by LSA staff. The acreage of the day-lighted creeks was approximated by using the linear feet of day-lighted creek segments provided by the City of Albany and an estimated average creek width of 5 feet. The majority of the undeveloped areas within the City limits are located in or adjacent to the Albany waterfront, Albany Hill, University Village, and four creeks (Codornices, Middle,

[13] California Department of Fish and Wildlife, 2015a. California Natural Diversity Database (CNDDB), commercial version dated May 31, 2015. Biogeographic Data Branch, Sacramento.

[14] Nelson, J. S., et al., editors, 2004. *A List of Common and Scientific Names of Fishes from the United States, Canada, and Mexico.* Sixth edition. American Fisheries Society Special Publication 20.

[15] Crother, B. I., editor, 2012. *Scientific and Standard English Names of Amphibians and Reptiles of North American north of Mexico*. Society for the Study of Amphibians and Reptiles (SSAR) Herpetological Circular 39.

[16] American Ornithologists' Union, 1998. *Check-list of North American Birds*. Seventh edition. American Ornithologists' Union, Washington, D.C.

[17] Baker, R. J., et al., 2003. *Revised Checklist of North American Mammals North of Mexico.*

Village, and Cerrito). These areas also support the majority of grassland, woodland, salt marsh, tidal mudflat, and open water vegetation/cover types, as shown in Figure IV.J-1.

The following sections describe the vegetation/cover types in more detail. These descriptions are based on LSA's reconnaissance surveys, unless otherwise noted.

Table IV.J-1: Acreages of Vegetation/Cover Types within the City of Albany Planning Area

Habitat Type	Acreage Within City
Urban	980
Grassland	35
Coast Live Oak Woodland	8
Eucalyptus Woodland	35
Mixed Riparian Woodland	8
Salt Marsh	13
Beach/Sand Dune	3
Tidal Mudflat	143
Ruderal	53
Agriculture	8
Open Water (Bay)	1,827
Open Water (Pond)	6
Creek (Day-lighted)	2
TOTAL	**3,121**

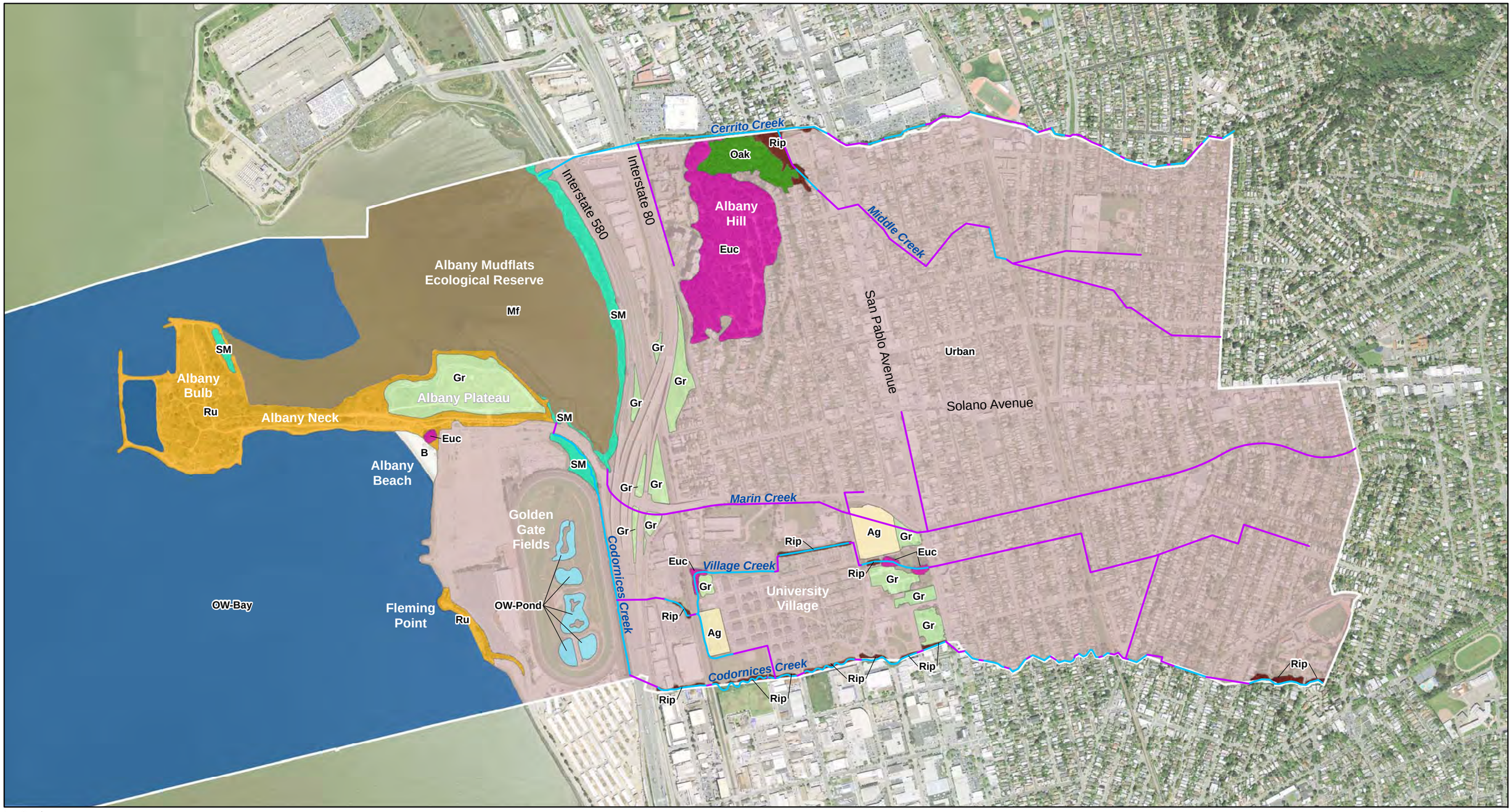
Note: Total of vegetation types in this table is different than total open space for land uses in Table IV.A-1, Existing Land Use within the City of Albany in the land use chapter, because this chapter includes water. Some portions of the tidal mudflats are counted as water, and other portions are counted as land, based on aerial photographs.

Source: LSA Associates, Inc., 2014.

(2) Urban. Urban land includes residential neighborhoods; commercial and industrial buildings; vacant lots; paved roads, sidewalks, and parking lots; institutional buildings such as schools, senior centers, police and fire departments, and civic centers; the horse racing track; and urban parks. A key component of urban habitat is the vegetation. Urban vegetation is typically composed of a highly diversified selection of non-native plant varieties chosen for specific qualities inherent in individual trees, shrubs, and perennial and annual herbaceous plants (too numerous to list). Pre-existing native vegetation does persist within the City (i.e., creek corridors, Albany Hill, Albany waterfront), and many private and public urban projects feature native vegetation.

The urban forest is the collection of trees occurring on public and private property. The City's urban forestry program promotes the beneficial effect of trees on the local environment, and assists homeowners with requests to plant street trees. The Albany Tree Task Force developed a tree list[18] of climate-appropriate trees for planting within Albany. Prominent street trees include: trident maple (*Acer buergerianum*), strawberry tree (*Arbutus* 'Marina'), crimson bottlebrush (*Callistemon citrinus*), camphor (*Cinnamomum camphora*), red flowering gum (*Corymbia ficifolia*), red ironbark eucalyptus (*Eucalyptus sideroxylon*), jacaranda (*Jacaranda mimosifolia*), sweet gum (*Liquidambar styraciflua*), southern magnolia (*Magnolia grandiflora*), flowering crabapple (*Malus floribunda*), paperbark mealaluca (*Melaleuca quinquenervia*), Canary Island pine (*Pinus canariensis*), London plane (*Platanus* x. *acerifolia*), coast redwood (*Sequoia sempervirens*), flowering cherry (*Prunus serrulata*), evergreen pear (*Pyrus kawakamii*), and Chinese elm (*Ulmus parvifolia*). Other trees within the area include: silk tree (*Albizia julibrissin*), European white birch (*Betula pendula*), Atlas cedar (*Cedrus atlantica*), deodar cedar (*Cedrus deodara*), carob (*Ceratonia siliqua*), Italian cypress (*Cupressus sempervirens*), hopseed bush (*Dodonaea viscosa*), blue gum (*Eucalyptus globulus*), Modesto ash (*Fraxinus velutina*), tulip tree (*Liriodendron tulipifera*), mayten (*Maytenus boaria*), California pepper tree (*Schinus molle*), Mexican fan palm (*Washingtonia robusta*), and coast live oak (*Quercus agrifolia*). Native coast live oak is a major component of the urban landscape and specimens can be found in public areas and private yards throughout the City.

[18] Albany, City of, 2014. *Revised Street Tree List.* Website: www.albanyca.org/index.aspx?page=150.



LSA

LEGEND

- City Limit
- Creek
- Creek in Culvert

0 500 1000 FEET

VEGETATION/COVER TYPES

Ag	Agricultural Research/ Community Garden	Mf	Tidal Mudflat	Rip	Mixed Riparian Woodland
B	Beach/Sand Dune	Oak	Coast Live Oak Woodland	Ru	Ruderal
Euc	Eucalyptus Woodland	OW-Bay	Open Water (Bay)	SM	Salt Marsh
Gr	Grassland	OW-Pond	Open Water (Pond)	Urban	Urban

SOURCE: USGS ORTHOIMAGERY, APRIL 2011.

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FIGURE IV.J-1

City of Albany General Plan EIR

Vegetation/Cover Types

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(3) Grassland. Large expanses of grassland occur at the following locations: University Village; the Plateau area of the waterfront; Union Pacific railroad right-of way; and undeveloped land that ranges from Pierce Street in the east to the areas north and south of Buchanan Street near I-80 (Figure IV.J-1). Grasslands are also present on Albany Hill, although they occur in small patches that form a mosaic within the surrounding woodland. This vegetation type consists primarily of annual non-native grasses and herbaceous annuals and is generally associated with areas of human caused disturbance. Trees and shrubs may occur sporadically, but in general this vegetation type does not include woody vegetation. Although non-native plant species dominate the grasslands, less disturbed areas of Albany Hill are more likely to support native grasses and forbs. Typical non-native plant species in grasslands include wild oats (*Avena fatua*), ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), Italian thistle (*Carduus pycnocephalus*), yellow star-thistle (*Centaurea solstitialis*), bull thistle (*Cirsium vulgare*), pampas grass (*Cortaderia* sp.), Bermuda grass (*Cynodon dactylon*), stinkwort (*Dittrichia graveolens*), sweet fennel (*Foeniculum vulgare*), stork's bill (*Erodium cicutarium*), summer mustard (*Hirschfeldia incana*), hare barley (*Hordeum leporinum*), Italian ryegrass (*Lolium multiflorum*), common mallow (*Malva neglecta*), bur-clover (*Medicago polymorpha*), prickly ox-tongue (*Helminthotheca echioides*), smilo grass (*Stipa miliacea* var. *miliacea*), cut-leaf plantain (*Plantago coronopus*), clover (*Trifolium* sp.), and brome fescue (*Vulpia* sp.). These species are common non-native grasses and forbs that typically occur in grasslands throughout the Bay Area and are expected to occur in grasslands within the City. Native species present in grasslands on Albany Hill include: yarrow (*Achillea millefolium*), soap root (*Chlorogalum pomeridianum*), ookow (*Dichelostemma congestum*), blue wildrye (*Elymus glaucus*), California poppy (*Eschscholzia californica*), bracken fern (*Pteridium aquilinum*), and California buttercup (*Ranunculus californicus*).

(4) Woodlands. Woodlands within the City consist of three broadly defined vegetation series:[19] (1) coast live oak woodland, consisting of woodlands where coast live oaks are the sole, dominant, or important tree in the canopy; (2) eucalyptus, a closed-canopy system dominated by blue gum or other eucalyptus species; and (3) mixed riparian woodland, which is co-dominated by riparian species such as California buckeye (*Aesculus californica*), arroyo willow (*Salix lasiolepis*), western sycamore (*Platanus racemosa*), California bay (*Umbellularia californica*), and coast live oak. Woodlands primarily occur at Albany Hill, University Village, along Cerrito Creek, Codornices Creek, Middle Creek, and to a limited extent on the Albany Plateau and Bulb (Figure IV.J-1).

Coast Live Oak Woodland. Coast live oak woodland occurs along the northern and eastern slopes of Albany Hill, with patches along the upland stream banks and terraces of Cerrito and Codornices Creeks. Coast live oaks dominate the canopy layer in these areas, with associate species including a mix of native and non-native species such as glossy privet (*Ligustrum lucidum*), big leaf maple (*Acer macrophyllum*), red ironbark eucalyptus, arroyo willow, California bay, California buckeye, and coast redwood. The coast live oak woodland includes a mix of native and non-native herbs and shrubs including California rose (*Rosa californica*), coffeeberry (*Rhamnus californica*), blue elderberry (*Sambucus nigra* subsp. *caerulea*), toyon (*Heteromeles arbutifolia*), California blackberry (*Rubus ursinus*), Canary and English ivy (*Hedera canariensis, H. helix*), and annual grasses.

[19] Sawyer, J. O., and T. Keeler-Wolf, 1995. *A Manual of California Vegetation.* California Native Plant Society, Sacramento.

Eucalyptus Woodland. Eucalyptus woodland ranges from monotypic blue gum stands with little or no understory to scattered trees with a well-developed understory. The best example of this habitat type occurs on Albany Hill. Eucalyptus woodland also occurs at Albany Beach, on the upland banks of Codornices Creek adjacent to Saint Mary's College High School and Golden Gate Fields, and along Village Creek west of San Pablo Avenue at University Village. Understory vegetation in this woodland is typically sparse, and what little vegetation is present consists predominantly of non-native species including: cheeseweed (*Malva parvilora*), annual blue grass (*Poa annua*), Chilean brome (*Bromus catharticus* var. *elatus*), pineapple weed (*Matricaria discoidea*), and seedlings of the next generation of eucalyptus. On Albany Hill, scattered thickets of native poison oak (*Toxicodendron diversilobum*), sticky monkey flower (*Mimulus aurantiacus*), and toyon are present in the understory.

Mixed Riparian Woodland. Mixed riparian woodland is dominated by native riparian tree species that are adapted to wetland stream banks, floodplains, and creek terraces that are seasonally flooded or permanently saturated by freshwater. In the City, mixed riparian woodland stands are comprised of a variety of tree species including: box elder (*Acer negundo*), redosier dogwood (*Cornus sericea*), California buckeye, western sycamore, coast live oak, arroyo willow, and California bay. In some areas, mixed riparian woodland is represented by pure stands of arroyo willow. Understory plant species observed along Cerrito Creek include native and non-native shrubs and herbs including: mugwort (*Artemisia douglasiana*), coyote brush (*Baccharis pilularis*), grasses in the genus *Bromus*, wild cucumber (*Marah fabacea*), Himalayan blackberry (*Rubus armeniacus*), Canary ivy, and California rose.

Mixed riparian woodland is present along several creeks within the City. This type of habitat is prominent along Cerrito Creek east of Pierce Street to about Talbot Avenue. Several large western sycamore trees are growing west of San Pablo Avenue adjacent to the Orientation Center for the Blind. East of Talbot Avenue, Cerrito Creek runs underground through culverts without daylight sections (as interpreted through aerial imagery).

Mixed riparian woodland vegetation is also present along Village Creek and in two sections of Middle Creek north of Ohlone Avenue and west of Jackson Street within University Village; and between the Union Pacific railroad and I-80 north of the Target store.

It is prominent along Codornices Creek west of I-80, east of I-80 to 6th Street, and 8th Street to San Pablo Avenue. A section of Codornices Creek between 6th Street and 8th Street has been planted with riparian woodland species and continues to develop toward a mature woodland. East of San Pablo Avenue public access to day-lighted sections of Codornices Creek's riparian woodland is mostly restricted, as these sections are limited to private property (with the exception of one location on Masonic Avenue).

(5) Beach/Sand Dune. Beach/Sand dune habitat is present at Albany Beach. This sandy beach provides important habitat because of its limited distribution on the East Bay shoreline and potential use by roosting and foraging shorebirds. The small dune field east of the wave-swept sand at Albany Beach is also an uncommon feature on the East Bay shoreline and has the potential to provide high tide refugia for birds and other animals. The dunes at Albany Beach are mostly vegetated by non-native plants; however, they do support two indicator species associated with a sensitive natural

community formerly classified as "Northern Foredunes."[20] This community typically is dominated by perennial grasses and low, often succulent, perennial herbs and subshrubs. The plants in this community are adapted to moving sands and salt-laden winds. Although typical northern foredunes vegetation with its characteristic native plant associations is absent from the City (e.g., bur-sage [*Ambrosia* sp.] and sea rocket [*Cakile maritime*]), non-native species, are abundant.

(6) Salt Marsh/Tidal Mudflat. This vegetation/cover type includes both salt marsh and tidal mudflats shown in Figure IV.J-1. Salt marsh is a highly productive community consisting of salt-tolerant, hydrophytic plants that form moderate to dense cover. Plants are usually segregated vertically depending on their tolerance of inundation and saline soils. This vegetation/cover type is typically associated with and occurs adjacent to intertidal mudflats or sloughs that are devoid of vegetation; during an ebb tide, the bottom is bare mud, cobble, or rock. This habitat type occurs along the Albany waterfront, specifically within the Albany Mudflats Ecological Reserve (an area that includes the eastern shore of the Albany Bulb) and at the mouth of Codornices Creek (at Buchanan Street and Golden Gate Fields).

Salt marshes within the City are similar in vertical structure, starting at the low elevation mudflat to the adjacent upland vegetation. Typically, mudflats are bordered by pure stands of cordgrass (*Spartina foliosa*) that are replaced at the mean high water level by a dense cover of pickleweed (*Salicornia pacifica*). Characteristic plants of the upper pickleweed zone are alkali heath (*Frankenia salina*), marsh rosemary (*Limonium californicum*), jaumea (*Jaumea carnosa*), and salt grass (*Distichlis spicata*). Marsh gumplant (*Grindelia stricta* var. *angustifolia*) is common along the edges of tidal sloughs that are infrequently inundated. The upper salt marsh zone is often dominated by saltgrass, interspersed with sand-spurrey (*Spergularia* sp.), jaumea, and other salt-tolerant native and non-native plants.

(7) Freshwater/Brackish Marsh/Seasonal Wetland. This vegetation type supports vegetation that is adapted to permanently or seasonally flooded soils (wetlands). This vegetation type covers only in small areas and therefore is not shown on Figure IV.J-1 or listed in Table IV.J-1. This vegetation type occurs in the lower reaches of Cerrito Creek, Village Creek, Middle Creek, and Codornices Creek (primarily east of I-80). The vegetation in the marshes associated with freshwater seeps and creek sections that receive minimal tidal exchange consists of dense cattails (*Typha* sp.) and other obligate wetland plants including: arroyo willow, tall flat sedge (*Cyperus eragrostis*), and watercress (*Nasturtium officinale*). Seasonal wetlands that occur as the result of impoundment of rainwater are also found within the City: in grassy areas on the Albany Plateau, adjacent to the Union Pacific railroad right-of-way, in the undeveloped land that ranges from Pierce Street in the east to the areas north and south of Buchanan Street near I-80, and within a network of interdune swales west of the gravel parking area behind Golden Gate Fields at Albany Beach.

Plants typical of freshwater seasonal wetlands consist of predominantly non-native grasses and herbaceous species, including Italian ryegrass (*Festuca perennis*), Mediterranean barley (*Hordeum marinum* subsp. *gussoneanum*), curly dock (*Rumex crispus*), Bermuda grass, and cutleaf plantain.

[20] Holland, R.F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California.* California Department of Fish and Game. 156 pp.

(8) Ruderal. Ruderal defines a general category of vegetation that occurs in developed areas and disturbed landscapes. Ruderal vegetation is typically dominated by weedy, non-native plant species and usually consists of non-native shrubs, broadleaved species and grasses, but some native species may also be present. Ruderal vegetation is widely distributed throughout the City and ranges in size from small strips (i.e., neglected sidewalk planting strips) to medium-sized parcels (vacant lots), to large expanses of open space (Albany Neck). Only the large ruderal areas within the City are shown on Figure IV.J-1. Native species occurring in ruderal areas include: coyote brush, coast live oak, arroyo willow, and poison oak. Non-native plant species in ruderal areas include: blackwood acacia (*Acacia melanoxylon*), silver wattle (*Acacia dealbata*), black mustard (*Brassica nigra*), Italian thistle (*Carduus pyncocephalus*), French broom (*Genista monspessulana*), Bermuda buttercup (*Oxalis pes-caprae*), firethorn (*Pyracantha* sp.), cotoneaster (*Cotoneaster* sp.), pampas grass (*Cortaderia* sp.), ripgut brome, soft chess, bull thistle, and fennel. Bermuda buttercup is one of the most prevalent plants observed throughout the City and also occurs in all other habitat types except for salt marsh.

Ruderal vegetation is also the dominant cover type at Fleming Point, which is a land mass that existed before extensive landfill occurred within the historic bay shoreline. Characteristic ruderal herbaceous species in this area include wild oats (*Avena* sp.), sheep sorrel (*Rumex acetosella*), English plantain (*Plantago lanceolata*), and vetch (*Vicia* sp.).

(9) Agricultural Research/Community Garden. Land used for agricultural research or community gardens is located within the City. Two separate areas are present at the University Village: (1) small plots used for community gardens between West End Way and the Union Pacific railroad right-of-way, are available exclusively for University Village residents; and (2) agricultural research and community garden areas in the northeast bordered by Jackson Street to the west and Buchannan Street to the north. Sites of small scale community gardens within the City are also located at the Albany Children's Center (720 Jackson Street), Memorial Park Edible Landscape Project (Carmel Avenue), and Ocean View Community Garden (in Ocean View Park, 900 Buchanan Street). Additional sites may also be present at other locations within the City.

(10) Open Water. Open water within the City consists of two types: freshwater and saltwater. Freshwater habitats include the ponds at Golden Gate Fields, which are primarily un-vegetated. Saltwater habitats include tidal sloughs (i.e., lower Cerrito and Codornices Creeks) and the open waters of San Francisco Bay. Near shore this cover type is closely associated with the salt marsh and tidal mudflat areas.

(11) Creek. Approximately 19,095 linear feet (approximately 3.62 miles) of day-lighted (open) creek channels are located within the City. These creeks are Cerrito Creek, Codornices Creek, Middle Creek, and Village Creek. Cerrito and Codornices Creeks originate in the Berkeley Hills to the east and flow through Berkeley before entering the City. Marin Creek is also located within the City, but is completely underground in culverts beneath urban areas and drains to an outfall at the Albany Mudflats Ecological Reserve. Because Marin Creek is underground in a culvert, it provides negligible habitat, if any. Middle Creek also has only short stretches that are day-lighted before flowing into Cerrito Creek.

Within the City, Cerrito Creek has sections that flow both below ground in closed culverts (underground and under roadways) and day-lighted sections that flow through open concrete and earthen channels. Cerrito Creek starts its journey within the City in a backyard just east of Curtis Street. From there, no definite signature of the creek (as seen from aerial photos) is apparent until Talbot Avenue. West of Talbot Avenue, the freshwater section of Cerrito Creek is open to daylight where it flows through earthen and concrete channels to Pierce Street. From Pierce Street to the San Francisco Bay, Cerrito Creek becomes a tidal slough as it flows through an earthen and riprap reinforced channel.

Codornices Creek has sections that flow both below ground in closed culverts (underground and under roadways) and daylight sections that flow through open concrete and earthen channels. Codornices Creek starts its journey within the City in an earthen channel that is open from the southeast corner of Saint Mary's College High School to the rear of residences on Ordway Street. From there, the aerial imagery signature of open creek channel appears and disappears between residential blocks until it reaches San Pablo Avenue. West of San Pablo Avenue, the freshwater section of Codornices Creek is open to daylight where it flows through earthen and concrete channels to I-80. After crossing beneath I-80, Codornices Creek makes a bend to the north where it becomes a tidal slough associated with an isolated tidal salt marsh before emptying in to the San Francisco Bay through the Albany Mudflats Ecological Reserve.

Village Creek is underground east of San Pablo Avenue and partially aboveground west of San Pablo Avenue (Figure IV.J-1). West of San Pablo Avenue, the open creek channel of Village Creek flows north of Monroe Street through University Village. After flowing beneath the Union Pacific railroad right-of-way, the final daylight freshwater segment of Village Creek appears north of the Target store before crossing beneath I-80 and joining with the tidal section of Codornices Creek.

c. Wildlife Habitat Values. The following sections provide information on wildlife species expected to occur in each vegetation/cover type described above. Not every species mentioned was observed during reconnaissance-level surveys, and several species not mentioned may nevertheless occur within the City. As such, the following discussion should not be interpreted as an exhaustive list of every species that may potentially occur, but rather a broad overview of wildlife communities within each vegetation/cover type.

(1) Urban. Most wildlife species that use urban areas are generalists that have adapted to human-modified habitats, and individual species that are present at any particular location will vary depending on the vegetation and other habitat features in an area. Industrial and commercial areas typically have less ornamental plantings and open lawns than residential neighborhoods and urban parks, and thus support fewer species. Species that use industrial and commercial areas are able to use ornamental landscaping as foraging habitat and/or escape cover, and some are able to exploit building crevices, rooftops, and/or ledges on buildings for nesting and/or roosting. Common urban bird species expected to use such features include mourning dove (*Zenaida macroura*), rock pigeon (*Columba livia*), American crow (*Corvus brachyrhynchos*), European starling (*Sturnus vulgaris*), house finch (*Haemorhous mexicanus*), and house sparrow (*Passer domesticus*). Residential neighborhoods and urban parks contain more trees, shrubs, and lawns than industrial and commercial areas, and thus support additional bird species such as Cooper's hawk (*Accipiter cooperi*), Anna's hummingbird (*Calypte anna*), northern flicker (*Colaptes auratus*), downy woodpecker (*Picoides pubescens*), black phoebe (*Sayornis nigra*), western scrub-jay (*Aphelocoma californica*), American robin (*Turdus migratorius*), northern mockingbird (*Mimus polyglottos*), chestnut-backed chickadee (*Poecile*

rufescens), bushtit (*Psaltriparus minimus*), brown creeper (*Certhia americana*), Bewick's wren (*Thryomanes bewickii*), California towhee (*Melozone crissalis*), and American goldfinch (*Carduelis tristas*). Many of these species also occur in undisturbed, more natural habitats (e.g., oak woodland, riparian woodland) throughout the Bay Area, but have successfully adapted to urban landscapes. During the winter, the resident bird community is supplemented by species that breed farther north or at higher elevations, such as cedar waxwing (*Bombycilla cedrorum*), ruby-crowned kinglet (*Regulus calendula*), yellow-rumped warbler (*Dendroica coronata*), Townsend's warbler (*Dendroica townsendi*), and golden-crowned sparrow (*Zonotrichia atricapilla*). All of these species may occur in adjacent residential areas, as well, provided that large remnant oaks or other mature trees are present.

Several amphibian and reptile species may occur in urban areas if suitable cover is present. Ornamental shrubs, leaf litter, and well-watered lawns provide cover and foraging habitat for Sierran treefrog (*Pseudacris sierra*), arboreal salamander (*Aneides lugubris*), and California slender salamander (*Batrachoseps attenuatus*). Such species are more likely to occur in residential areas or parks rather than industrial or commercial areas.

Mammal species expected to occur in urban areas include Virginia opossum (*Didelphis virginiana*), fox squirrel (*Sciurus niger*), Botta's pocket gopher (*Thomomys bottae*), house mouse (*Mus musculus*), Norway rat (*Rattus norvegicus*), black rat (*Rattus rattus*), northern raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), and black-tailed deer (*Odocoileus hemionus*).

(2) Grassland. The majority of grasslands within the City are located in the Albany Plateau, University Village, and beneath I-80 (Figure IV.J-1). Grasslands provide foraging habitat for raptors such as white-tailed kite (*Elanus leucurus*), northern harrier (*Circus cyaneus*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), barn owl (*Tyto alba*), and burrowing owl (*Athene cunicularia*). Burrowing owls are a California Species of Special Concern (see below) and are closely associated with California ground squirrels (*Otospermophilus beecheyi*). Other bird species typically associated with grasslands include killdeer (*Charadrius vociferus*), American pipit (*Anthus rubescens*), savannah sparrow (*Passerculus sandwichensis*), western meadowlark (*Sturnella neglecta*), and red-winged blackbird (*Agelaius phoeniceus*). Large flocks of Canada geese feed in the undeveloped grasslands along the Albany waterfront, as well as in the adjacent landscaped areas with manicured lawns, such as those present at the U.S. Department of Agriculture office complex. Common amphibian and reptile species expected to occur in grasslands include western fence lizard (*Sceloporus occidentalis*), gopher snake (*Pituophis catenifer*), common kingsnake (*Lampropeltis getula*), western toad (*Anaxyrus boreas*), common garter snake (*Thamnophis sirtalis*), southern alligator lizard (*Elgaria multicarinatus*), and Sierran treefrog. Areas with accumulated thatch and sufficient grass cover are likely to support small mammal species such as deer mouse (*Peromyscus maniculatus*), western harvest mouse (*Reithrodontomys megalotis*), California vole (*Microtus californicus*), and Botta's pocket gopher. Other common mammal species expected to occur in grasslands include black-tailed jackrabbit (*Lepus californicus*), northern raccoon, striped skunk, and black-tailed deer.

(3) Woodlands. Many of the same wildlife species that occur in urban areas also use woodlands since such areas within the City largely consist of narrow corridors (e.g., the Cerrito and Codornices Creek mixed riparian woodland and the Albany Hill coast live oak and eucalyptus woodlands) within an otherwise urbanized landscape. Nevertheless, the somewhat higher structural diversity of riparian woodland along portions of Cerrito, Village, Middle, and Codornices Creeks (e.g., between I-80 and San Pablo Avenue) provides habitat for understory species such as spotted

towhee (*Pipilo maculatus*), fox sparrow (*Passerella iliaca*), and hermit thrush (*Catharus guttatus*), the latter two of which winter but do not breed in the Bay Area. This increased structural diversity also provides stopover habitat for migratory species such as Pacific-slope flycatcher (*Empidonax difficilis*), yellow warbler (*Setophaga petechia*), Wilson's warbler (*Wilsonia pusilla*), and western tanager (*Piranga ludoviciana*). Some of these species may forage in adjacent residential areas, as well. Larger trees and snags along these creeks provide nesting habitat for red-shouldered hawk (*Buteo lineatus*), Cooper's hawk, and downy woodpecker.

The eucalyptus and oak trees on Albany Hill, mature trees at the University Village, and the blue gum eucalyptus grove next to Albany Beach provide nesting habitat for raptors such as red-tailed hawk (*Buteo jamaicensis*) and red-shouldered hawk. Urban-adapted songbirds such as northern mockingbird, American goldfinch, and house finch also may nest in the grove and other nearby ornamental trees.

The increased leaf litter, moisture content, and, in some areas, understory vegetation, of woodland habitats provides increased foraging opportunities and cover for amphibians and reptiles. Many of the same species that inhabit the urban and grassland areas are also likely to occur in woodlands, especially species that prefer leaf litter and woody ground cover such as arboreal salamander and California slender salamander.

Most of the same mammal species that occur in urban areas are expected to use woodland habitats. The linear nature of most of the woodlands within the City facilitates movement and dispersal for these species through the urban environment. Larger trees and snags along Cerrito, Middle, Village, and Codornices Creeks and on Albany Hill may occasionally support bat species such as big brown bat (*Eptesicus fuscus*), hoary bat (*Lasiurus cinereus*) (winter and migration only), pallid bat (*Antrozous pallidus*), Brazilian free-tailed bat (*Tadarida brasiliensis*), and Yuma myotis (*Myotis yumanensis*).

(4) Salt Marsh/Tidal Mudflat. Salt marshes and tidal mudflats support a variety of wildlife species specifically adapted to the salt-tolerant vegetation, channels and sloughs, and tidal regimes that characterize these areas. Along with open water, this habitat type supports a great diversity of wildlife within the City. Salt marshes provide foraging habitat for special-status raptors such as northern harrier and white-tailed kite. Tidal mudflats support a diverse benthic macroinvertebrate community which in turn attracts large numbers of migrating and wintering shorebirds such as willet (*Tringa semipalmata*), long-billed curlew (*Numenius americanus*), marbled godwit (*Limosa fedoa*), dowitchers (*Limnodromus* spp.), and various sandpipers (*Calidris* spp.). These species forage on mudflats as they are exposed by receding tides, often concentrating at the water's edge where worms, crustaceans, and bivalves are closer to the mud's surface. Vegetated portions of tidal marshes are not heavily used by shorebirds, although willets tend to forage next to pools created on the marsh plain during extremely high tides. Wading birds such as snowy egret (*Egretta thula*), great egret (*Ardea alba*), and great blue heron (*Ardea herodias*) forage along the margins of tidal channels and marsh edges. Dabbling (i.e., surface-feeding) ducks such as mallard (*Anas platyrhynchos*), gadwall (*Anas strepera*), green-winged teal (*Anas crecca*), American wigeon (*Anas americana*), northern pintail (*Anas acuta*), northern shoveler (*Anas clypeata*), and cinnamon teal (*Anas cyanoptera*) forage over inundated mudflats and tidal channels.

The Albany Mudflats Ecological Reserve provides valuable foraging habitat for large concentrations of shorebirds that migrate through or winter in the San Francisco Bay Estuary. Western and least sandpiper (*Calidris mauri*, *C. minutilla*), dunlin (*Calidris alpina*), dowitchers (*Limnodromus* spp.), marbled godwit (*Limosa fedoa*), and willet (*Tringa semipalmata*) are some of the more abundant shorebird species known to occur in the San Francisco Bay Estuary during these periods,[21] and all of these species are common to abundant at Eastshore State Park.[22,23] During high tides when mudflats are unavailable for foraging, shorebirds roost on old piers, remnant dock structures, breakwaters, and other barren areas above the high tide line that are free of disturbance.[24]

When inundated by high tides, tidal channels and mudflats provide important foraging habitat for a variety of estuarine fish species, including bat ray (*Myliobatis californica*), leopard shark (*Triakis semifasciata*), northern anchovy (*Engraulis mordax*), topsmelt (*Atherinopsis affinis*), American shad (*Alosa sapidissima*), striped bass (*Morone saxatilis*), staghorn sculpin (*Leptocottus armatus*), yellowfin goby (*Acanthogobius flavimanus*), and shiner surfperch (*Cymatogaster aggregata*).

Amphibian or reptile use of tidal marshes and mudflats is limited due to high salinity and risk of drowning. Western fence lizards and southern alligator lizards have been observed on dikes and outfall structures adjacent to marsh habitats,[25] but are not expected to use portions of the marsh subject to tidal influence.

Mammal species known to use tidal marshes include black-tailed jackrabbit, Botta's pocket gopher, and California ground squirrel. California voles and western harvest mice may use the pickleweed portions of the marsh during low tides.

(5) Freshwater/Brackish Marsh. Freshwater and brackish marsh within the City provides foraging and nesting habitat for many of the species that occur in the tidal marshes and mudflats, as well as a few bird species specifically adapted to the dense vegetation (i.e., cattails and tules) and wet soils that characterize such habitats. Species that occur in this habitat include Wilson's snipe (*Gallinago delicata*), marsh wren (*Cistothorus palustris*), song sparrow, red-winged blackbird, egrets, and great blue herons, as well as mammalian predators such as northern raccoon and striped skunk. Wetter portions of freshwater marshes that remain ponded throughout the spring provide breeding habitat for Sierran treefrog, western toad, and common garter snake.

[21] Stenzel, L.E., C.M. Hickey, J.E. Kjelmyr, and G.W. Page, 2002. *Abundance and Distribution of Shorebirds in the San Francisco Bay Area*. Western Birds 33:69–98.

[22] Golden Gate Audubon, 2006. *A Census of the Birdlife in the Eastshore State Park: October 2005–September 2006*. Prepared by members of Golden Gate Audubon, Berkeley, California.

[23] LSA, personal observation.

[24] LSA Associates, Inc., 2002b. Recreation, Scenic, and Cultural Resources section in *Eastshore Park Project Resource Inventory*. Prepared for California Department of Parks and Recreation, East Bay Regional Park District and California State Coastal Conservancy, February 2002.

[25] LSA, personal observation.

(6) Ruderal. As described above, ruderal vegetation is primarily found at Fleming Point, the Albany Bulb, Albany Neck, and portions of the Albany Plateau, which are dominated by coyote brush and/or dense patches of ruderal forbs. The amphibian, reptile, and mammal species composition of this vegetation type is expected to closely resemble that of urban and grassland habitats. Ruderal habitats do not support any distinctive bird species but those species that do occur in ruderal areas tend to favor shrubs or other dense vegetation. Such species include western scrub-jay, American robin, northern mockingbird, Bewick's wren, California towhee, white-crowned sparrow, and golden-crowned sparrow. If located near extensive grasslands or marsh, coyote brush shrubs represent ideal nest sites for white-tailed kites.

California ground squirrel and Botta's pocket gopher (*Thomomys bottae*) were the only mammal species detected during LSA's reconnaissance survey; these species primarily occur in the northern portion of the planning area on the Albany Neck, where the abundant construction debris and riprap provides numerous crevices, recesses, and nooks that provide cover from predators.

(7) Agricultural Research/Community Garden. Similar to ruderal areas, the wildlife species composition of agricultural research or community garden areas within the City closely resembles that of nearby habitats and does not contain any unique habitat specialists. Depending on the specific habitat features present, agricultural research areas are likely to support species that occur in urban, grassland, and woodland habitats. Species observed in agricultural research and community garden areas in University Village include wild turkey (*Meleagris gallopavo*), rock pigeon, mourning dove, Canada goose, American crow, and red-winged blackbird.[26]

(8) Open Water. Open water habitats within the City include the San Francisco Bay and the freshwater ponds at the Golden Gate Fields. The San Francisco Bay has high value as habitat for resident, migrating, and wintering waterbirds (e.g., shorebirds, waterfowl, wading birds, grebes, cormorants, pelicans, terns, and gulls). In addition to providing foraging and roosting habitat for wintering and migrating shorebirds and waterfowl, open water provides habitat for California gull (*Larus californicus*), western gull (*Larus occidentalis*), Caspian tern (*Hydropogne caspia*), and Forster's tern (*Sterna forsteri*). Diving ducks, such as greater scaup (*Aythya marila*), bufflehead (*Bucephala albeola*), and ruddy duck (*Oxyura jamaicensis*), winter in large numbers in the open waters of San Francisco Bay. Common goldeneye (*Bucephala clangula*), double-crested cormorant (*Phalacrocorax auritus*), American wigeon (*Anas americana*), American coot (*Fulica americana*), Canada goose, mallard, ruddy duck, bufflehead, scaup, grebes, and various gull species occur in the Bay. Other waterbird species expected to use open water habitats within the City include pied-billed grebe (*Podilymbus podiceps*), horned grebe (*Podiceps auritus*), eared grebe (*Podiceps nigricollis*), western grebe (*Aechmophorus occidentalis*), Clark's grebe (*Aechmophorusclarkii*), American white pelican (*Pelecanus erythrorhynchos*), and California brown pelican (*Pelecanus occidentalis californicus*). Some of the waterfowl species that use the bay, such as mallard, Canada goose, and gulls also use the freshwater ponds at Golden Gate Fields.

[26] LSA, personal observation.

Inshore waters and mudflats in and adjacent to the City are used by game fish species such as California halibut (*Paralichthys califonicus*), starry flounder (*Platichthys stellatus*), and striped bass (*Morone saxatilis*). Smaller schooling fish, such as topsmelt (*Atherinops affinis*), northern anchovy (*Engraulis mordax*), and Pacific herring (*Clupea pallasii*), would be expected in deeper water in the City and are important as food for game fish and fish-eating birds. The longjaw mudsucker (*Gillichthys mirabilis*), a typical species of shallow bays and mud flats, is also likely present in the City. Elasmobranchs typical of near shore waters in San Francisco Bay and likely present within the City boundary include leopard shark (*Triakis semifasciata*), brown smoothound (*Mustelus henlei*), and bat ray (*Myliobatis californicus*).[27] The sevengill shark (*Notorynchus cepedianus*), a large and powerful predator, also occurs in San Francisco Bay and will forage in shallow water.[28] This species may also occasionally occur in the City.

Numerous other fish species are present in the near shore waters of the City, such as the bay pipefish (*Syngnathus leptorhynchus*), shiner surfperch (*Cymatogaster aggregata*),[29] and Pacific herring (*Clupea pallasi*).[30]

Several special-status fish species occur in San Francisco Bay, including many distinctive populations of salmon and steelhead, that have unique genetically based adaptations to local and regional environments.[31] Some of these distinctive populations, often referred to as runs or stocks, are recognized by the resources agencies as evolutionarily significant units (ESU). Several ESUs of salmon and steelhead could occasionally occur in the waters adjacent to the City. While juveniles of these species may find suitable habitat in eelgrass beds, generally these species would be expected in the deeper water channels of the Bay. The green sturgeon (*Acipenser medirostris*) is another special-status fish species that could occasionally occur in the City, but as with salmon and steelhead this anadromous species generally is found in deeper water channels.

The rocky shoreline that characterizes much of the Albany waterfront provides habitat for shorebird species that favor rocky intertidal habitats, such as black oystercatcher (*Haematopus bachmani*), black and ruddy turnstones (*Arenaria melanocephala, A. interpres*), and surfbird (*Aphriza virgata*), although the latter two are considered rare in the City.[32] The presence of such rocky shore specialists is somewhat noteworthy for this location given that none of these species are abundant in San Francisco Bay, numbering at most in the low hundreds.[33]

[27] Ebert, D.A., 2003. *Sharks, Rays, and Chimaeras of California*. University of California Press. Berkeley, CA.

[28] Ibid.

[29] Carr, L.A., K.E. Boyer and A.J. Brooks. In review. Patterns in epifaunal community structure in San Francisco Bay eelgrass (Zostera marina) beds.

[30] Spratt, J.D., 1981. *The Evolution of California's Herring Roe Fishery: Catch Allocation, Limited Entry and Conflict Resolution*. California Fish and Game 78: 20-44.

[31] Moyle, P.B., 2002. *Inland Fishes of California*. University of California Press, Berkeley.

[32] Golden Gate Audubon, 2006. *A Census of the Birdlife in the Eastshore State Park: October 2005–September 2006*. Prepared by members of Golden Gate Audubon, Berkeley, California.

[33] Takekawa, J.Y., et al., 2000. *Waterfowl and Shorebirds of the San Francisco Bay Estuary*. Pages 309–316 in P. R. Olofson, editor. *Baylands Ecosystem Species and Community Profiles: Life Histories and Environmental Requirements of Key Plants, Fish, and Wildlife*. Prepared by the San Francisco Bay Area Wetlands Ecosystem Goals Project. San Francisco Bay Regional Water Quality Control Board, Oakland, California.

(9) Creeks. Cerrito, Codornices, Middle, and Village Creeks support a variety of both native and introduced fish species. Native fish species known to occur in one or more of these creeks include prickly sculpin (*Cottus asper*) and threespine stickleback (*Gasterosteus aculeatus*). Introduced species include rainwater killifish (*Lucania parva*), western mosquitofish (*Gambusia affinis*), and striped bass (*Morone saxatilis*).[34] Native rainbow trout/steelhead, a federally threatened species, also occur in Codornices Creek.[35] Another creek, Marin Creek, is located within the City, but is completely culverted beneath developed (urban) areas and provides negligible habitat for plants, fish, or wildlife.

Many of the same amphibian species that occur in urban areas, particularly Sierran treefrog and western toad, likely use creeks for breeding, foraging, and dispersal. Common garter snakes are good swimmers and also likely use creeks for such purposes. Although none have been recorded to date,[36] the creeks within the City also contain suitable habitat for western pond turtles (*Actinemys marmorata*).

Within the urban environment, wading birds such as great and snowy egrets and great blue heron are most likely to be found along creeks. Creeks also provide ideal foraging habitat for cliff swallows (*Petrochelidon pyrrhonata*), barn swallows (*Hirundo rustica*), Alameda song sparrow, and black phoebe.

d. Special-Status Species and Sensitive Habitats. This section outlines special-status species and sensitive habitats within the City.

(1) Special-Status Plants. Forty-five (45) special-status vascular plant species were evaluated for their potential to occur in the City. These special-status plant species are listed in Table IV.J-2. Two criteria were used to select these plants: records from the California Natural Diversity Database[37] (either extant or extirpated) indicate the species occurs within a 5-mile radius of the planning area; or its potential presence in the City was indicated in a search of the database of *Rare, Unusual and Significant Plants of Alameda and Contra Costa Counties*.[38] Twenty-three (23) of these plants show no potential of occurrence based on the absence of suitable habitat, high levels of disturbance, or being outside of the species normal elevation range. Twelve (12) of the plants show a low potential of occurrence based on presence of marginal habitat resulting from degradation by human use or crowding out by invasive weeds. Ten (10) of the plants show a moderate to high potential of occurrence based upon presence of suitable, undisturbed habitat. This moderate potential is particularly true at the Albany Mudflats Ecological Reserve within the City, in which three of these plants are present.

[34] Leidy, R. A., 2007. *Ecology, Assemblage Structure, Distribution, and Status of Fishes in Streams Tributary to the San Francisco Estuary, California*. San Francisco Estuary Institute Contribution No. 530. San Francisco Estuary Institute, Oakland, California.

[35] Ibid.

[36] California Department of Fish and Wildlife, 2015a., op. cit.

[37] Ibid.

[38] Lake, Diane, 2010. *Rare, Unusual and Significant Plants of Alameda and Contra Costa Counties.* Eighth Edition. March 15, 2010. California Native Plant Society.

California sea lavender (*Limonium californicum*, locally rare), California cordgrass (*Spartina foliosa*, locally rare), and sand spurrey (*Spergularia macrotheca* var. *macrotheca*, locally rare) all occur within the City at the Albany Mudflats Ecological Reserve.

Point Reyes salty bird's-beak (*Chloropyron maritimum* subsp. *palustre*, CRPR 1B), seaside golden yarrow (*Eriophyllum staechadifolium*, locally rare), Oregon ash (*Fraxinus latifolia*, locally rare), low bulrush (*Isolepis cernua*, locally rare), Marin knotweed (*Polygonum marinense*, CRPR 3.1), hedge nettle (*Stachys ajugoides* var. *ajugoides*, locally rare), and Suisun Marsh aster (*Symphytrichum lentum*, CRPR 1B) may occur within the City based on suitable habitat present at Albany Beach, the Albany Mudflats Ecological Reserve, the riparian area adjacent to Albany Hill park, and marshy benches adjacent to freshwater seeps and creeks.

Twenty-two (22) plants in Table IV.J-2 were considered unlikely to occur in the City because they inhabit habitats or soils that are not present in the City (i.e., coastal sage scrub, chaparral, vernal pools, and serpentine soils). These habitat and soil types occur in other parts of Alameda County.

(2) Special-Status Animals. Based on a review of the CNDDB and other sources identified below, LSA identified 32 special-status animal species known to occur or potentially occur in the vicinity of Albany. These species are listed in Table IV.J-3. Three of these species are not likely to occur within the City due to a lack of suitable habitat. The following 11 special-status species may occasionally pass through or forage within the City, but are not known or expected to breed in the City: green sturgeon (*Acipenser medirostris*), both the Sacramento River winter-run and Central Valley spring-run Evolutionarily Significant Units of Chinook salmon (*Oncorhynchus tshawytscha*), redhead (*Aythya americana*), American white pelican (*Pelecanus erythrorhynchos*), California brown pelican (*Pelecanus occidentalis californicus*), bald eagle (*Haliaeetus leucocephalus*), golden eagle (*Aquila chrysaetos*), American peregrine falcon (*Falco peregrinus anatum*), western snowy plover (*Charadrius alexandrinus nivosus*), and short-eared owl (*Asio flammeus*). The salt marsh wandering shrew (*Sorex vagrans halicoetes*) is not known to occur in the City.[39] The remaining special-status species are discussed in further detail below.

[39] California Department of Fish and Wildlife, 2015a, op. cit..

Table IV.J-2: Special-Status Plant Species Potentially Occurring or Known to Occur in the Vicinity of Albany, Alameda County, California

Species	Status[a]	Habitat/Blooming Period	Potential for Occurrence
Ambrosia chamissonis Silver beachweed	A2	Coastal strand, sand Elevation: 0-480 m. Blooms: June-July	Low potential for occurrence. Although some sand dunes exist at Albany Beach, and this habitat may have been more extensive prior to the development of Golden Gate Fields, the current habitat conditions within the City are highly disturbed. The East Bay Chapter of the California Native Plant Society considers the Albany shoreline as potential habitat for this species.[40]
Amsinckia lunaris Bent-flowered fiddleneck	1B	Occurs in coastal bluff scrub, cismontane woodland, valley and foothill grassland. Elevation: 3-500 m. Blooms: March-June	Low potential for occurrence. No suitable habitat is present on-site due to past disturbance and development. Nearest occurrence is within 3 miles of the City on San Pablo Ridge.
Arctostaphylos pallida Pallid manzanita	FT/CE/1B	Broadleafed upland forest, close coned coniferous forest, cismontane woodland, coastal scrub, and chaparral. Grows on siliceous shale, sandy, or gravelly substrates in uplifted marine terraces. Elevation: 185-465 m. Blooms: December-March	No potential for occurrence. Although cismontane woodland habitat is present in the City, these habitats are below the elevation range for this species. Nearest remaining natural occurrences are in Sobrante Ridge Regional Preserve, approximately 6 air miles northeast of the City.
Astragalus tener var. *tener* Alkali milk-vetch	1B	Occurs in mesic alkaline and adobe clay soils in valley and foothill grassland, adjacent to vernal pools. Elevation: 1-60 m. Blooms: March-June	Low potential for occurrence. No suitable habitat is present on-site due to past development and disturbance. Nearest known records are in Emeryville, approximately 3.5 miles south of the City. There are no recent records; species presumed extirpated from the City.
California macrophylla Round-leaved filaree	1B	Grassy openings in cismontane woodland, valley and foothill grassland with clay soils Elevation: 15-1,200 m. Blooms: March-May	Low potential for occurrence. Although grassy openings in cismontane woodland habitat are present on Albany Hill, the potential for this species to occur is low due to the density of invasive plants and foot traffic. The closest CNDDB occurrence (#54) is an extirpated population from the U.C. Berkeley campus, approximately 0.6 miles from the City. Furthermore, all of the occurrences for this species within 10 miles of the City are from the late 19th century with no current occurrences recorded.

[40] Lake, Diane, 2010, op. cit.

Table IV.J-2: Special-Status Plant Species Potentially Occurring or Known to Occur in the Vicinity of Albany, Alameda County, California

Species	Status[a]	Habitat/Blooming Period	Potential for Occurrence
Calystegia purpurata subsp. *saxicola* Coastal bluff morning-glory	1B	North Coast coniferous forest, coastal dunes, and coastal scrub Elevation: 10-105 m. Blooms: March-May	No potential for occurrence. No suitable habitat is present on-site due to past development and disturbance. The closest CNDDB occurrence (#1) is from a presumed extant population on Brooks Island, approximately 0.48 miles from the City.
Carex comosa Bristly Sedge	2	Occurs in freshwater wetlands and lake margins in coastal prairie, marshes and swamps, valley and foothill grassland. Elevation: 0-425 m. Blooms: May-September	No potential for occurrence. Although habitat for this species may have been present prior to the development and fill of the Albany Plateau, the current habitat conditions within the City are unlike those required for this species. The closest CNDDB occurrence (#10, possibly extirpated) is an 1866 record from an unspecified "swamp" location in San Francisco, approximately 4.1 miles west of the City.
Castilleja affinis var. *neglecta* Tiburon paintbrush	FE/CT/1B	Valley and foothill grassland (serpentinite) Elevation: 60-400 m. Blooms: April-June	No potential for occurrence. Although valley and foothill grassland is present on Albany Hill, the soils there are not serpentine. The closest CNDDB occurrence (#2) is from a presumed extant population in serpentine grassland in Tiburon, approximately 4.3 miles west of the City.
Chloropyron maritimum subsp. *palustre* [= Cordylanthus maritimus subsp. palustris] Point Reyes salty bird's-beak	1B	Marshes and swamps (coastal salt) Elevation: 0-10 m. Blooms: June-October	Moderate potential for occurrence. Suitable habitat for this species may be present in the Albany Mudflats Ecological Reserve. The closest CNDDB occurrence (#21, possibly extirpated) is an 1891 record from the generalized location along the Emeryville/Berkeley shoreline, approximately 2.5 miles south of the City.
Chorizanthe cuspidata var. *cuspidata* San Francisco Bay spineflower	1B	Coastal strand/dunes, coastal bluff scrub, coastal prairie, northern coastal scrub Elevation: 3-215 m. Blooms: April-August	No potential for occurrence. Although some sand dunes exist at Albany Beach, and this habitat may have been more extensive prior to the development of Golden Gate Fields, the current habitat conditions within the City are highly disturbed. The closest CNDDB occurrence (#16, extirpated) is a 1881 record presumed to be west of what is now Lake Merritt in Oakland, approximately 3.8 miles to the south.

Table IV.J-2: Special-Status Plant Species Potentially Occurring or Known to Occur in the Vicinity of Albany, Alameda County, California

Species	Status[a]	Habitat/Blooming Period	Potential for Occurrence
Cirsium andrewsii Franciscan thistle	1B	Occurs in mesic areas of broadleaf upland forest, coastal bluff scrub, coastal prairie and coastal scrub; sometimes serpentinite. Elevation: 0-150 m. Blooms: March-July	No potential for occurrence. Although broadleaf upland forest is present on Albany Hill, this species is typically associated with serpentine seeps. The closest CNDDB occurrence (#14) is from a presumed extant population from Tilden Regional Park, approximately 2.5 miles east of the City.
Collinsia multicolor San Francisco blue eyed Mary	1B	Closed-cone coniferous forest, coastal scrub and grassland on decomposed shale (mudstone) mixed with humus; in moist and shady areas and sometimes on serpentinite. Elevation: 30-250 m. Blooms: March-May	No potential for occurrence. The habitat conditions of the City are unlike those required for this species. The closest CNDDB occurrence (#26) is from a presumed extant population from Angel Island State Park, approximately 2.7 miles northwest of the City.
Dirca occidentalis Western leatherwood	1B	Broadleafed upland forest, chaparral, closed-cone coniferous forest, cismontane woodland, north coast coniferous forest, riparian forest, and riparian woodland on brushy slopes, mesic sites. Elevation: 30-395 m. Blooms: January-March	Low potential for occurrence. Although cismontane woodland is present on Albany Hill, the potential for this species to occur is low due to the density of invasive plants and foot traffic. The closest CNDDB occurrence (#24) is from a presumed extant population in Tilden Regional Park, approximately 1.2 miles from the City.
Eriogonum luteolum var. *caninum* Tiburon buckwheat	1B	Chaparral, cismontane woodland, coastal prairie, and valley and foothill grassland; often on serpentine, gravelly to sandy soils. Elevation: 0-700 m. Blooms: May-September	No potential for occurrence. Although cismontane woodland and valley and foothill grassland are present on Albany Hill, the soils there are not serpentine. The closest CNDDB occurrence (#2) is from a presumed extant population in serpentine grassland in Tiburon, approximately 4.3 miles west of the City.
Eriophyllum staechadifolium Seaside golden yarrow	A2	Coastal strand and coastal sage scrub Elevation: 0-150 m. Blooms: May-August	Moderate potential for occurrence. Although some sand dunes exist at Albany Beach, and this habitat may have been more extensive prior to the development of Golden Gate Fields, the current habitat conditions within the City are highly disturbed. The East Bay Chapter of the California Native Plant Society considers the Albany shoreline as potential habitat for this species.[41]

[41] Ibid.

Table IV.J-2: Special-Status Plant Species Potentially Occurring or Known to Occur in the Vicinity of Albany, Alameda County, California

Species	Status[a]	Habitat/Blooming Period	Potential for Occurrence
Extriplex joaquinana [= Atriplex joaquiniana] San Joaquin spearscale	1B	Seasonal alkali wetland, alkali sink/chenopod scrub, meadows and seeps, playas, valley and foothill grassland/alkaline Elevation: 1-835 m. Blooms: April-October	Low potential for occurrence. Although habitat for this species may have been present prior to the development and fill of the Albany Plateau, the current habitat conditions within the City are unlike those required for this species. The closest CNDDB occurrence (#77, possibly extirpated) is a 1929 record from an unknown location at the "marshes of Oakland", approximately 5 miles south of the City.
Fraxinus latifolia Oregon ash	B	Wetland riparian Elevation: 0-1,480 m. Blooms: April-May	Moderate potential for occurrence. Wetland riparian habitat occurs adjacent to Codornices Creek. The East Bay Chapter of the California Native Plant Society considers the Codornices Creek west of San Pablo Avenue and east of I-80 as potential habitat for this species.[42]
Fritillaria liliacea Fragrant fritillary	1B	Coastal scrub, valley and foothill grassland, and coastal prairie. Often on serpentine soils. Other various soils reported, though usually clay. Elevation: 3-410 m. Blooms: February-April	No potential for occurrence. Although habitat for this species may have been present prior to the development and fill of the Albany Plateau, the current habitat conditions within the City are unlike those required for this species. The closest CNDDB occurrence (#57, possibly extirpated) is a 1900 record from a generalized location in present day Richmond, approximately 0.5 miles north of the City.
Gilia capitata subsp. *chamissonis* Blue coast gilia	1B	Coastal dunes and coastal scrub Elevation: 2-200 m. Blooms: April-July	No potential for occurrence. Although some sand dunes exist at Albany Beach, and this habitat may have been more extensive prior to the development of Golden Gate Fields, the current habitat conditions within the City are highly disturbed. The closest CNDDB occurrence (#3, extirpated) is attributed to a location on the south side of Yerba Buena Island, approximately 4.2 miles southwest of the City.

[42] Ibid.

Table IV.J-2: Special-Status Plant Species Potentially Occurring or Known to Occur in the Vicinity of Albany, Alameda County, California

Species	Status[a]	Habitat/Blooming Period	Potential for Occurrence
Helianthella castanea Diablo helianthella	1B	Broadleaved upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland, usually within rocky azonal soils Elevation: 60–300 m. Blooms: April-June	Low potential for occurrence. Cismontane woodland and valley and foothill grassland is present on Albany Hill. There are no records of this species from Albany Hill, and its presence is unlikely due to the intimate knowledge volunteer botanists and plant enthusiasts have of the vegetation at this location.[43] The closest CNDDB occurrence (# 84) is from a presumed extant population near Lawrence Hall of Science in Berkeley, approximately 1.8 miles from the City.
Hemizonia congesta subsp. *congesta* White seaside tarplant	1B	Valley and foothill grasslands; sometimes roadsides Elevation: 20-560 m. Blooms: April-November	Low potential for occurrence. Valley and foothill grassland is present on Albany Hill. There are no records of this species from Albany Hill, and its presence is unlikely due to the intimate knowledge volunteer botanists and plant enthusiasts have of the vegetation at this location.[44] The closest CNDDB occurrence (#2, presumed extant) is a late 19th to early 20th century observation from a generalized location in the southern part of San Francisco, approximately 4.1 miles southwest of the City.
Hesperolinon congestum Marin western flax	FT/CT/1B	Chaparral, valley and foothill grassland/serpentinite Elevation: 5-370 m. Blooms: April-July	No potential for occurrence. Although valley and foothill grassland is present on Albany Hill, the soils there are not serpentine. The closest CNDDB occurrence (#6) is from a presumed extant population in serpentine grassland in Tiburon, approximately 4.2 miles west of the City.
Heteranthera dubia Water star-grass	2	Wetland riparian, pond and lake margins; alkaline Elevation: 0-1,500 m. Blooms: July-August	No potential for occurrence. Although riparian vegetation is present along Cerrito and Codornices Creeks, the habitat is unlike that required for this species. The closest CNDDB occurrence (#1, presumed extant) is an 1879 observation from a generalized location in the general vicinity of San Francisco, approximately 4.1 miles southwest of the City.

[43] Ertter, B., 1999. *The Value of Albany Hill*. From the website of the Friends of Albany Hill: www.imaja.com/as/environment/albanyca/valueofalbanyhill.html.

[44] Ibid.

Table IV.J-2: Special-Status Plant Species Potentially Occurring or Known to Occur in the Vicinity of Albany, Alameda County, California

Species	Status[a]	Habitat/Blooming Period	Potential for Occurrence
Hoita strobilina Loma Prieta hoita	1B	Chaparral, cismontane woodland, and riparian woodland on mesic serpentine sites Elevation: 30-860 m. Blooms: May-October	Low potential for occurrence. Although cismontane woodland is present on Albany Hill, the site is likely too dry to support this species. There is no serpentine on the site. The closest CNDDB occurrence (#15) is from a presumed extant population in El Sobrante, approximately 4.0 miles from the City.
Holocarpa macradenia Santa Cruz tarplant	FT/CE/1B	Occurs in sandy-clay soil in coastal prairie, coastal scrub, and in valley and foothill grassland Elevation: 10-220 m. Blooms: June-October	No potential for occurrence. Although valley and foothill grassland is present on Albany Hill, this species is known to occur on sandy soils, which are absent from Albany Hill. All extant populations of this plant have been reintroduced. Suitable habitat for this species may be present in the Albany Mudflats Ecological Reserve. The closest CNDDB occurrence (#20, extirpated) is from a 1916 record from the generalized location along the Emeryville/Berkeley shoreline, approximately 1.6 miles south of the City.
Horkelia cuneata subsp. *sericea* Kellogg's horkelia	1B	Occurs in closed-cone coniferous forest, maritime chaparral, coastal scrub, dunes and coastal sandhills; sandy or gravelly openings. Primarily found on old dunes and coastal sand hills. Elevation: 10-200 m. Blooms: April-September	No potential for occurrence. Although some sand dunes exist at Albany Beach, and this habitat may have been more extensive prior to the development of Golden Gate Fields, the current habitat conditions within the City are highly disturbed. The closest CNDDB occurrence (#35, possibly extirpated) is attributed to a vague location in Oakland, approximately 3.8 miles south of the City.

Table IV.J-2: Special-Status Plant Species Potentially Occurring or Known to Occur in the Vicinity of Albany, Alameda County, California

Species	Status[a]	Habitat/Blooming Period	Potential for Occurrence
Isolepis cernua Low bulrush	B	Coastal salt marsh, freshwater wetlands, northern coastal scrub, and wetland riparian Elevation: 0-2,350 m. Blooms: June-February	Moderate potential for occurrence. Coastal salt marsh, marginal freshwater wetlands and some wetland riparian vegetation exists within the City. The East Bay Chapter of the California Native Plant Society considers the edges of Codornices Creek near its mouth, east of I-80 at the Albany/Berkeley border, as potential habitat for this species.[45]
Layia carnosa Beach layia	FE/CE/1B	Coastal dunes and coastal strand Elevation: 0-60 m. Blooms: March-July	Low potential for occurrence. Although some sand dunes exist at Albany Beach, and this habitat may have been more extensive prior to the development of Golden Gate Fields, the current habitat conditions within the City are highly disturbed. The closest CNDDB occurrence (#6, extirpated) is attributed to dune hollows prior to the development of San Francisco, approximately 4.11 air miles southwest of the City. One historical observation in Alameda is from the area now occupied by the Port of Oakland. The closest extant population is at Point Reyes National Seashore.
Leptosiphon rosaceus Rose leptosiphon	1B	Coastal bluff scrub Elevation: 0-100 m. Blooms: April-July	No potential for occurrence. Due to the past disturbance, coastal bluff scrub is absent from the City. The closest CNDDB occurrence (#6, presumed extirpated) is attributed to a vague location in San Francisco, approximately 4.1 miles from the City.
Limonium californicum *California sealavender*	1B	Coastal salt marsh and coastal strand. Elevation: 0-160 m. Blooms: June-September	Present within the City within the coastal salt marsh. The East Bay Chapter of the California Native Plant Society considers the Albany shoreline as potential habitat for this species.[46] This species was observed at the Albany Mudflats Ecological Reserve.

[45] Lake, Diane, 2010, op. cit.

[46] Ibid.

Table IV.J-2: Special-Status Plant Species Potentially Occurring or Known to Occur in the Vicinity of Albany, Alameda County, California

Species	Status[a]	Habitat/Blooming Period	Potential for Occurrence
Mason's lilaeopsis *Lilaeopsis masonii*	CR/1B	Tidal zone of freshwater and brackish marshes. Elevation: 0-1 m. Blooms: June-August	No potential for occurrence. Tidal zone of brackish marsh is limited at the Albany Mudflats Ecological Reserve during periods of high flows (winter and possibly spring rainy seasons) and therefore brackish conditions are not present long enough for this species colonize the site. This perennial herb is found on silty soils on eroding brackish slough banks, and occasionally on old wharf pilings. The closest CNDDB occurrences are beyond five miles of the City from around Mare Island in Solano County. This species requires brackish waters with salt concentrations that are probably lower than at the salinity of the water in the City.
Meconella oregana White fairypoppy	1B	Coastal prairie, coastal scrub Elevation: 250-620 m. Blooms: March-April	No potential for occurrence. Due to the past disturbance, coastal bluff scrub is absent from the City. The closest CNDDB occurrence (#4) is from a presumed extant population from Wildcat Canyon Regional Park, approxi-mately 2.9 miles east of the City.
Monardella villosa subsp. *globosa* Robust monardella	1B	Openings in broadleaved upland forest, chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland Elevation: 100-915 m. Blooms: June-July (August)	Low potential for occurrence. Cismontane woodland and valley and foothill grassland habitat is present on Albany Hill. The taxonomy of this species is in question as the plant may show variance when growing in full sun or part shade. Nearest occurrence is within 3 miles of the City in Tilden Regional Park.
Plagiobothrys chorisianus var. *chorisianus* Choris' popcornflower	1B	Occurs in grassy and moist areas (ephemeral drainages) in chaparral, coastal prairie and coastal scrub Elevation: 15-160 m. Blooms: March-June	No potential for occurrence. Due to the past disturbance, coastal bluff scrub and costal prairie are absent from the City. The closest CNDDB occurrence (#11, extirpated) is attributed a vague location in Oakland, approximately 3.8 miles from the City.
Polemonium carneum Oregon polemonium	2	Coastal prairie, coastal scrub, lower montane coniferous forest Elevation: 0-1,830 m. Blooms: April-September	No potential for occurrence. Due to the past disturbance, coastal bluff scrub and costal prairie are absent from the City. The closest CNDDB occurrence (# 3) is from a presumed extant population from Angel Island State Park, approximately 2.7 miles northwest of the City.

Table IV.J-2: Special-Status Plant Species Potentially Occurring or Known to Occur in the Vicinity of Albany, Alameda County, California

Species	Status[a]	Habitat/Blooming Period	Potential for Occurrence
Polygonum marinense Marin knotweed	3	Marshes and swamps in coastal salt or brackish areas Elevation: 0-10 m. Blooms: April-October	Moderate potential for occurrence. Suitable habitat is present at within the Albany Mudflats Ecological Reserve. This perennial herb is often overlooked within pickleweed marsh habitat. The closest CNDDB occurrences are beyond five miles of the City from the pickleweed marshes of the Napa River.
Spartina foliosa California cordgrass	B	Coastal salt marsh and wetland riparian Elevation: 0-220 m. Blooms: June-November	Present within the City within the brackish marsh and sloughs connected to the Albany Mudflats Ecological Reserve. The East Bay Chapter of the California Native Plant Society considers the Albany shoreline as potential habitat for this species.[47]
Spergularia macrotheca var. *macrotheca* Sand spurrey	A2	Wetland riparian Elevation: 0-340 m. Blooms: February-May	Present within the City along the upland areas of the brackish marsh and sloughs connected to the Albany Mudflats Ecological Reserve. The East Bay Chapter of the California Native Plant Society considers the Albany shoreline as potential habitat for this species.[48]
Stachys ajugoides var. *ajugoides* Hedge nettle	A2	Mixed evergreen forest, northern coastal scrub, closed-cone pine forest, coastal sage scrub, wetland riparian Elevation: 0-2,460 m. Blooms: February-April	Moderate potential for occurrence. Marginal freshwater wetland habitat exists within the City. The East Bay Chapter of the California Native Plant Society considers the Albany area as potential habitat for this species. Although location of potential habitat is vague, this species would most likely be found adjacent to the neglected portions of creeks within private property and within Albany Hill Park.[49]

[47] Ibid.

[48] Ibid.

[49] Ibid.

Table IV.J-2: Special-Status Plant Species Potentially Occurring or Known to Occur in the Vicinity of Albany, Alameda County, California

Species	Status[a]	Habitat/Blooming Period	Potential for Occurrence
Stebbinsoseris decipiens Santa Cruz microseris	1B	Occurs in broadleaf upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, and valley and foothill grassland; open disturbed areas with sandstone, shale or serpentine derived soils Elevation: 10-500 m. Blooms: April-May	No potential for occurrence. The habitat conditions of the City are unlike those required for this species. The closest CNDDB occurrence (#26) is from a presumed extant population from Angel Island State Park, approximately 2.7 miles northwest of the City.
Streptanthus albidus subsp. *Peramoenus* Most beautiful jewelflower	1B	Chaparral, cismontane woodland, valley and foothill grassland, serpentine soils Elevation: 95-1,000 m. Blooms: March-October	No potential for occurrence. The habitat conditions of the City are unlike those required for this species. This species has an affinity to grow on serpentine soils in grasslands and within openings in chaparral and oak woodland. There is no serpentine in the City.
Streptanthus glandulosus subsp. *niger* Tiburon jewelflower	FE/CE/1B	Valley and foothill grassland on serpentine soils Elevation: 30-150 m. Blooms: May-June	No potential for occurrence. The habitat conditions of the City are unlike those required for this species. This species has an affinity to grow on serpentine soils in grasslands and within openings in chaparral and oak woodland. There is no serpentine in the City.
Suaeda californica California sea-blite	FE/1B/A1x	Narrow high tide zone along sandy salt marsh edges or estuarine beaches Elevation: 0-15 m. Blooms: July-October	Low potential for occurrence. Tidal zone of brackish marsh is present at the Albany Mudflats Ecological Reserve, and some sand dunes exist at Albany Beach (albeit highly disturbed and unnatural). The closest CNDDB occurrence (#10, extirpated) is attributed to a 1912 observation from the Albany landmark known as Fleming Point. Several recent occurrences at restored tidal sites within the San Francisco Bay may provide for passive recruitment in the City.
Symphyotrichum lentum Suisun Marsh aster	1B	Brackish and freshwater marshes and swamps, most often seen along sloughs Elevation: 0-3 m. Blooms: May-November	Moderate potential for occurrence. Brackish marsh and freshwater marsh are present at the Albany Mudflats Ecological Reserve.

Table IV.J-2: Special-Status Plant Species Potentially Occurring or Known to Occur in the Vicinity of Albany, Alameda County, California

Species	Status[a]	Habitat/Blooming Period	Potential for Occurrence
Trifolium hydrophylum [= Trifolium depauperatum var. *hydrophylum]* Saline clover	1B	Marshes and swamps, valley and foothill grassland, Vernal pools Elevation: 0-300 m. Blooms: April-June	No potential for occurrence. Although habitat for this species may have been present prior to the development and fill of the Albany Plateau, the current habitat conditions within the City are unlike those required for this species. The closest CNDDB occurrence (#30, possibly extirpated) is a 1900 record from a generalized location in present day Richmond (Stege Marsh), approximately 0.5 miles north of the City.

[a] Status:

Federal/State
FE = Federally Endangered
FT = Federally Threatened
CE = State-Listed as Endangered
CR = State Rare
CT = State-Listed as Threatened

Rare Plant Rank
1B = California Rare Plant Rank 1B: species considered rare or endangered in California and elsewhere.
2 = California Rare Plant Rank 2 – rare, threatened or endangered in California, but more common elsewhere.
3 = California Rare Plant Rank 3 – review list, plants for which we need more information.

Local
A1x = Locally rare species previously known from Alameda or Contra Costa Counties, but now believed to be extirpated, and no longer occurring here.
A2 = Locally rare species currently known from 3 to 5 regions in Alameda or Contra Costa Counties, or, if more, meeting other important criteria such as small populations, stressed or declining populations, small geographical range, limited or threatened habitat, etc.
B = High priority watch list: a locally rare species currently known from 6 to 9 regions in Alameda or Contra Costa Counties, or, if more, meeting other important criteria as described above in A2.

Source: California Natural Diversity Database, California Department of Fish and Wildlife, 2015a.

Table IV.J-3: Special-Status Animal Species Potentially Occurring or Known to Occur in the Vicinity of Albany, Alameda County, California

Species	Status[a]	Habitat	Potential for Occurrence
Invertebrates			
Danaus plexippus Monarch Butterfly –Winter colony sites	[b]	Winter colony sites occur along the California coast in wind protected tree groves (eucalyptus, Monterey pine, and cypress) where nectar and water resources are nearby.	Winter colony sites have been documented in eucalyptus trees on Albany Hill in 1991-92, 1997, and 1998, and in trees near the University Village near Village and Codornices creeks in January 1998.
Fish			
Acipenser medirostris Green sturgeon, Southern DPS	FT/CSC	Near shore marine waters, bays and estuaries, spawns in rivers in deep fast water over large cobbles, but also clean sand to bedrock. Southern most spawning population in the Sacramento River.	May occasionally visit Bay waters within the City.
Eucyclogobius newberryi Tidewater goby	FE/CSC	Fresh to brackish shallow lagoons and lower stream reaches with still, but not stagnant, water.	No suitable habitat present, not expected to occur. Considered extirpated from San Francisco Bay,[50] but some small populations may persist.[51]
Oncorhynchus tshawytscha Chinook salmon (Sacramento River winter-run ESU[52])	FE/SE	Anadromous: spawns in Sacramento River system; occurs in small numbers in San Francisco Bay.	May occasionally visit Bay waters within the City.
Oncorhynchus tshawytscha Chinook salmon (Central Valley spring-run ESU)	FT	Anadromous: spawns in Sacramento River system; occurs in small numbers in central San Francisco Bay.	May occasionally visit Bay waters within the City.

[50] Moyle, P.B., 2002, op. cit.

[51] Leidy, R.A., 2007, op. cit.

[52] ESU = Evolutionarily Significant Unit. The National Marine Fisheries Service (NMFS) considers an ESU a "species" under the Endangered Species Act.

Table IV.J-3: Special-Status Animal Species Potentially Occurring or Known to Occur in the Vicinity of Albany, Alameda County, California

Species	Status[a]	Habitat	Potential for Occurrence
Oncorhynchus mykiss Steelhead (central California coast ESU)	FT	Anadromous: spawns in small coastal streams and rivers. For spawning and egg development requires cool, well-oxygenated water with moderate flow/velocity, small to medium gravel bottom material, and moderately deep, cool pools for refuge. Rearing sites are in tributaries.	Species known to occur in Codornices Creek. Approximately 150 juveniles observed in Codornices Creek between the railroad tracks and San Pablo Avenue during surveys in 2001 by Rana Resources;[53] few individuals observed in pools during LSA's site visit in June 2003. Suitable spawning habitat present in sections where cobbled stream beds occur.
Amphibians and Reptiles			
Emys marmorata Western pond turtle	CSC	Ponds, marshes, streams, and irrigation ditches with aquatic vegetation, deep water, basking sites, and adjacent uplands that are suitable for egg-laying (sandy banks or grassland).	Portions of Codornices, Middle, and Cerrito Creeks provide suitable breeding or resident habitat. Species observed in Codornices Creek, just upstream from the railroad tracks. [54] Four CNDDB occurrences have been recorded within 5 miles of the City: Brooks Island, San Pablo Reservoir, Jewell Lake, and Lake Temescal.
Rana draytonii California red-legged frog	FT/CSC	Perennial ponds or pools and streams where water remains long enough for breeding and development of young. Highest frog densities associated with dense emergent or shoreline riparian vegetation and deep (>2 feet), still or slow-moving water. Juvenile frogs often found in warm, shallow-water habitats with floating or submerged vegetation.	Not known to occur in or near the City. Creeks within the City do not provide high quality habitat due to their urban setting and the lack of adjacent upland habitat. Introduced predators, such as non-native fish and bullfrogs, further degrade the habitat. Closest CNDDB recorded occurrences are more than 3 miles away near San Pablo Dam Reservoir in the vicinity of El Sobrante and Orinda.
Birds			
Aythya americana Redhead	CSC	Large, deep bodies of water; nests in freshwater emergent wetlands.	May winter in small numbers on open water habitats along the Albany waterfront, but does not breed within the City.
Pelecanus erythrorhynchos American white pelican	CSC	Forages over shallow inland waters and coastal marine habitats, nests on isolated islands or peninsulas.	May forage and roost in the City, but does not breed in San Francisco Bay or in the City.

[53] Environmental Collaborative, 2001, op. cit.

[54] Albany, City of, 1998. *City of Albany Watershed Management Plan*. Prepared in Consultation with David Mattern & Associates, Consulting Engineers; Wolfe Mason Associates, Landscape Architects; Balance Hydrologics, Inc.; and Botanical Consulting Services. October 1998.

Table IV.J-3: Special-Status Animal Species Potentially Occurring or Known to Occur in the Vicinity of Albany, Alameda County, California

Species	Status[a]	Habitat	Potential for Occurrence
Pelecanus occidentalis californicus California brown pelican	FD/SD/CFP	Coastal areas; nests on islands.	May forage and roost in the shallow subtidal portions of the Albany waterfront, but does not breed in San Francisco Bay or in the City. Individuals may occasionally roost on Fleming Point Pier.
Elanus leucurus White-tailed kite	CFP	Open grasslands, meadows, or marshes; require dense-topped trees or shrubs for nesting and perching.	Marginal nesting and foraging habitat present at Albany Bulb, University Village, Albany Hill, and along the creeks within the Planting Area. Nesting has been documented on Brooks Island and in the vicinity of Berkeley Meadow approximately 1.6 miles south of the City. This species has been observed at University Village.[55]
Haliaeetus leucocephalus Bald eagle	FD/SE/CFP	Ocean shorelines, lake margins, and rivers for both nesting and wintering; nests in large trees with open branches.	May occasionally occur near the Albany waterfront during winter, but not expected to remain for long periods or breed within the City. Known to have nested near San Pablo Reservoir.
Circus cyaneus Northern harrier	CSC	Nests in wet meadows and marshes, forages over open grasslands and agricultural fields.	Marginal foraging habitat present at Albany Plateau, but limited in the City. Not expected to nest on or near the City due to ongoing disturbance associated with trail users and pets. Historically known to nest less than 1 mile south of the City in northwestern corner of Berkeley Meadow, but not in recent years.
Aquila chrysaetos Golden eagle	CFP	Rolling foothills and mountain areas. Nests in cliff-walled canyons or large trees in open areas.	May occasionally occur during winter, but not expected to remain for long periods or breed within the City.
Falco peregrinus American peregrine falcon	FD/SD/CFP	A variety of open habitats including coastlines, mountains, marshes, bay shorelines, and urban areas. Nest on cliffs, bridges, and tall buildings.	May occasionally forage over the City shoreline but not expected to nest due to lack of suitable nest sites on or adjacent to the City. Known to occasionally forage over Albany Mudflats Ecological Reserve.[56]
Laterallus jamaicensis coturniculus California black rail	ST/CFP	Salt marshes bordering larger bays, also found in brackish and freshwater marshes.	May occur in tidal marsh habitat along the Albany waterfront. Closest recent CNDDB occurrence is approximately 3.5 miles south of the City at the Emeryville Crescent.
Rallus longirostris	FE/SE/CFP	Tidal salt marshes with sloughs and substantial	May occur in tidal marsh habitat along the Albany waterfront.

[55] Environmental Collaborative, 2001, op. cit.

[56] LSA Associates, Inc., 2002a, op. cit.

Table IV.J-3: Special-Status Animal Species Potentially Occurring or Known to Occur in the Vicinity of Albany, Alameda County, California

Species	Status[a]	Habitat	Potential for Occurrence
obsoletus California clapper rail		cordgrass (*Spartina* sp.) cover.	Known to occur approximately 0.25 miles north in the Richmond Inner Harbor, 3.1 miles south in the Emeryville Crescent Marsh, and 4.7 miles north at Wildcat Creek Marsh.
Charadrius alexandrinus nivosus Western snowy plover (Pacific coast population)	FT	Sandy beaches, salt ponds, and salt pond levees.	Not known to breed within the City, but could forage on tidal mudflats. No suitable nesting habitat present.
Sternula antillarum browni California least tern	FE/SE/CFP	Sandy beaches, alkali flats, hard-pan surfaces (salt ponds).	Occasionally forages over Bay waters in the City between April and July. Observed nesting on created shell islands just south of Central Avenue in El Cerrito in 2000,[57] just north of the City.
Athene cunicularia Burrowing owl	CSC	Open, dry grasslands that contain abundant ground squirrel burrows.	Wintering individuals may occasionally use concrete rip-rap along the shoreline of the Albany waterfront and natural and artificial burrows within the Albany Plateau. Has been observed wintering at scattered locations in the City and vicinity, including the Albany Bulb, Cesar Chavez Park, North Basin Strip of the Berkeley Marina, and Berkeley Meadow,[58] but no nesting confirmed to date. The closest CNDDB occurrence is approximately 1.2 miles northwest of the City in south Richmond. They have also been observed wintering along the Berkeley shoreline at the following locations: Cesar Chavez Park, Berkeley Meadows, and the Gilman ballfields.[59]
Asio otus Long-eared owl	CSC	Conifer, oak, riparian, pinyon-juniper, and desert woodlands adjacent to grasslands, meadows, or shrublands.	Not expected to occur due to lack of suitable habitat.
Asio flammeus	CSC	Open grasslands, meadows, and marshes with	May occasionally occur in tidal marsh habitats within and

[57] LSA observations as cited in LSA Associates, Inc., 2002a, op. cit.

[58] LSA observations and EBRPD observations 2009 and 2010 as cited in LSA Associates, Inc., 2002a. *Habitat Issues - Animal Life section in Eastshore Park Project Resource Inventory. Prepared for California Department of Parks and Recreation, East Bay Regional Park District.*

[59] LSA observations in 2008, 2009, and 2006 as cited in LSA Associates, Inc. 2002a. Habitat Issues - Animal Life section in Eastshore Park Project Resource Inventory. Prepared for California Department of Parks and Recreation, East Bay Regional Park District

Table IV.J-3: Special-Status Animal Species Potentially Occurring or Known to Occur in the Vicinity of Albany, Alameda County, California

Species	Status[a]	Habitat	Potential for Occurrence
Short-eared owl		few trees; requires dense ground vegetation for both roosting and nesting.	adjacent to the Albany waterfront during winter. Closest CNDDB occurrence is approximately 4.7 miles north of the City in Wildcat Creek Marsh.
Lanius ludovicianus Loggerhead shrike	CSC	Open grasslands and woodlands with scattered shrubs, fence posts, utility lines, or other perches; nests in dense shrubs and lower branches of trees.	May nest and forage within the ruderal scrub habitat along the Albany waterfront, particularly at the Albany Plateau.
Geothlypis trichas sinuosa San Francisco common yellowthroat	CSC	Salt, brackish, and freshwater marshes; and riparian woodlands; nests on or near ground in low vegetation.	Suitable nesting habitat present within tidal marsh, scrub, and riparian habitat habitats. Observed along the Albany shoreline near the Codornices Creek outfall in 2000 and 2001.[60] Closest CNDDB occurrence is near the Bay Bridge toll plaza in Emeryville.
Passerculus sandwichensis alaudinus Bryant's savannah sparrow	CSC	Nests and forages in salt marsh and adjacent ruderal habitat, and moist grasslands in the fog belt, but has also be found in dry grasslands back from the coast.	May nest and/or forage in salt marsh and ruderal vegetation along the Albany waterfront. Known to occur in the vicinity of the BSA.[61] Observed in Albany Plateau.[62]
Melospiza melodia pusillula Alameda song sparrow	CSC	Tidal salt marshes dominated by pickleweed; nests primarily in pickleweed and marsh gumplant.	Observed at Middle and Cerrito Creeks during LSA's reconnaissance survey. Closest CNDDB records are in Cerrito Creek and along the waterfront in Richmond and Emeryville. Likely occurs at Codornices Creek and within marsh and riparian habitat along the Albany waterfront.
Mammals			
Sorex vagrans halicoetes Salt marsh wandering shrew	CSC	Tidal marshes with abundant driftwood and other debris (for shelter and foraging).	Unlikely to occur due to the limited extent of transitional and upland habitat adjacent to tidal and non-tidal salt marsh in the City.
Reithrodontomys raviventris Salt-marsh harvest mouse	FE/SE/CFP	Tidal salt marshes of San Francisco Bay and its tributaries. Requires tall, dense pickleweed for cover.	Not expected to occur due to lack of high quality tidal marsh habitat. Known to occur approximately 3 miles south of the City in the Emeryville Crescent and approximately 4.7 miles

[60] Ohlson, Kristin, 2001, as cited in LSA 2002a.

[61] Shuford, W. D. and T. Gardali, eds., 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento, California.

[62] Ohlson, Kristin, 2001, op. cit.

Table IV.J-3: Special-Status Animal Species Potentially Occurring or Known to Occur in the Vicinity of Albany, Alameda County, California

Species	Status[a]	Habitat	Potential for Occurrence
			north of the City in Wildcat Creek Marsh.
Antrozous pallidus Pallid bat	CSC	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rockier areas for roosting. Needs roosts that protect bats from high temperature and disturbance.	Suitable roosting habitat present in large trees and snags on Albany Hill or along the creeks within the City. No recent (after 1970) CNDDB occurrences within 5 miles of the City. Nearest occurrence was recorded at an unknown location in El Cerrito in 1943.
Nyctinomops macrotis Big free-tailed bat	CSC	Low-lying arid areas in Southern California. Needs high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.	No habitat present within the City. Only one occurrence within 5 miles of the City is a 1916 record at an unknown location in Berkeley.
Corynorhinus townsendii Townsend's big-eared bat	SCT/CSC	Riparian woodlands, wetlands, forest edges, and open woodlands; roosts in caves, mines, and old buildings.	Suitable roosting habitat present in large trees and snags on Albany Hill or along the creeks within the City. Nearest CNDDB occurrence is at Angel Island.

[a] Status:

Federal/State
FE = Federally Endangered
FT = Federally Threatened
FD = Federally Delisted
SE = State Endangered
ST = State Threatened
SCT = State Candidate Threatened
SD = State Delisted
CSC = California Species of Special Concern
CFP = California Fully Protected Species

[b] Winter colonies recognized by CDFW as a sensitive habitat in California. USFWS accepted a 90-day finding on a petition for listing the species as being warranted and USFWS are currently within the 12-month review period.

Source: California Natural Diversity Database, California Department of Fish and Wildlife 2015a, unless otherwise noted.

Monarch Butterfly Winter Colony Sites (Sensitive Habitat). Monarch butterflies are not listed as a species of special concern, threatened, or endangered by the United States Fish and Wildlife Services (USFWS) or the CDFW. The USFWS, however, accepted a 90-day finding on a petition stating that listing the species under the FESA may be warranted and are currently within the 12-month review period. Additionally, California law recognizes Monarch butterfly winter colonies as "special resources." The CDFW is required to identify winter colony sites and establish management plans to protect them. Monarch butterflies winter in large colonies along the California coast. Winter roost sites are typically characterized by large, mature trees that are close together, providing a stable micro-climate and protection from wind. Monarch butterflies often use non-native tree species, including eucalyptus, as well as native species such as Monterey pine (*Pinus radiata*) and Monterey cypress (*Hesperocyparis macrocarpa*) (species native to the Monterey Peninsula but not elsewhere).

The eucalyptus, pine, and cypress groves within and adjacent to the City have the potential to support Monarch butterflies. U.C. Berkeley staff observed Monarchs roosting in eucalyptus trees along Codornices Creek in 1998.[63] In October 1997, City of Albany staff observed several hundred Monarch butterflies in the eucalyptus groves in Dowling Park (University Village), along the railroad tracks, and in pine and eucalyptus trees east of San Pablo Avenue and south of Marin Avenue east of the University Village. At that time, the University consulted with Paul Cherubini, a Monarch butterfly expert who determined that these aggregations of Monarchs represented temporary roosts, rather than over-wintering habitats. The nearest known regular wintering colony is at the Point Pinole Regional Shoreline. Large groups of Monarch butterflies have also been observed in the fall and winter in eucalyptus groves near Albany Hill.

Steelhead – Central California Coast ESU (Federal Threatened). The steelhead is the anadromous form of rainbow trout, migrating from the ocean to freshwater streams to spawn. Juveniles spend one to three years in their natal streams before going to sea as smolts. Most steelhead return to freshwater streams after spending two to three years at sea. Important factors associated with preferred stream channel conditions include temperature, velocity, depth, gravel substrate, and water quality. Shaded banks with overhanging riparian vegetation (termed "shaded riverine aquatic cover" by the USFWS) are also beneficial to salmonids, providing foraging habitat and cover from predators. High water temperatures, low rates of stream flow, low levels of dissolved oxygen, low sediment input, and stream obstructions can be detrimental to steelhead populations.

Approximately 150 juvenile steelhead were observed in Codornices Creek between the railroad tracks and San Pablo Avenue during surveys in 2001 conducted by Rana Resources.[64] Steelhead were also observed in Codornices Creek within the planning area during LSA's June 2003 site visit. Steelhead appear to be surviving in Codornices Creek despite the surrounding urban development, non-point source pollution, and the potential for removal or killing by people and domestic animal predators. Their continued presence in Codornices Creek is probably due to many factors, notably the lack of barriers between San Francisco Bay and upstream areas, the presence of a few deep pools in which to seek cover and take refuge when the stream is relatively dry, a cobbled stream bed in sections that can be used for spawning, and the abundant overstory in many sections that keep the stream shaded and

[63] Ibid.

[64] Environmental Collaborative, 2001, op. cit.

cool. Although Codornices Creek provides suitable habitat for steelhead, NOAA Fisheries does not consider it to be critical habitat. It is considered "occupied, but excluded as critical habitat."[65] Steelhead are not known to occur within the other creeks in the City.[66]

California Red-Legged Frog (Federal Threatened). The California red-legged frog has been extirpated or nearly extirpated from 70 percent of its former range.[67] Population declines of this species have been attributed to a variety of factors, with habitat loss and predation by non-native aquatic predators (e.g., bullfrogs, crayfish, other non-native fishes) typically implicated as the primary threats. California red-legged frogs occur in and along freshwater marshes, streams, ponds, and other semi-permanent water sources. Optimal habitat contains dense emergent or shoreline riparian vegetation closely associated with deep (i.e., greater than 2.3 feet), still, or slow-moving water.[68] Cattails, bulrushes, and arroyo willows provide the habitat structure that seems to be most suitable for California red-legged frogs.[69] Although the species can occur in intermittent streams and ponds, they are unlikely to persist in streams in which all surface water disappears.[70] Suitable breeding ponds and pools usually have a minimum depth of 20 inches, but California red-legged frogs do sometimes breed successfully in pools as shallow as 10 inches.[71] Regardless of water depth, suitable breeding habitat must contain water during the entire development period for eggs and tadpoles.

California red-legged frogs are not known to occur in any of the creeks within the City; the closest CNDDB occurrences are more 3 miles northeast near San Pablo Dam Reservoir in the vicinity of El Sobrante.[72] No individuals were observed along Codornices or Village Creeks during LSA's site visits in June and August 2003 and August 2008. The habitat along these sections of Codornices Creek and Village Creek is not suitable for California red-legged frogs for several reasons: few deep pools in which frogs could breed are present; no refuge from high flow storm events is present; Codornices Creek has a highly variable water regime; most of the stream corridor is intensively developed; and the surrounding urban area supports an abundance of domestic and wild predators that

[65] National Oceanic and Atmospheric Administration, 2005. *Endangered and Threatened Species; Designation of Critical Habitat for Seven Evolutionarily Significant Units of Pacific Salmon and Steelhead in California; Final Rule*. Federal Register: 70:52488-52627.

[66] California Department of Fish and Wildlife, 2015b, op. cit.

[67] U.S. Fish and Wildlife Service, 2002. *Recovery Plan for the California Red-legged Frog* (*Rana aurora draytonii*). Portland, Oregon. May 28, 2002.

[68] Hayes, M. P. and M. R. Jennings, 1988. Habitat Correlates of Distribution of the California Red-Legged Frog (*Rana Aurora Draytonii*) and the Foothill Yellow-Legged Frog (*Rana Boylii*): Implications for Management, pp. 144-158. In: R. C. Szaro, K. E. Severson, and D. R. Patton (Technical Coordinators) *Proceedings of the Symposium on the Management of Amphibians, Reptiles, and Small Mammals in North America.* U.S. Department of Agriculture, Forest Service, General Technical Report RM-166.

[69] Jennings, M. R., 1988. Natural History and Decline of Native Ranids in California, pp. 61-72. In: H. F. DeLisle, P. R. Brown, B. Kaufman, and B. M. McGurty (editors) *Proceedings of the Conference on California Herpetology.*

[70] Jennings, M.R. and M.P. Hayes, 1994. *Amphibian and Reptile Species of Special Concern in California*. Final Report to the California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, CA. 255 pp.

[71] Fellers, G. M., 2005. California red-legged frog. M. Lannoo, editor. *Amphibian Declines: The Conservation Status of Unites States Species.* University of California Press, Berkeley, CA.

[72] California Department of Fish and Wildlife, 2015b, op. cit.

probably have a significant impact on amphibian populations.[73] For these same reasons, Cerrito, Middle, and the other sections of Village and Codornices Creeks also likely do not provide suitable habitat for this species.

Western Pond Turtle (California Species of Special Concern). Western pond turtles occur in a wide variety of aquatic habitats, including ponds, lakes, marshes, rivers, streams, and irrigation ditches that typically have a rocky or muddy bottom and contain stands of aquatic vegetation.[74] The presence or absence of pond turtles at a given aquatic site is largely dependent on the availability of suitable basking sites and adjacent upland habitat for egg-laying (e.g., sandy banks or grassy open fields) and over-wintering. Nests are typically dug in dry substrate with a high clay or silt fraction since the female moistens the site where she will excavate the nest prior to egg-laying.[75] Hatchlings require shallow water habitat with relatively dense submergent or short emergent vegetation in which to forage.[76]

Suitable habitat for western pond turtles exists within portions of Cerrito, Middle, and Codornices Creeks within the City. This species was observed by Michael Woods Botanical Consulting in the late 1990s in Codornices Creek, just upstream from the railroad tracks.[77] No turtles were observed during LSA's reconnaissance surveys of Cerrito, Middle, Codornices or Village Creeks in February 2014 or during LSA's field survey of Codornices and Village Creeks on June 2003 or August 2008,[78] or during extensive surveys of Codornices and Village Creeks conducted in 2001 by Rana Resources.[79] Village Creek does not provide suitable habitat for western pond turtles due to the lack of perennial deep pools or basking sites and because most of the creek channel is narrow or densely vegetated. The lack of large pools and/or suitable nesting habitat along Codornices Cerrito, Middle and Village Creeks within the City makes it unlikely that this species would permanently occupy these creeks; however, suitable habitat along Codornices Creek exists within the City both upstream and downstream of the reach within University Village.[80] The closest CNDDB occurrences are at Brooks Island, Tilden Regional Park in Berkeley, San Pablo Reservoir, and Lake Temescal.[81]

[73] Environmental Collaborative, 2001, op. cit.

[74] Stebbins, R. C., 2003. *A Field Guide to Western Amphibians and Reptiles*. Third edition. Houghton Mifflin Company, Boston, MA.

[75] Holland, D. C., 1991. *Status and Reproductive Dynamics of a Population of Western Pond Turtles (Clemmys marmorata) in Klickitat County, Washington, in 1991*. Unpublished report prepared for the Washington Department of Wildlife, Olympia. Cited in Jennings and Hayes 1994, op. cit.

[76] Ibid.

[77] City of Albany. 1998. City of Albany Watershed Management Plan. Prepared in Consultation with David Mattern & Associates, Consulting Engineers; Wolfe Mason Associates, Landscape Architects; Balance Hydrologics, Inc.; and Botanical Consulting Services. October 1998.

[78] LSA Associates, Inc., 2009, op. cit.

[79] Environmental Collaborative, 2001, op. cit.

[80] Ibid.

[81] California Department of Fish and Wildlife, 2015a, op. cit.

White-Tailed Kite (California Fully Protected Species). Most white-tailed kites in California occur west of the Sierra Nevada in lowlands and foothills, where they are often seen year-round.[82] This species nests in densely foliaged trees and large shrubs located near suitable foraging habitat (e.g., grasslands, marshes, agricultural fields). Preferred prey items include California voles and mice.

White-tailed kite may nest and/or forage in the tree groves and riparian woodland in and adjacent to the City, particularly at the Albany Bulb, Neck, and Plateau. White-tailed kites have been observed in the ruderal/non-native grassland habitats in the City, including University Village[83] and at the Albany waterfront.[84] The closest nesting occurrences are at Brooks Island, the Berkeley Marina, and Wildcat Creek Marsh.[85] Suitable nesting and foraging habitat for these raptors occurs within the City.

Northern Harrier (California Species of Special Concern). Northern harriers are widespread in California, although they have become uncommon in the southern part of the State.[86] Their preferred habitats are freshwater wetlands and salt marshes, although they are also commonly found over grasslands and agricultural fields.[87] Harriers breed from mid-March to September, building their nests on the ground.

Suitable foraging and nesting habitat for northern harriers is present in the grassland, tidal marsh, ruderal or agricultural habitats in the City. Northern harriers nested approximately 0.75 miles south near the Berkeley Meadow in 2001 and 2002 and approximately 4.7 miles north at Wildcat Creek Marsh.[88]

California Black Rail (State Threatened; California Fully Protected Species). Around the San Francisco Bay Estuary, California black rails primarily inhabit tidal salt marsh dominated by pickleweed, but also occupy brackish marshes dominated by bulrush. California black rails prefer tidal marshes but apparently will use high marshlands during "wet" years.[89] Black rails build nests in tall grasses or marsh vegetation during the spring, with most nests constructed of pickleweed and placed on or slightly above the ground.

California black rails could occur in tidal marsh habitat along the Albany waterfront. Black rails have been reported south of the City at the Emeryville Crescent marsh.[90]

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[82] Peeters, H., and P. Peeters, 2005. *Raptors of California.* University of California Press, Berkeley.

[83] Environmental Collaborative, 2001, op. cit.

[84] Ohlson, Kristin, 2001, op. cit.

[85] California Department of Fish and Wildlife, 2015a, op. cit.

[86] Peeters, H., and P. Peeters, 2005, op. cit.

[87] Ibid.

[88] California Department of Fish and Wildlife, 2015a, op. cit.

[89] Trulio, L. A., and J. G. Evens, 2000. California Black Rail. Pages 341–345 *in Goals Project. Baylands Ecosystem Species and Community Profiles: Life histories and environmental requirements of key plants, fish, and wildlife*. Prepared by the San Francisco Bay Area Wetlands Ecosystem Goals Project. P. R. Olofson, editor. San Francisco Bay Regional Water Quality Control Board, Oakland, California.

[90] California Department of Fish and Wildlife, 2015a, op. cit.

California Clapper Rail (Federal and State Endangered; California Fully Protected Species). This secretive species prefers tidal salt marshes dominated by pickleweed and cordgrass with adjacent areas of high marsh cover dominated by pickleweed, gumplant, saltgrass, alkali heath, and/or fleshy jaumea (*Jaumea carnosa*).[91] Clapper rails also occupy tidal brackish marshes dominated by bulrush. The California subspecies of clapper rail is now restricted to the tidal marshlands around the San Francisco, San Pablo, and Suisun Bays. A Bay-wide survey in the early 1970s estimated a total population of between 4,000 and 6,000 birds.[92] The most recent population estimate for California clapper rails was approximately 1,040 to 1,264 individuals in San Francisco Bay.[93] Although habitat loss is implicated in population declines, predation of rails by the introduced red fox is another major threat.

California clapper rails could occur in tidal marsh habitat along the Albany waterfront. Clapper rails have been reported at the Emeryville Crescent marsh, Inner Richmond Harbor, and Wildcat Creek Marsh.[94]

California Least Tern (Federal and State Endangered; California Fully Protected Species). During the breeding season, California least terns are found along the west coast of North America from central California south to northwestern Mexico. This subspecies winters in coastal marine areas off Mexico and Central America. Least terns nest in colonies on barren or sparsely vegetated areas, including sand flats, low dunes, beaches, levees, river bars, sandy islands, and shell islands.[95] They forage for fish over shallow to deep waters.

In Spring and Summer 2000, 12 pairs of California least terns were observed nesting immediately north of the City, on the westernmost shell-covered island located just south of Central Avenue, and at least one young tern fledged. In addition to using the island for nesting, individuals foraged in the nearby shallow subtidal habitat and intertidal mudflat (at high tide) within the Albany Mudflats Ecological Reserve. In Spring 2001, several least terns were observed at the same island, and some were engaged in courtship displays, but they did not nest there in 2001.[96] In San Francisco Bay, the largest nesting colony of least terns is at the former Alameda Naval Air Station.

[91] Albertson, J. D., and J. G. Evens, 2000. California Clapper Rail. Pages 332–340 *in Goals Project. Baylands Ecosystem Species and Community Profiles: Life histories and environmental requirements of key plants, fish, and wildlife.* Prepared by the San Francisco Bay Area Wetlands Ecosystem Goals Project. P. R. Olofson, editor. San Francisco Bay Regional Water Quality Control Board, Oakland, California.

[92] Gill, Jr., R., 1979. *Status and Distribution of the California Clapper Rail (Rallus longirostris obsoletus).* California Fish and Game 65:36–49.

[93] Albertson, J. D., and J. G. Evens, 2000, op. cit.

[94] California Department of Fish and Wildlife, 2015a, op. cit.

[95] Thompson, B., et al., 1997. Least tern (*Sterna antillarum*). A. Poole and F. Gill, editors. *The Birds of North America, No. 210*. The Academy of Natural Sciences, Philadelphia, and American Ornithologists' Union, Washington, D.C.

[96] LSA Associates, Inc., 2002a, op. cit.

Burrowing Owl (California Species of Special Concern). Burrowing owls have undergone substantial population declines throughout central and coastal California, primarily due to habitat loss.[97] This species occurs in open, well-drained grasslands with abundant small mammal burrows, particularly those of California ground squirrels. Burrowing owls also prefer areas with short vegetation so they can easily scan their surroundings and spot potential predators.[98] In human-modified areas burrowing owls often use burrows under the edges of concrete, asphalt, rubble piles, and riprap.[99]

Although no nesting records of burrowing owls exist in the City, this species has been observed wintering at the Albany Bulb around piles of concrete.[100] They have also been observed wintering to the south at Cesar Chavez Park in Berkeley, the North Basin Strip in Berkeley Marina, the south shoreline of the North Basin (in riprap) in the Berkeley Marina, and south of University Avenue (west of the Strawberry Creek outfall).[101] Artificial burrows suitable for use by burrowing owls have been constructed within an established 8-acre fenced off area of the Albany Plateau, but as of 2012, the burrows have yet to be occupied.[102] The concrete debris along the Albany Neck and riprap along the Albany waterfront also provide suitable crevices and cover that could be used by the occasional migrating or wintering burrowing owl.

Loggerhead Shrike (California Species of Special Concern). Loggerhead shrikes occur in open habitats with scattered shrubs, trees, posts, fences, utility lines, and other perches. Shrikes primarily nest in the lower branches of dense shrubs and tall trees, although they have also been observed nesting in buildings and debris piles. They feed primarily on large insects, small birds, and mammals.

The open grasslands and scattered trees and shrubs that characterize the Albany Plateau provide suitable habitat for loggerhead shrikes. Shrikes may also occasionally forage over tidal marshes if suitable perches are nearby.

San Francisco Common Yellowthroat (California Species of Special Concern). The common yellowthroat is a widely distributed warbler in North America, occurring in wetlands, moist thickets, and grasslands. The San Francisco subspecies is restricted to riparian habitat, brackish marsh, freshwater marsh, tidal salt marsh, and adjacent grassland and ruderal vegetation along the

[97] DeSante, D. F., et al., 2007. A Census of Burrowing Owls in Central California in 1991. Pages 38–48, J. L. Lincer and K. Steenhof, editors. *The Burrowing Owl, Its Biology and Management: Including the Proceedings of the First International Symposium. Raptor Research Report No. 9.*

[98] Zarn, M., 1974. Burrowing owl *(Spetyto cunicularia hypugaea). Habitat Management Series for Unique or Endangered Species. Technical Report T-N-250*. Bureau of Land Management, Denver, Colorado.

[99] Barclay, J, 2001. *Burrowing Owl Species Summary*. Appendix IV in Colonel Allensworth State Historic Park Final Burrowing Owl Mitigation and Management Plan. Albion Environmental, Inc., Santa Cruz, California. March.

[100] LSA Associates, Inc., 2002a, op. cit.

[101] Ibid.

[102] Albany Patch, 2012. *Burrowing Owls Eschew Albany Habitat at Waterfront*. Website: albany.patch.com/groups/politics-and-elections/p/burrowing-owls-eschew-albany-habitat-at-waterfront. June 6.

margins of San Francisco Bay. Despite the common name, most salt marsh common yellowthroats breed in brackish or freshwater marshes.

Suitable nesting habitat is present within tidal marsh and riparian habitats within the City. This species has been observed along the Albany shoreline near the Codornices Creek outfall.[103]

Bryant's Savannah Sparrow (California Species of Special Concern). Bryant's savannah sparrow is a California endemic restricted to a narrow coastal strip between Humboldt Bay south to the Morro Bay area, with its primary center of abundance appearing to be the San Francisco Bay area.[104] This subspecies occupies low, tidally influenced habitats, adjacent ruderal areas, moist grasslands within and just above the fog belt, and infrequently drier grasslands. Around San Francisco Bay, Bryant's savannah sparrows primarily occur in the transition zone between tidal marsh and upland; such habitats are typically dominated by pickleweed or saltgrass.[105]

This species could occur in the salt marsh and adjacent ruderal habitat along the Albany waterfront.

Alameda Song Sparrow (California Species of Special Concern). This subspecies of the widely distributed song sparrow is restricted to the tidal marshes and adjacent uplands around the San Francisco Bay. They occur primarily in tidal salt marshes, but may also nest or forage in other shoreline habitats such as seasonal wetlands, intertidal mudflats, and adjacent uplands.[106] Favored nesting substrates include gumplant and cordgrass adjacent to tidal sloughs, although they also occur in peppergrass in the drier, upper portions of salt marshes and in brackish marshes dominated by bulrush.[107]

During LSA's reconnaissance survey, Alameda song sparrows were observed at Middle and Cerrito Creeks. This species has also been observed near the mouth of Codornices Creek.[108] This subspecies is expected to occur within and adjacent to any tidal or brackish marsh habitats and along the lower portions of the creek channels within the City.

[103] Ohlson, Kristin, 2001, op. cit.

[104] Fitton, S. D., 2008. Bryant's Savannah Sparrow (*Passerculus sandwichensis alaudinus*). Pages 382–387; Shuford, W. D., and T. Gardali, editors. *California Bird Species of Special Concern: a Ranked Assessment of Species, Subspecies, and Distinct Populations of Birds of Immediate Conservation Concern in California*. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

[105] Ibid.

[106] Cogswell, H., 2000. Song Sparrow. Pages 374–385 in *Goals Project. Baylands Ecosystem Species and Community Profiles: Life Histories and Environmental Requirements of Key Plants, Fish, and Wildlife.* Prepared by the San Francisco Bay Area Wetlands Ecosystem Goals Project. P. R. Olofson, editor. San Francisco Bay Regional Water Quality Control Board, Oakland, California.

[107] Marshall, J. T., and K. G. Dedrick,1994. Endemic Song Sparrows and yellowthroats of San Francisco Bay. Pages 316–317; J. R. Jehl, Jr., and N. K. Johnson, editors. *A Century of Avifaunal Change in North America. Studies in Avian Biology 15*.

[108] Ohlson, Kristin, 2001, op. cit.

Salt Marsh Harvest Mouse (Federal and State Endangered; California Fully Protected Species). The salt marsh harvest mouse is endemic to the tidal salt marshes of the San Francisco Bay Estuary. This species primarily occurs in marshes dominated by pickleweed, but also uses adjacent upland habitats during high tides. The presence of adequate peripheral halophyte plant cover adjacent to the pickleweed-dominated marsh plain is an important habitat component for this species, which depends on such cover for refuge from terrestrial predators during extremely high tides. Marshes without such cover or that are too narrow to allow adequate growth of such cover usually lack salt marsh harvest mice.

Salt marsh harvest mice are not likely to occur within the City due to lack of high quality tidal marsh habitat. Pickleweed is present only as small patches along the Albany waterfront. The closest CNDDB occurrences are approximately 3 miles to the south in the Emeryville Crescent and approximately 4.7 miles north in Wildcat Creek Marsh.

Pallid Bat (California Species of Special Concern). Pallid bats are found in grasslands, shrublands, woodlands, and forest from sea level through mixed conifer forests. They prefer rocky outcrops, cliffs, crevices and buildings as roosting sites, with access to open habitats for foraging. Roosts must protect them from high temperatures.

This bat species and other bat species could roost in the large trees and snags on Albany Hill or along the creeks within the City. CNDDB occurrences for pallid bats within 5 miles of the City were recorded prior to 1970 from the El Cerrito, Berkeley, and Orinda areas.

Townsend's Big-Eared Bat (State Candidate Threatened; California Species of Special Concern). The Townsend's big-eared bat occurs in riparian woodlands, wetlands, forest edges, and open woodlands and roosts in open sites, caves, mines and old buildings.

The Townsend's big-eared bat and other bat species could roost in the large trees and snags on Albany Hill or along the creeks within the City. The closest CNDDB occurrence for Townsend's big-eared bat was recorded in 2008 at Angel Island.

(3) Sensitive Habitats. Special plant communities and jurisdictional waters are described below.

Special Plant Communities. The CDFW tracks the occurrences of "special" plant communities that are listed in the CDFW publication *List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database*.[109] These communities are sometimes addressed by lead or trustee agencies in CEQA documents, but generally are not afforded the same protection as CRPR List 1B and 2 plant species. Many special plant communities support special-status plants and animals and are addressed under CEQA as habitat for those species. The following special plant communities occur within a 5-mile radius of the City: northern coastal salt marsh, northern maritime chaparral, serpentine bunchgrass, and valley needlegrass grassland. Northern coastal salt marsh is the only special plant community within the City. Although remnants of northern maritime chaparral and valley needlegrass grassland may occur in the City, these patches

[109] California Department of Fish and Wildlife, 2015a, op. cit.

are too disturbed and fragmented to be recognized as special plant communities. Serpentine bunchgrass habitat is present in Alameda County, but it is not present in the City. Northern coastal salt marsh is dominated by native halophytes and usually supports an abundance of native forbs and potentially supports special-status plants. This community occurs in the northern portion of the City at the Albany Mudflats Ecological Reserve (Figure IV.J-1).

Jurisdictional Waters. Although a formal jurisdictional delineation of wetlands and other waters of the U.S. and State was not conducted for this study, several features can be assumed to fall under U.S. Army Corps of Engineers (Corps) and Regional Water Quality Control Board (RWQCB) jurisdiction pursuant to Sections 401 and 404 of the federal Clean Water Act and the Porter-Cologne Water Quality Control Act.

Features within the City that would likely be considered other waters of the U.S. by the Army Corps of Engineers (Corps) include the open waters and tidal areas of San Francisco Bay and Cerrito, Codornices, Middle, and Village Creeks. Known jurisdictional wetlands within the City include all tidal, brackish, and freshwater marshes along the Albany waterfront in the City, including the Albany Mudflats Ecological Reserve. Two potentially jurisdictional seasonal wetlands and an unvegetated drainage located near the Albany Beach, west of the parking area behind Golden Gate Fields, were delineated in 2010 as part of the Albany Beach Restoration and Public Access Feasibility Study.[110] Additional other waters and wetlands may be present in other undeveloped portions of the City, but would require site-specific evaluations to fully identify.

All creeks within the City are also expected to fall under CDFW jurisdiction pursuant to Section 1602 of the California Fish and Game Code. Unlike Corps jurisdiction, however, which is limited to the Ordinary High Water Mark, CDFW jurisdiction over these features extends to the top of bank, or the outer dripline of riparian vegetation, whichever is greater.

e. Regulatory Context. Biological resources within the City may be subject to agency jurisdiction or regulations, as described below.

(1) Federal Endangered Species Act. The USFWS has jurisdiction over federally listed threatened and endangered plant and animal species. The Federal Endangered Species Act (FESA) and its implementing regulations prohibit the take of any fish or wildlife species that is federally listed as threatened or endangered without prior approval pursuant to either Section 7 or Section 10 of the FESA. FESA defines "take" as "*harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct*." Federal Regulation 50 CFR 17.3 defines the term "harass" as an intentional or negligent act that creates the likelihood of injuring wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns such as breeding, feeding, or sheltering (50 CFR §17.3). Furthermore, Federal Regulation 50 CFR 17.3 defines "harm" as an act that either kills or injures a listed species. By definition, "harm" includes habitat modification or degradation that actually kills or injures a listed species by significantly impairing essential behavior patterns such as breeding, spawning, rearing, migrating, feeding, or sheltering (50 CFR 217.12).

[110] LSA Associates, Inc., 2011. *Albany Beach Restoration and Public Access Feasibility Study*. January.

Section 10(a) of the FESA establishes a process for obtaining an incidental take permit that authorizes non-federal entities to incidentally take federally listed wildlife or fish. Incidental take is defined by the FESA as take that is "incidental to, and not the purpose of, the carrying out of an otherwise lawful activity." Preparation of a Habitat Conservation Plan (HCP) is required for all Section 10(a) permit applications. The USFWS and National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) have joint authority under the ESA for administering the incidental take program. NOAA Fisheries Service has jurisdiction over anadromous fish species and USFWS has jurisdiction over all other fish and wildlife species.

Section 7 of the FESA requires all federal agencies to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any species listed under the FESA, or result in the destruction or adverse modification of its habitat. Federal agencies are also required to minimize impacts to all listed species resulting from their actions, including issuance or permits or funding. Section 7 requires consideration of the indirect effects of a project, effects on federally listed plants, and effects on critical habitat (FESA requires that the USFWS identify critical habitat to the maximum extent that it is prudent and determinable when a species is listed as threatened or endangered). This consultation results in a Biological Opinion prepared by the USFWS stating whether implementation of the HCP will result in jeopardy to any HCP Covered Species or will adversely modify critical habitat and the measures necessary to avoid or minimize effects to listed species.

Although federally listed animals are legally protected from harm no matter where they occur, Section 9 of the FESA provides protection for endangered plants by prohibiting the malicious destruction on federal land and other "take" that violates State law. Protection for State-listed plants not living on federal lands is provided by the California Endangered Species Act.

(2) Clean Water Act. The Corps is responsible under Section 404 of the Clean Water Act to regulate the discharge of fill material into waters of the U.S. Waters of the U.S. and their lateral limit are defined in 33 CFR Part 328.3(a) and include streams that are tributaries to navigable waters and their adjacent wetlands. The lateral limits of jurisdiction for a non-tidal stream are measured at the line of the Ordinary High Water Mark (33 CFR Part 328.3[e]) or the limit of adjacent wetlands (33 CFR Part 328.3[b]). Any permanent extension of the limits of an existing water of the U.S., whether natural or man-made, results in a similar extension of Corps jurisdiction (33 CFR Part 328.5).

Waters of the U.S. fall into two broad categories: wetlands and other waters. Other waters include waterbodies and watercourses generally lacking plant cover such as rivers, streams, lakes, springs, ponds, coastal waters, and estuaries. Wetlands are aquatic habitats that support hydrophytic wetland plants and include marshes, wet meadows, seeps, floodplains, basins, and other areas experiencing extended seasonal soil saturation. Seasonally or intermittently inundated features, such as seasonal ponds, ephemeral streams, and tidal marshes, are categorized as wetlands if they have hydric soils and support wetland plant communities. Seasonally inundated waterbodies or watercourses that do not exhibit wetland characteristics are classified as other waters of the U.S.

Waters and wetlands that are not adjacent to or cannot trace a continuous hydrologic connection to a navigable water of the U.S. are not tributary to waters of the U.S. These are termed "isolated wetlands." Isolated wetlands are jurisdictional when their destruction or degradation can affect interstate or foreign commerce (33 CFR Part 328.3[a]).

In general, a project proponent must obtain a Section 404 permit from the Corps before placing fill or grading in wetlands or other waters of the U.S. Prior to issuing the permit, the Corps is required to consult with the USFWS under Section 7 of the FESA if the project may affect federally listed species.

All Corps permits require water quality certification under Section 401 of the Clean Water Act. In the San Francisco Bay Area, this regulatory program is administered by the San Francisco Bay Regional Water Quality Control Board (RWQCB). Project proponents who propose to fill wetlands or other waters of the U.S. must apply for water quality certification from the RWQCB. The RWQCB has adopted a policy requiring mitigation for any loss of wetland, streambed, or other jurisdictional area.

(3) Migratory Bird Treaty Act. The federal Migratory Bird Treaty Act (MBTA) prohibits the taking, hunting, killing, selling, purchasing, etc. of migratory birds, parts of migratory birds, or their eggs and nests. As used in the MBTA, the term "take" is defined as "to pursue, hunt, shoot, capture, collect, kill, or attempt to pursue, hunt, shoot, capture, collect, or kill, unless the context otherwise requires." Most bird species native to North America are covered by this act.

(4) California Endangered Species Act. The CDFW has jurisdiction over State-listed endangered, threatened, and rare plant and animal species under the California Endangered Species Act (CESA). CESA is similar to FESA both in process and substance; it is intended to provide additional protection to threatened and endangered species in California. Species may be listed as threatened or endangered under both acts (in which case the provisions of both State and federal laws apply) or under only one act. A candidate species is one that the Fish and Game Commission has formally noticed as being under review by CDFW for addition to the State list. Candidate species are protected by the provisions of CESA.

(5) California Environmental Quality Act. CEQA applies to "projects" proposed to be undertaken or requiring approval by State and local government agencies. Projects are defined as having the potential to have physical impact on the environment. Under Section 15380 of CEQA, a species not included on any formal list "shall nevertheless be considered rare or endangered if the species can be shown by a local agency to meet the criteria" for listing. With sufficient documentation, a species could be shown to meet the definition of rare or endangered under CEQA and be considered a "de facto" rare or endangered species.

(6) California Fish and Game Code. The CDFW is also responsible for enforcing the California Fish and Game Code, which contains several provisions potentially relevant to construction projects. For example, Section 1602 of the Fish and Game Code governs the issuance of Lake and Streambed Alteration Agreements by the CDFW. Lake or Streambed Alteration Agreements are required whenever project activities substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated as such by the CDFW.

The California Fish and Game Code also lists animal species designated as Fully Protected or Protected, which may not be taken or possessed at any time. The CDFW does not issue licenses or permits for take of these species except for necessary scientific research, habitat restoration/species recovery actions, or live capture and relocation pursuant to a permit for the protection of livestock. Fully Protected species are listed in Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and

amphibians), and 5515 (fish) of the California Fish and Game Code, while Protected amphibians and reptiles are listed in Chapter 5, Sections 41 and 42.

Section 3503 of the California Fish and Game Code prohibits the take, possession, or needless destruction of the nest or eggs of any bird. Subsection 3503.5 specifically prohibits the take, possession, or destruction of any birds in the orders Falconiformes (hawks and eagles) or Strigiformes (owls) and their nests. These provisions, along with the federal MBTA, essentially serve to protect nesting native birds. Non-native species, including European starling, house sparrow, and rock pigeon, are not afforded any protection under the MBTA or California Fish and Game Code.

(7) Porter-Cologne Water Quality Control Act. Under this Act (California Water Code Sections 13000–14920), the RWQCB is authorized to regulate the discharge of waste that could affect the quality of the State's waters. The RWQCB asserts jurisdiction over isolated waters and wetlands, as well as waters and wetlands that are regulated by the Corps. Therefore, even if a project does not require a federal permit, it still requires review and approval by the RWQCB. When reviewing applications, the RWQCB focuses on ensuring that projects do not adversely affect the "beneficial uses" associated with waters of the State. In most cases, the RWQCB seeks to protect these beneficial uses by requiring the integration of waste discharge requirements (WDRs) into projects that will require discharge into waters of the State. For most construction projects, the RWQCB requires the use of construction and post-construction Best Management Practices (BMPs).

(8) McAteer-Petris Act. The McAteer-Petris Act and Suisun Marsh Preservation Act were adopted to protect San Francisco Bay and Suisun Marsh as great natural resources for the benefit of the public and to encourage development compatible with this protection. The San Francisco Bay Conservation and Development Commission (BCDC) was established to carry out this Act. The two primary goals of the BCDC are: (1) to prevent the unnecessary filling of San Francisco Bay; and (2) to increase public access to and along the Bay shoreline. BCDC approval is required for all projects within 100 feet of the Bay shoreline, as well as projects that propose any filling or dredging within Bay waters.

(9) Other Statutes, Codes, and Policies Affording Species Protection. The CDFW maintains an administrative list of California Species of Special Concern (CSC), defined as a "species, subspecies, or distinct population of an animal native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

- Is extirpated from the State, or, in the case of birds, in its primary seasonal or breeding role;
- Is listed as federally, but not State-, threatened or endangered;
- Meets the State definition of threatened or endangered but has not formally been listed;
- Is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status;
- Has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for State threatened or endangered status."

The CDFW's Nongame Wildlife Program is responsible for producing and updating CSC publications for mammals,[111] birds,[112] and reptiles and amphibians.[113] The Fisheries Branch is responsible for updates to the Fish CSC document and list.[114] Section 15380 of the CEQA Guidelines clearly indicates that CSC should be included in an analysis of project impacts if they can be shown to meet the criteria of sensitivity outline therein. In contrast to species listed under the FESA or CESA, however, CSC have no formal legal status.

California Rare Plant Ranks. Special-status plants in California are assigned to one of five "California Rare Plant Ranks" (CRPR) by a collaborative group of over 300 botanists in government, academia, non-governmental organizations, and the private sector. This effort is jointly managed by the CDFW and the non-profit CNPS. The five CRPRs currently recognized by the CNDDB include the following:

- CRPR 1A – presumed extinct in California
- CRPR 1B – rare, threatened, or endangered in California and elsewhere
- CRPR 2 – rare, threatened, or endangered in California but more common elsewhere
- CRPR 3 – a review list of plants about which more information is needed
- CRPR 4 – a watch list of plants of limited distribution

Substantial impacts to plants ranked 1A, 1B, and 2 are typically considered significant based on Section 15380 of the CEQA Guidelines depending on the policy of the lead agency. Plants ranked 3 and 4 may be evaluated by the lead agency on a case-by-case basis to determine significance thresholds under CEQA.

Volunteers with the East Bay Chapter of the CNPS (EB-CNPS) have compiled observations from many sources as well as direct in-the-field surveys, and used this information to evaluate which species are rare or threatened locally, but possibly more common elsewhere. This compilation is published by the EB-CNPS in *Rare, Unusual and Significant Plants of Alameda and Contra Costa Counties*[115] and can be accessed through the Calflora website.[116] Locally rare or unusual plant species (ranked A1, A2, or A1x) are protected by CEQA in sections 15380 or 15125(a) which address species of local concern and place special emphasis on environmental resources that are rare or unique to a region. Thus they may be considered in local land planning and management issues. The locally rare or unusual plant ranks are:

[111] Williams, D. F, 1986. *Mammalian Species of Special Concern in California.* California Department of Fish and Game, Sacramento.

[112] Shuford, W. D., and T. Gardali, editors, 2008, op. cit.

[113] Jennings, M. R., and M. P. Hayes, 1994. *Amphibian and Reptile Species of Special Concern in California.* Final report to California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova.

[114] Moyle, P. B., et al., 1995. *Fish Species of Special Concern in California: Second Edition.* Final report to California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova. Contract No. 2128IF.

[115] Lake, Dianne, 2010, op. cit.

[116] Calfora, 2014. Website: www.calflora.org.

- A1 – Species known from 2 or less botanical regions in Alameda and Contra Costa Counties, either currently or historically. Protected by CEQA.
- A1x – Species previously known from Alameda or Contra Costa Counties, but now believed to be extirpated, and no longer occurring here. Protected by CEQA.
- A? – Species possibly occurring in Alameda or Contra Costa Counties, but there are questions about their identification or location.
- A2 – Species currently known from 3 to 5 regions in the two counties, or, if more, meeting other important criteria such as small populations, stressed or declining populations, small geographical range, limited or threatened habitat, etc. Protected by CEQA.
- B – A high-priority watch list: species currently known from 6 to 9 regions in the two counties, or, if more, meeting other important criteria as described above for A2. Not protected by CEQA.
- C – A second-priority watch list: species currently known from 10 to 15 regions in the two counties, but potentially threatened if certain conditions persist such as over-development, water diversions, excessive grazing, weed or insect invasions, etc. Not protected by CEQA.

f. City of Albany 1992 General Plan. The following policies that relate to biological resources were included in the 1992 General Plan.

- **Policy LU 7.1:** Designate the UC lands along the San Pablo Avenue frontage and a portion of Buchanan Street at the intersection of San Pablo for commercial retail and compatible uses. Incorporate the recommendations in the San Pablo Avenue Design Guideline and Public Improvement Study as part of this effort. In addition, consider preserving a portion of the Gill Tract, particularly those portions with important and significant stands of trees, as open space when any re-use of this area is proposed.
- **Policy LU 7.2:** Participate actively in the UC Master Plan process for redevelopment of the Gill Tract and Albany Village. Specific concerns that must be addressed in this process include but are not limited to:

  B. Protect and enhance the creeks running through and adjacent to the U.C. Village property.

  C. Protect and preserve the important stands of trees on the site.
- **Policy LU 9.2:** Develop policies to protect existing riparian habitat within the Creek Conservation Zone and restrict development in this Zone appropriately (see Conservation, Recreation and Open Space Element Policies).
- **Policy LU 9.3:** Develop a comprehensive street tree planting program (see Conservation, Recreation and Open Space Element Policies).
- **Policy CROS 1.1**: Develop a comprehensive program to sponsor restoration and public access improvements for Albany's creeks. Continue to implement the 1977 Albany Creek Restoration Program. As part of this effort, continue to recognize that these areas have important wildlife and vegetation values.
- **Policy CROS 1.2:** Pursue funding for the restoration of Codornices and Cerrito Creeks through the Department of Water Resources Urban Stream Restoration Program, and the Coastal Conservancy.
- **Policy CROS 1.3:** Support the efforts of the Codornices Creek Association to restore Codornices Creek.

- **Policy CROS 1.4:** Develop policies to be included in the Watercourse Combining District to protect riparian habitat within the Creek Conservation Zone where practically feasible and applicable.
- **Policy CROS 2.1:** Develop and implement a comprehensive street tree planting program for City residential and commercial streets, including establishing priorities, setting time schedules, and developing a comprehensive maintenance program.
- **Policy CROS 3.2:** Consider the potential impacts to the Monarch Butterfly roosting sites on Albany Hill within the context of developing Albany Hill Park and reviewing residential development applications on the remaining parcels.
- **Policy CROS 4.3:** Promote preservation of trees and other vegetation by requiring an inventory of significant site vegetation prior to development application review.
- **Policy CROS 4.5:** Require tree preservation measures during site design and construction.
- **Policy CROS 5.3:** Recognize the value of the Albany Mudflats Ecological Reserve, located north and west of the Buchanan Street/I-80/I-580 interchange, and protect bird feeding and nesting areas by limiting activities and preserving important habitat areas.
- **Policy CROS 7.2:** Consider the important, surrounding wildlife and vegetation resources that must be adequately protected when developing the alignment of the Bay Trail.
- **Policy CHS 1.1:** Conserve riparian and littoral habitat within the area 100 feet from creek centerline in appropriate areas both for its importance in reducing flood impacts and for its aesthetic value.

The City is in the process of replacing these policies with more comprehensive and current policies on conservation and biological resources as part of its General Plan Update, the project being analyzed by this EIR.

2. Impacts and Mitigation Measures

The following section describes potentially significant project impacts to biological resources. This section first lists the criteria by which significance is determined, followed by a discussion of impacts.

a. Criteria of Significance. Implementation of 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 CDFW or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in applicable local or regional plans, policies, regulations, or by the CDFW or USFWS;
- Have a substantial adverse effect on federally-protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) 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 applicable local policies or ordinances protecting biological resources, such as a tree preservation policy ordinance; and/or
- Conflict with the provision of approved local, regional, or State habitat conservation plans.

b. Project Impacts. The following sections provide an evaluation and analysis for the potential less-than-significant, significant and cumulative impacts of the Draft General Plan for each of the criteria of significance listed above.

(1) Special-Status Species. The proposed Draft General Plan would have a significant effect on the environment if it would cause a substantial adverse effect to special-status species. Forty-five special-status plants and 32 special-status animals are known to occur or potentially occur in the City. Twelve of the plant species show a low potential of occurrence based on the presence of marginal habitat resulting from degradation by human use or crowding out by invasive weeds, while ten of the plants show a moderate to high potential of occurrence based upon the presence of suitable, undisturbed habitat. Seventeen special-status animal species show a low to high potential of occurrence based upon the presence of suitable habitat. These known and potentially occurring special-status species can occur in many of the habitats in the City and could be impacted by implementation of the Draft General Plan by the direct loss of these species or the loss of their habitat. However, the Draft General Plan contains goals, policies, and actions that contribute to the protection of special-status plants and animals and their habitats.

Several Draft General Plan goals, policies, and actions ensure the protection of native plants and wildlife and their habitats, including special-status species. Draft General Plan goals and policies illustrate the City's commitment to preserving native plants and wildlife in the City. These include the following:

- **Goal LU-5: Environmentally Sensitive Areas.** Ensure that land use and planning decisions protect the quality of Albany's natural environment and conserve environmentally sensitive areas.
- **Action PROS-1.B: Creekside Master Plan Implementation**. Implement the open space management recommendations of the 2012 Creekside Master Plan, including vegetation management, trail improvements, signage and other park improvements.
- **Action PROS-1.C: Albany Hill Conservation Easements**. Work with the owner of the 11-acre vacant parcel south of Gateway Towers and land conservation organizations to develop a site plan for the property which maximizes the conservation of open space on the upper slopes and ridgeline portions of the site. Continue to work with owners of other private properties on Albany Hill to reduce fire hazards and manage the Hill's unique ecosystem.
- **Policy PROS-2.7: Resource Preservation**. Design and plan new parks in a manner that preserves and enhances natural resources, protects trees and significant topographic features, and is consistent with the sustainability principles articulated in the General Plan Conservation Element.
- **Action PROS-6.E: Community-Based Creek Restoration**. Continue to support the work of Friends of Albany Hill, Friends of Five Creeks, and other community based organizations to enhance the open space and trail potential of Codornices Creek, Cerrito Creek, Village Creek, and other natural areas in the city.
- **Goal CON-1: Protection of Natural Features.** Protect and enhance the natural features that define Albany's environment, including the waterfront, wetlands, creeks, and Albany Hill.

- **Policy CON-1.1: Reducing Environmental Impacts**. Ensure that new development is sensitive to environmental conditions and reduces impacts on the natural environment to the greatest extent feasible.
- **Policy CON-1.3: Conservation of Albany Hill**. Protect and restore natural features, native vegetation, and wildlife on Albany Hill.
- **Action CON-1.B: Watercourse Combining District**. Review the Watercourse Combining District zoning regulations to ensure that they sufficiently protect riparian habitat, reduce erosion and flooding hazards, and mitigate impacts of development on creek ecology. Compliance with all applicable state and federal regulations also shall be required for any project that could potentially impact the city's creeks.
- **Action CON-1.E: Construction Impacts on Creek Wildlife.** Ensure that large-scale construction activities adjacent to Codornices and Cerrito Creeks considers potential impacts on special-status species, including steelhead, California red-legged frog, and western pond turtle. Pre-construction surveys shall be completed as required by CEQA. In the event that such surveys determine the potential for impacts to special-status species, a protection plan shall be prepared and implemented to avoid and mitigate potential impacts, and a post-construction management plan shall be implemented to avoid future impacts
- **Policy CON-2.3: Tree Planting**. Undertake street tree planting and maintenance programs to beautify the City, create shade, provide habitat for birds and other animals, and enhance the built environment.
- **Policy CON-2.5: Albany Hill Vegetation Management**. Protect the remaining native plant communities on Albany Hill. Vegetation on the Hill should be managed in a way that allows the eucalyptus forest to co-exist with other plant communities, including oak woodland, grassland, and toyon understory.
- **Goal CON-5: Biological Resources.** Protect and enhance Albany's plant and animal habitat.
- **Policy CON-5.1: Habitat Protection**. Ensure that development decisions, vegetation management plans, and open space plans enhance wildlife diversity, avoid wildlife disruption, and protect the habitat of rare, endangered, and special status species.
- **Policy CON-5.2: Coordination with State and Federal Resource Agencies**. Work with the US Fish and Wildlife Service, the California Department of Fish and Game, the Regional Water Quality Control Board, the Bay Conservation and Development Commission, and other resource agencies to conserve and restore sensitive habitat areas. Refer local projects to these agencies for review and comment as appropriate.
- **Action CON-5.A: Environmental Review**. Use the environmental review process as a way to identify important biological resources and mitigate potentially significant impacts on plants and animals associated with future projects. The City will ensure that qualified botanists or wildlife biologists are engaged in the planning and design processes for projects with the potential to impact special-status plant and animal species, and will further require that potential impacts to these species are avoided and minimized, as required by CEQA.
- **Action CON-5.B: Habitat Restoration Plans**. Support implementation of state and federal habitat restoration plans which increase the health of San Francisco Bay and bay wetlands.
- **Action CON-5.C: Resource Conservation Overlay Zones**. As appropriate, consider the use of Resource Conservation Overlay districts to protect rare, endangered, or special status species.
- **Policy EH-2.2: Collateral Benefits**. Maximize opportunities for collateral benefits associated with vegetation management projects, such as habitat restoration, increased security, and enhanced public access.

- **Goal W-4: Waterfront Ecology.** Preserve, enhance, and restore the unique ecology of the Albany waterfront.
- **Policy W-1.1: Preservation, Conservation, and Recreation Areas**. Utilize the Eastshore State Park General Plan designations of Preservation Areas, Conservation Areas, and Recreation Areas as a framework for the planning and design of the Albany portion of the proposed McLaughlin Eastshore State Park.
- **Policy W-4.1: Native Plant Restoration**. Support the preservation and enhancement of native plant communities in the waterfront area, while also encouraging the reduction of invasive and non-native species.
- **Policy W-4.2: Upland Habitat.** Support the long-term protection of existing upland areas along the waterfront, particularly in those areas designated for conservation by the Eastshore State Park Plan. Upland wildlife habitat should also be protected within active recreation areas, consistent with the design of planned facilities.
- **Policy W-4.3: Wetland Habitat**. Support the conservation and restoration of wetlands as waterfront park improvements are constructed.
- **Policy W-4.4: Roosting Habitat.** Support efforts by the East Bay Regional Park District and resource agencies to enhance roosting habitat for shorebirds, such as turning small peninsulas into islands, and adding rock or other material to raise existing roosts above higher tides.
- **Policy W-4.5: Buffers**. Maintain or create buffer areas between trails and sensitive habitat areas where necessary to minimize wildlife disturbance.
- **Policy W-4.6: Access Restrictions**. Minimize disruption of wildlife by restricting access by people and dogs in the most environmentally sensitive areas along the shoreline, and by siting trails and other facilities appropriate distances from these areas. Signs should be posted restricting access to the most sensitive areas.
- **Action W-4.A: Botanic and Wildlife Surveys**. Ensure that qualified botanists and wildlife biologists are engaged in the planning and design processes for waterfront improvements. Environmental professionals should be retained to identify potential habitat for special status plant and animal species, and to ensure that potential impacts to these species are avoided and minimized. If unavoidable impacts are possible, measures to offset those impacts should be identified and implemented.
- **Action W-4.E: Burrowing Owl Habitat Assessment**. Support future assessments of the designated burrowing owl habitat area on the Albany Plateau. Such evaluations should be used to evaluate the degree of public access and range of future activities to be planned for this area.

Goal CON-5, Policy CON-5.1, and Policy PROS-2.7 protect and enhance the City's plant and animal habitat. Goal W-4 and Policy W-4.1 protect native plants and plant communities in the Albany waterfront and Policy CON-1.3, Policy CON-2.5, Action PROS-1.B, and Action PROS-1.C promote the protection of natural features, native vegetation and wildlife on Albany Hill. Goal LU-5 and Goal CON-1 and Policy CON-1.1 promote conservation of the City's natural environment and environmentally sensitive areas. Action W-4.A promotes undertaking plant surveys in the Albany waterfront. Action CON-5.B, Action PROS-6.E, and Policy EH-2.2 promote the restoration of habitat and Action CON-5.C promotes the protection of habitat for special-status species. Policy W-4.2 protects upland wildlife habitat and Policy W-4.3 and Policy W-4.4 protect wetland and shorebird roosting habitat along the Albany waterfront. Policy W-4.5 and Policy W-4.6 protect sensitive wildlife habitat by calling for the creation of buffers and restricting access. Policy CON-1.3 protects wildlife on Albany Hill. Policy CON-2.3 promotes the planting of trees for habitat for birds and other

animals. Policy W-1.1 and Action W-4E promote the protection of burrowing owl habitat at the Albany Plateau.

Because creeks and riparian woodlands provide important habitat for special-status wildlife as well as open space areas for public enjoyment, the preservation of these resources are promoted in the Draft General Plan. Increased public access could cause impacts to biological resources and special-status species at creeks and riparian areas. The Draft General Plan goals, policies, and actions would assist in protecting these biological resources. These goals, policies, and actions are discussed further in the subsection below entitled (2) Impacts of Riparian Habitat and Other Sensitive Natural Communities.

Numerous State, federal, and local agencies have responsibilities related to special-status species, and the Draft General Plan includes policies that promote coordination between the City and other regulatory agencies in order to preserve habitat that can support both common and special-status species within the City. These policies include Policy CON-5.2, Action CON-1.B, and Action CON-5.A, which encourage environmental review and mitigation to reduce any potential impacts related to biological resources. Action CON-5.A specifically requires environmental review to identify biological resources and mitigate potential significant impacts on plants and animals and requires wildlife and botanical surveys for projects that have the potential to impact special-status species.

Implementation of these Draft General Plan goals, policies, and actions, as well as State and federal regulatory requirements and the City's extensive site-specific review process for new developments, would reduce impacts to special-status plants and animals to a less-than-significant level.

Special-Status Plants. Several special-status plant species are known to occur or potentially occur in the City (Table IV.J-2). Impacts to these special-status plants and their habitats may result from implementation of the Draft General Plan. The goals, policies, and actions in the Draft General Plan, particularly Action CON-5.A, as cited above, would reduce the potential impacts of development to special-status plants associated with implementation of the Draft General Plan to a less than significant level.

Monarch Butterfly Winter Colonies. Monarch butterfly winter colonies have been recorded within the City. The eucalyptus, pine, and cypress groves within and adjacent to the City have the potential to support Monarch butterflies. They have been observed roosting in eucalyptus trees along Codornices Creek, in the eucalyptus groves in Dowling Park (University Village), along the railroad tracks, and in pine and eucalyptus trees east of San Pablo Avenue and south of Marin Avenue east of the University Village, and in eucalyptus groves near Albany Hill.

Potential development associated with implementation of the Draft General Plan could impact Monarch butterfly winter colonies. If a colony were to begin using any of the tree groves within the City prior to construction, then this colony could be disturbed by construction activities or eliminated by the removal of trees. Impacts on Monarch butterflies would be less than significant with implementation of the Draft General Plan goals, policies, and actions listed in this section, along with the following policy and action that address the protection of Monarch butterfly roost sites on Albany Hill and construction disturbance to roosting sites throughout Albany:

- **Policy CON-5.3: Monarch Butterfly Roosting**. Consider potential impacts to Monarch butterfly roosting sites on Albany Hill in any future applications for development, park expansion, trail construction, and fuel reduction on the Hill.

- **Action CON-5.D: Monarch Butterfly Surveys.** For construction projects that would affect eucalyptus, pine, and cypress groves during the period between September and March, require pre-construction surveys by a qualified biologist to determine if roosting Monarch butterflies are present. In the event winter colonies are identified, require appropriate measures to avoid impacts, such as postponing tree removal until butterflies have left or designating buffer areas around the affected trees.

Steelhead. Steelhead were observed in Codornices Creek in 2001 and 2003. Steelhead are not known to occur within the other creeks in the City. Several goals, policies, and actions of the proposed Draft General Plan promote the protection of creeks, riparian corridors, and sensitive wildlife habitat. Moreover, the General Plan identifies no specific development opportunities along Codornices Creek, and does not anticipate changes in land use or construction projects that would impact the creek. The City will ensure that qualified creek restoration specialists are engaged in the planning and design processes for projects with the potential to impact Codornices Creek, and will further require that potential impacts to the Creek are avoided and minimized, as required by CEQA (Action CON-1.E and Action CON-5.A). Thus the impacts on steelhead populations would be less than significant.

California Red-Legged Frog. Habitat for this species occurs along the creeks within the City, but no documented records of this species are known within the City. Implementation of the Draft General Plan may impact creeks and uplands that are inhabited by this species. However, potential impacts are mitigated by policies and actions in the General Plan and would be less than significant. Action CON-1.E specifically requires pre-construction surveys for projects that have the potential to impact creek wildlife, such as California red-legged frogs, and Action CON-5.A requires environmental review for areas with biological resources. Implementation of the policies and actions in the General Plan, as cited above, would reduce impacts to less-than-significant levels.

Western Pond Turtle. Western pond turtles have been observed in Codornices Creek and may also occur in Cerrito Creek and Middle Creek. Construction projects along or adjacent to these creeks could impact western pond turtles, if present. Implementation of policies and actions in the General Plan, especially Action CON-1.E and Action CON-5.A, would reduce impacts to western pond turtles to less-than-significant levels.

Bird Species. Implementation of the Draft General Plan could result in loss of foraging or nesting habitat of birds. Several special-status bird species may nest and/or forage within the City, including burrowing owls, white-tailed kites, Alameda song sparrows, and a number of other special-status birds. Nest sites could be lost as a result of project development if trees are removed or construction activities occur in close proximity to nest sites. The California Fish and Game Code and the federal Migratory Bird Treaty Act prohibit the disturbance or destruction of active bird nests for special-status and non-special-status bird species. Policy CON-5.5 requires compliance with state and federal regulations that protect birds and their nests and Action CON-5.A requires environmental review to protect wildlife. Implementation of the policies and actions in the General Plan, as cited above, would reduce impacts to less than significant levels.

(2) Impacts of Riparian Habitat and Other Sensitive Natural Communities. Riparian habitats are considered sensitive habitat areas and are identified as special natural communities by CDFW. Actions potentially affecting streambeds, which may include adjacent riparian areas, are regulated by the CDFW through a streambed alteration agreement under Section 1602 of the California Fish and Game Code; they may also be regulated by the Corps and the RWQCB.

Compliance with required National Pollutant Discharge Elimination System permit requirements and implementation of site-specific stormwater control plans would generally mitigate impacts on water quality. Discharges to stream channels and open-water habitat also may be regulated by the Corps or State. Discharge of fill into waters of the United States could have a significant impact.

Approximately 8 acres of riparian woodland habitat occur along Cerrito, Codornices, Middle, and Village Creeks within the City. These riparian areas provide an important corridor and habitat for special-status wildlife, such as steelhead and western pond turtle. The preservation of creeks and associated riparian habitat is promoted in the Draft General Plan as important plant and wildlife habitat and as an open space amenity. Riparian habitats can potentially be impacted by build-out of the Draft General Plan.

Draft General Plan goals, policies, and actions generally protect creeks and riparian corridors and identify habitat conservation and enhancement and development setbacks including Goal LU-5, Goal CON-1, Action CON-1.B, Action CON-2.B, PROS-6.E, Policy W-4.1, and goals/policies/actions listed below:

- **Policy LU-1.5: Open Spaces**. Provide a diverse range of open spaces to complement the urbanized areas of the City, including improved parks and playing fields, conservation areas on Albany Hill and along the shoreline, a publicly accessible waterfront, natural areas along creeks, areas for community gardens and urban agriculture, and private open spaces.
- **Policy LU-4.5: UC Village.** Recognize University of California (UC) Village as an integral part of the Albany community. Land use decisions on the University's property should be compatible with nearby uses and provide collateral benefits to Albany residents and businesses wherever feasible. Important natural features at UC Village, such as Village Creek, Codornices Creek, and significant tree stands, should be protected.
- **Policy LU-5.3: Albany's Creeks**. Maintain a Creek Conservation Zone (CCZ) along Cerritos, Codornices, and Village Creek. Protect the existing riparian habitat within the CCZ and restrict development as necessary to conserve the creek environment.
- **Policy PROS-6.8: Creek Trails**. Coordinate trail planning and improvement programs for Cerrito and Codornices Creeks with the cities of Berkeley, Richmond and El Cerrito, non-profit organizations such as Friends of Five Creeks, and appropriate county, state and federal regulatory agencies.
- **Policy CON-1.6: Respecting Natural Features**. Design new development to conserve natural landscape features, such as topography, drainage patterns, and vegetation. Avoid projects which require excessive hillside grading, rerouting of streams and drainageways, filling of wetlands, and other alterations which compromise natural resources.
- **Policy CON-1.7: Creek Restoration**. Enhance the natural characteristics of Albany's creeks and uncover and restore ("daylight") portions of creeks that have been placed in underground culverts and pipes where feasible.
- **Policy CON-1.9: Riparian Corridors**. Maintain special development regulations for areas within 100 feet of Codornices Creek, Cerrito Creek, and Village Creek which ensure that riparian and littoral habitat is conserved, flood impacts are reduced, and the creeks are enhanced for their aesthetic and ecological value. Watercourses on private property should be kept free of trash, debris, excessive vegetation, and obstacles to the flow of water.
- **Action CON-1.A: Codornices and Cerrito Creek Restoration Initiatives**. Continue collaborative efforts with community organizations, resource agencies, and adjacent cities to restore natural conditions and stabilize banks along Albany's creeks, particularly Codornices and Cerrito Creeks.

- **Action CON-1.C: Creeks at UC Village**. Work with the University of California and the developers of projects on the UC Village property to maintain undeveloped open space easements along Village Creek and along Codornices Creek, and to plan for the restoration of the creeks as adjacent properties are developed or altered.
- **Action CON-1.D: Creek Clean-Ups.** Support community-led creek clean-ups and restoration efforts.
- **Policy CON-2.1: Trees and the Environment**. Recognize the importance of trees and vegetation to improving air and water quality in the City and contributing to local efforts to reduce global climate change.
- **Action CON-2.B: Tree Preservation Requirements**. Continue to study alternatives for protecting large specimen trees and addressing tree removal and preservation issues on private property.
- **Policy CSF-6.6: Green Infrastructure**. Encourage the development of "greener" infrastructure which is less impactful on the natural environment and supports local sustainability and climate action goals. This is particularly true for storm drainage facilities, which should be designed to restore natural drainage systems and improve water quality to the greatest extent feasible.
- **Policy W-5.6: Water Quality**. Design all drainage, water, and wastewater systems to maximize the potential for environmental benefits. This should include minimizing the area of impervious surface, using drought-tolerant landscaping, and incorporating bio-swales and other features which minimize water runoff. In areas where landscape irrigation is required, water systems should be designed for the eventual delivery of reclaimed water.
- **Action W-5.A: Shoreline Improvement Projects**. Support EBRPD in the shoreline restoration and improvement project for the south shore of the Albany Neck.

Draft General Plan Goals LU-5, CON-1, Policies LU-1.5, LU-4.5, LU-5.3, CON-1.6, CON-1.7, CON-1.9, and Actions CON-1.A, CON-1.B, CON-1.C, and CON-1.D promote the protection or restoration of riparian corridors and creeks. Policy CON-1.9 protects riparian corridors through development setbacks. Policy CON-1.7 and Action CON-1.A would restore natural habitats adjacent to creeks. Polices, goals, and actions in the Draft General Plan also protect the water quality of creeks and wetlands, which is important for sustaining special-status species. Policy W-5.6, Policy CSF-6.6, Policy CON-2.1, and Action W-5.A promote the protection of water quality through shoreline improvements, tree planting, and green infrastructure.

Increased public access could impact biological resources and special-status species along the creeks and riparian habitats. However, Draft General Plan goals, policies, and actions would protect biological resources from public access impacts as described above.

Other sensitive natural communities within the City are the tidal mudflat and salt marsh. These communities are located along the northern shoreline of the Albany waterfront. Trail construction and/or maintenance within or adjacent to riparian habitat (Policy CON-1.8, Policy PROS-6.8, Policy PROS-6.B, Action PROS-6.C, Action PROS-6.D, Action PROS-6.E) and salt marsh (Action PROS-6.A) could result in ground disturbance that leaves areas of bare soil susceptible to colonization by non-native invasive plant species. Invasive plants can have a variety of impacts on native plant communities, including alteration of ecosystem processes and displacement of native species. If not controlled, invasive plants could encroach into native riparian habitat and tidal marshes within the City, reducing their habitat value for native plants and wildlife, including special-status species. Policy W-4.1 aims to contain the spread of invasive species in the waterfront area.

A relatively recent tree preservation issue is the spread of introduced pathogens, such as sudden oak death, which can cause disease and kill certain species of trees. These pathogens are often introduced from non-native trees and shrubs from nurseries that are planted as landscaping. Action CON-2.B requires the study of alternatives for protecting large specimen trees and addresses preservation issues.

Development activities associated with implementation of the Draft General Plan may lead to direct and indirect impacts on creeks and riparian habitat and sensitive communities. However, implementation of Draft General Plan goals, policies and actions, as well as State and federal regulatory requirements and the City's extensive review process for new developments, would reduce impacts to creeks and riparian woodlands and sensitive communities to a less-than-significant level.

Given the above goals, policies, and actions, the proposed Draft General Plan will have a less-than significant impact on riparian habitat or sensitive natural communities and no additional mitigation measures are required.

(3) Invasive Plants. Invasive plant species could colonize the natural habitat of the City. Impacts to natural habitats caused from invasive plants may result from new development associated with the implementation of the Draft General Plan. Draft General Plan goals, policies, and actions require Bay-friendly, drought-tolerant landscaping including Policy CON-2.4 and Policy CON-6.9, and action and policy listed below:

- **Action CON-2.G: Native Plant Restoration.** Preserve and enhance native plant communities in the city while encouraging the control or removal of invasive and non-native species.

- **Policy PROS-3.7: Vegetation Management.** Ensure that park landscaping and maintenance practices are consistent with City policies to reduce wildfire hazards and manage vegetation. These practices should also reinforce City programs to conserve water and promote Bay-friendly landscaping, such as native, non-invasive, drought tolerant plants, and use reclaimed water for irrigation.

Implementation of policies and actions in the General Plan, as cited above, would reduce impacts to less-than-significant levels.

(4) Impacts to Federally Protected Wetlands. Open water, creeks, and wetlands, which are located within the City, provide valuable habitat to native plant and wildlife species and contribute to the maintenance of water quality. Goals, policies and actions in the Draft General Plan, including Goal W-4, Goal LU-5, Goal CON-1, Policy W-1.1, Policy W-4.3, Policy LU-1.5, Policy LU-4.5, Policy LU-5.3, Policy CON-1.1, Action W-5.A, as well as the goals/policies/actions listed below protect and promote enhancement wetlands and riparian habitats associated with wetlands and include the following:

- **Policy LU-5.2: Albany Shoreline**. Work collaboratively with federal, state and regional agencies, key interest groups and shoreline open space advocates, and Albany residents to enhance the recreational, ecological, and open space value of the Albany waterfront.

- **Goal PROS-1: Open Space Protection.** Preserve and enhance open space in Albany for natural resource protection, food production, hazard prevention and abatement, aesthetics, and recreation.

- **Policy PROS-1.3: Albany Waterfront**. Recognize the importance of the Albany waterfront as a multi-use open space area and a vital part of the cultural landscape of the East Bay. The City will work toward achieving the maximum feasible open space and recreational uses in the waterfront area and improved public access to and along the Albany shoreline. All future land use decisions for the area west of Interstate 80 shall be consistent with State and regional park plans, trail plans, and Bay conservation and shoreline access plans.
- **Policy CON-1.4: Albany Waterfront**. Protect and sustain the Albany waterfront and surrounding wetlands as a natural and cultural resource, a vital ecosystem, a place of scenic beauty, and a defining feature of Albany's physical environment.
- **Policy W-2.6: Water Activities**. Ensure that boating, wind-surfing, and other water-oriented activities are managed to reflect the varying levels of sensitivity of the local marine environment. Motorized boats and motorized personal watercraft should generally be prohibited throughout the entire park, and non-motorized craft (sailboards, kayaks, etc.) should be limited to areas that are specifically designated for aquatic recreation rather than preservation or conservation.
- **PolicyW-4.3: Wetland Habitat.** Support the conservation and restoration of wetlands as waterfront park improvements are constructed.
- **Policy W-4.8: Marine Habitat**. Designate the most valuable marine habitat areas, including the Albany mudflats and the two sub-tidal areas at the west end of the Albany Bulb, as Aquatic Preservation or Conservation areas.
- **Action W-4.B: Albany Beach Restoration Project**. Continue to support implementation of the Albany Beach Restoration Project, including upper beach enhancement, expansion of the dune areas, seasonal wetland enhancement, landscaping with native plants and removal of invasive plants, new bioswales and stormwater management facilities, and removal of debris.
- **Action W-4.C: Lagoon Area Restoration**. Support modifications to the levees that surround the lagoon at the west end of the Albany Bulb which enhance the habitat value of the area and reduce the likelihood of disturbance by humans and land animals.
- **Goal W-5: Sustainable Shoreline.** Create a safer, more resilient shoreline that is better integrated with the Bay's hydrologic and biological systems.
- **Policy W-5.1: Balanced Objectives**. Strive for a balance between shoreline protection, waterfront access, environmental enhancement, recreation, education, and cost considerations in the planning and design of shoreline improvements.
- **Policy W-5.2: Carrying Capacity.** Ensure that the level and character of park activities is managed in a way that does not exceed the carrying capacity of park resources.
- **Policy W-5.4: Shoreline Protection**. Replace portions of the shoreline that consist of construction debris, concrete, and slag material with materials and designs that improve their long-term function and enhance their appearance.
- **Action W-6.A: Shoreline Setback**. Prohibit construction of any buildings within a 100-foot minimum of the shoreline. Consider larger setbacks where possible to expand the parkland area along the shoreline.

Policy CON-5.2 requires coordination with the State and federal resource agencies on projects related to conservation and restoration of sensitive habitat areas, such as wetlands. The goals, policies, and actions related to creeks also apply to the protection of federally protected wetlands, since all the creeks in the planning area are federally protected.

Implementation of these Draft General Plan goals, policies, and actions, as well as State and federal regulatory requirements and the City's extensive review process for new developments, would reduce impacts to federally protected wetlands to a less-than-significant level.

(5) Wildlife Movement and Wildlife Nursery Sites. Riparian corridors provide the primary movement corridors between open space areas and may provide cover as well as food and water for wide ranging wildlife species moving through otherwise unsuitable habitats. For example, deer and small mammals may use riparian corridors to move between different parts of the City. These corridors allow wildlife to access food resources and foraging areas that may be unavailable to them without the cover and security provided in the corridor. Corridors that link to the oak woodland in Albany Hill can make seasonal food resources available to wildlife such as acorn crops in oak woodlands in the fall. Mammals and birds utilize these seasonally available resources and may use corridors to reach such resources. Disruptions of movement corridors can be where a urban development may obstruct access from one open space area to another. Additionally, disruption of riparian corridors by removal of vegetation or placement of permanent structures or active recreational facilities within the corridors could impact wildlife movement corridors or nursery sites. Species that occur or may occur in the City that are particularly susceptible to such disruptions include fish, amphibians, and aquatic reptiles, such as steelhead and western pond turtle. Activities or structures, such as bridge crossings and culverts that could temporarily block passage or isolate the upper reaches of streams could impact movement corridors for these species.

The Draft General Plan promotes the establishment and protection of movement corridors for wildlife through various policies, including Policy CON-1.6, Policy CON-1.7, Policy CON-1.9, Policy CON-5.1, Goal CON-5, Policy CON-5.3, Policy CON-5.5, Action W-4.A, and the policy listed below:

- **Policy CON-5.4: Albany Mudflats Ecological Reserve**. Recognize the environmental value of the Albany Mudflats Ecological Reserve, located west of I-580 and north of Buchanan Street. Protect bird feeding and nesting areas by limiting activities in important habitat areas.

In addition to the above, several goals, policies, and actions protect creeks and riparian corridors and also would protect these habitats as movement corridors. Protection of the connections and wildlife movement corridors is essential to ensure that preserved habitat areas maintain their ecological value and are viable preserves over time. Implementation of these policies ensures that wildlife movement corridors are protected.

In preserving corridors and habitat areas as envisioned in the goals, policies, and actions of the Draft General Plan, nursery sites for native wildlife would also be preserved. Goal CON-5, Policy CON-5.1, Policy CON-5.3, Policy CON-5.4, Policy CON-5.5, and Action W-4.A of the Draft General Plan in particular promote the protection of nursery sites for wildlife. Action W-4.A promotes wildlife surveys to ensure that special-status animal species are protected. Goal CON-5, Policy CON-5.1, and Policy CON-5.4 protect wildlife habitat, including nesting habitat. Policy CON-5.5 requires compliance with State and federal regulations protecting bird nests. These regulations would require conducting pre-construction surveys for nesting birds prior to construction activities in a given area.

Implementation of these Draft General Plan goals, policies, and actions, as well as State and federal regulatory requirements and the City's extensive review process for new developments, would reduce impacts to wildlife corridors and nursery sites to a less-than-significant level.

(6) Conformance with Local Ordinances and Policies. Trees protected under the City's tree removal ordinance (i.e., Section 20.48 of the City's Municipal Code) are present in the City within the Hillside Development District and the Hillside Combining District, which are near Albany Hill. The ordinance protects living trees over 5 feet in height on undeveloped property in the Hillside Development District and the Hillside Combining District. An application for tree removal would need to be acquired from City's Department of Public Works prior to tree removal. In addition to this ordinance, several policies and actions in the Draft General Plan address tree removal, including:

- **Policy LU-4.5: UC Village.** Recognize University of California (UC) Village as an integral part of the Albany community. Land use decisions on the University's property should be compatible with nearby uses and provide collateral benefits to Albany residents and businesses wherever feasible. Important natural features at UC Village, such as Village Creek, Codornices Creek, and significant tree stands, should be protected.
- **Policy CON-2.1: Trees and the Environment**. Recognize the importance of trees and vegetation to improving air and water quality in the City and contributing to local efforts to reduce global climate change.
- **Policy CON-2.2: Tree Preservation**. Require preservation of mature trees during the review of development proposals and subsequent construction projects. Site design and construction plans should identify individual trees and groves of trees and include measures to protect them wherever feasible. When tree preservation is not feasible, require replacement trees and ongoing maintenance measures to avoid net loss of tree coverage.
- **Action CON-2.A: Street Tree Planting Program**. Continue implementation of a comprehensive street tree planting and maintenance program for Albany streets, including priorities, time schedules, and species selection guidelines. Seek funding through state, federal, and non-profit urban forestry programs to support increased tree planting and maintenance capacity.
- **Action CON-2.B: Tree Preservation Requirements**. Continue to study alternatives for protecting large specimen trees and addressing tree removal and preservation issues on private property.
- **Action CON-2.C: Tree Inventories**. Implement standard operating procedures requiring inventories of trees and significant site vegetation as a part of development application review.

Policy LU-4.5, Policy CON-2.1 and Policy CON-2.2 of the proposed Draft General Plan specifically address the protection of trees as an important resource. Actions under this policy include Action CON-2.A (implement a street tree planting and maintenance program), Action CON-2.B (study alternatives for protecting large specimen trees and addressing tree removal and preservation on private property), and Action CON-2.C (include inventories of trees and significant site vegetation as a part of development application review).

The City's tree ordinance and the implementation of the Draft General Plan policies and actions would reduce potential impacts to trees to a less-than-significant level.

(7) Conformance with Approved Conservation Plans. The City does not occur within or adjacent to any approved conservation plans. Implementation of the Draft General Plan will not impact approved conservation plans.

c. Cumulative Impacts. Implementation of the Draft General Plan, in conjunction with other development in the City, has the potential to cumulatively impact biological resources. Proposed development allowed under the Draft General Plan could adversely affect such resources during construction. Before mitigation, therefore, developments within the City, as well as other local recent and current developments, have the potential to cause adverse cumulative impacts to biological resources due to their impacts to habitat.

However, each development proposal received by the City will undergo environmental review, consistent with the City's current procedures, and would be subject to the policies and actions within the Draft General Plan. Neither the proposed Draft General Plan nor other development projects are expected to cumulatively result in significant impacts to biological resources, provided that appropriate environmental review occurs and appropriate mitigation measures, including pre-construction surveys, are implemented as a condition of development. Therefore, implementation of project-specific mitigation measures and appropriate Draft General Plan Policy CON-4.2, Action CON-1.B, and Action CON-4.A encouraging environmental review and mitigation reduce any potential cumulative impacts related to biological resources to a less-than-significant level.

K. CULTURAL RESOURCES

This section describes existing cultural resources conditions in the City of Albany, identifies potentially significant impacts to such resources that may result from General Plan implementation, and recommends program-level mitigation measures to reduce the severity of potentially significant impacts.

Cultural resources are sites, buildings, structures, objects, and districts that may have traditional or cultural value for their historical significance. Cultural resources include a broad range of resources, examples of which include archaeological sites, historic roadways, landscapes, and buildings of architectural significance. For a cultural resource to be considered a historical resource (i.e., eligible for listing in the California Register of Historical Resources), it generally must be 50 years or older[1] and: 1) be listed in, or determined eligible for listing in, the California Register of Historical Resources by the State Historical Resources Commission; 2) be included in a local register of historical resources, as defined in section 5020.1(k) or identified as part of a survey meeting the requirements of section 5024.1(g) of the Public Resources Code; or 3) be determined by the lead agency as historically significant.

Under CEQA, paleontological resources are a subset of cultural resources and include fossil plants and animals, and evidence of past life such as trace fossils and tracks. Ancient marine sediments may contain invertebrate fossils representing snails, clam and oyster shells, sponges, and protozoa; and vertebrate fossils such as fish, whale, and sea lion bones. Terrestrial sediments may contain fossils that represent such vertebrate land mammals as mammoth, camel, saber tooth cat, horse, and bison.

1. Setting

This section: (1) describes the methods used to establish the baseline conditions for cultural resources in the City; (2) provides a brief historical overview of the Albany area; (3) includes the State and local legislative regulatory context for cultural resources; and (4) describes the cultural resources identified in the City and their significance under CEQA.

a. Methods. The cultural resources analysis conducted for the project included archival records searches and contact with the Albany Historical Society. This work was done to establish the baseline conditions for cultural resources in the City and vicinity. The results of these efforts are presented below**.**

(1) Records Searches. Records searches were conducted to identify cultural resources within and adjacent to the City. The records searches were conducted at the Northwest Information Center (NWIC) of the California Historical Resources Information System, Sonoma State University, Rohnert Park; the Native American Heritage Commission (NAHC), Sacramento; and the University of California Museum of Paleontology (UCMP), Berkeley. The NWIC, an affiliate of the State of California Office of Historic Preservation, is the official State repository of cultural resources records and reports for Alameda County. The NAHC is the official State repository of Native American sacred site location records in California. The UCMP's database includes information on locations

[1] California Code of Regulations, Title 14 Section 4852(d)(2).

where fossils have been identified, the taxa of fossils found at a particular location, and the geological formations associated with a fossil locality.

As part of the records search, LSA reviewed the following State of California inventories for cultural resources in the City:

- *California Inventory of Historic Resources*;[2]
- *Five Views: An Ethnic Historic Site Survey for California*;[3] and
- *Directory of Properties in the Historic Property Data File*.[4] The directory includes the listings of the National Register of Historic Places, National Historic Landmarks, the California Register of Historical Resources, California Historical Landmarks, and California Points of Historical Interest.

(2) Literature Review. Publications and maps were reviewed for archaeological, ethnographic, historical, and environmental information about the project area and vicinity. The purpose of this review was to: 1) identify cultural resources within the project area and their historical context, and 2) identify the potential for the project area to contain such resources.

(3) Albany Historical Society. On May 27, 2015, LSA sent the Albany Historical Society a letter requesting information or concerns regarding historical resources that should be considered for the Draft General Plan update. The purpose of this outreach was to identify cultural resources that may not be identified as part of the records searches completed for the General Plan Update (i.e., are not included in published historical inventories or identified as part of the technical study but are of local interest or significance. As of November 2015, the Historical Society did not respond to LSA's request for information or concerns.

b. Cultural Resources Overview. This subsection briefly describes the paleontology, prehistory, ethnography, history, and paleontology of the project area vicinity as determined by the records searches and literature review described above.

(1) Paleontology. Albany lies on the coastal plain bordering the eastern shore of San Francisco Bay. The basement rocks of this region consist of the Franciscan Complex, which is comprised of a mixture of shale and sandstone that includes greenstone, chert, and greywacke. Outcroppings of Franciscan rock occur at Fleming Point and Albany Hill. The Franciscan Complex is known to contain fossils, most notably for the microscopic single-celled organisms known as radiolaria, which comprise the distinctive red and green radiolarian cherts associated with the Franciscan Complex. Although less common, extinct species of vertebrate marine fossils and shellfish have also been found in the Franciscan Complex.[5,6]

[2] California Department of Parks and Recreation, 1976. *California Inventory of Historic Resources.* California Department of Parks and Recreation, Sacramento.

[3] California Office of Historic Preservation, 1988. *Five Views: An Ethnic Historic Site Survey for California.*

[4] California Office of Historic Preservation, 2012. California Department of Parks and Recreation, Sacramento. April 5.

[5] Bailey et al., 1964:116-117. *Franciscan and Related Rocks and their Significance in the Geology of Western California*. California Division of Mines and Geology, San Francisco.

The surface geology of Albany consists of artificial fill and Quaternary landforms. These Quaternary landforms consist of Holocene and Pleistocene alluvial fan and fluvial deposit.[7] Holocene alluvial gravels, sand, and clay eroded from the East Bay Hills and, transported by creeks, formed the plains along eastern San Francisco Bay. These Holocene deposits are too recent (11,500 year B.P. to present) to contain significant paleontological resources (fossils). Pleistocene sediments, which may underlie these Holocene landforms and are mapped at or near the surface of Albany, are older and have a potential to contain significant fossils. Locally, these sediments contain invertebrate and extinct vertebrate fossils, many of which are representative of the Rancholabrean land mammal age. Fossils found in alluvium of this age include, but are not limited to bison, mammoth, ground sloths, saber-toothed cats, dire wolves, cave bears, rodents, birds, reptiles and amphibians.

(2) Prehistory and Ethnography. The Archaic-Emergent cultural sequence developed by Fredrickson,[8] recalibrated by Milliken et al.,[9] is commonly used to interpret the prehistoric occupation of the San Francisco Bay Area. The recalibrated sequence is broken into two broad periods: the Archaic Period, consisting of the Early Holocene Lower Archaic (8000-3500 cal B.C.), Middle Archaic (3500-500 cal B.C.), Initial Upper Archaic (500 cal B.C.-cal A.D. 430), and Late Upper Archaic (cal. A.D. 430-1050); and the Emergent Period, consisting of the Lower Emergent Period (cal A.D. 1050-1550), and Terminal Late (or Upper Emergent) Period (cal. A.D. 1550-historic). The Early Holocene is characterized by "a generalized mobile forager pattern" as indicated by assemblages containing millingslabs and handstones and large wide-stemmed and leaf-shaped projectile points.[10] Archaeological sites from the Early Holocene are rare, although this may in part be an issue of visibility, with these ancient deposits likely underlying several feet of soil. Although local variations occur, the Early Period is generally marked by populations that were less mobile, regional trade, and symbolic integration. *Olivella* and *Haliotis* shell ornaments and the mortar and pestle first appear in the local archaeological record during this period.

An evolution in symbolic integration systems and technology is witnessed in the Lower Middle Period, with the introduction of new shell bead styles and bone tools, including split-beveled and small saucer *Olivella* beads, barbless fish spears, elk femur spatula, bone tubes and whistles, and basketry awls. Culturally distinct traits appear during the Upper Middle Period, suggesting migration of a new population. This new population, referred to as the Meganos Aspect, appears to have spread from the San Joaquin Delta to the East Bay during the Upper Middle Period and is primarily characterized by its mortuary complex, which typically includes extended burial posture.

[6] Hilton, Richard P., 2003:22. *Dinosaurs and other Mesozoic Reptiles of California*. University of California Press, Berkeley.

[7] Helley, E.J., and R.W. Graymer, 1997. *Quaternary Geology of Alameda County and Surrounding Areas, California.* U.S. Geological Survey, Washington, D.C.

[8] Fredrickson, David A., 1974. Cultural Diversity in Early Central California: A View from the North Coast Ranges. *Journal of California Anthropology* 1(1):41–53.

[9] Milliken, Randall, et al., 2007. Punctuated Culture Change in the San Francisco Bay Area. In *California Prehistory*, edited by Terry L. Jones and Kathryn A Klar, pp 99–124. Rowman and Littlefield Publishers, Inc, Lanham, Maryland.

[10] Milliken, Randall, et al., 2007:114

The Initial Late Period represents the ethnographically documented cultures present at the time of European contact. This period is marked in part by an increase in permanent settlements; status ascription and social stratification observed in burial practices; and the emergence of the Kuksu Cult, a ceremonial system that unified several language groups in Central California at the time of European contact. New technology was also introduced during this period, notably the bow-and-arrow, which is evidenced in the archaeological record by small dart-sized projectile points.

Prehistoric archaeological resources in the East Bay date to at least the Middle Holocene (Middle Archaic Period), as documented at the West Berkeley (CA-ALA-307) and Ellis Landing (CA-CCO-295) shellmounds.[11] In Albany, archaeological excavations at CA-ALA-625 yielded radiocarbon dates from the Middle Archaic Period (3,940 +/- 110 Radio Carbon Years Before the Present [RCYBP]) and the Terminal Late Period (390 +/- 40 RCYBP).[12]

Present-day Albany is within territory once occupied by Costanoan (also commonly referred to as Ohlone) language groups. Eight Ohlone languages were spoken in the area from the southern edge of the Carquinez Strait to portions of the Big Sur and Salinas rivers south of Monterey Bay, to approximately 50 miles inland from the coast.[13] Albany is within ancestral territory of the Chochenyo language group of Ohlone.

Ohlone territories were comprised of one or more land holding groups that anthropologists refer to as "tribelets." The tribelet, a nearly universal characteristic throughout native California, consists of a principal village occupied year round, and a series of smaller hamlets and resource gathering and processing locations occupied intermittently or seasonally. Populations of tribelets ranged between 50 and 500 persons and were largely determined by the carrying capacity of a tribelet's territory. The closest known tribelet to the project area was *Huchiun*, whose territory extended from Temescal Creek, north to lower San Pablo and Wildcat Creek drainages.[14] Members of the *Huchiun* are noted on Mission San Francisco registers beginning in 1794.[15]

(3) Post Indigenous History. Initial settlement of the Albany area followed the period of Spanish land grants between 1820 and California statehood in 1850. In 1820, the last Spanish governor of California granted 44,800 acres to Luis Maria Peralta, a sergeant in the Spanish army. The property, which was known as Rancho San Antonio, extended from Cerrito Creek in the north to San Leandro Creek in the south. It encompassed the present day cities of Albany, Berkeley, Emeryville, Oakland, Piedmont, Alameda, and portions of San Leandro.

[11] Milliken, Randall, et al., 2007:115.

[12] Chavez, David A., 2004. *Archaeological Investigations at CA-ALA-29, Albany, Alameda County, California.* David Chavez & Associates, Mill Valley, California.

[13] Shipley, William F., 1978. Native Languages of California. In *California*, edited by Robert F. Heizer, pp. 80-90. Handbook of the North American Indians, Vol. 8, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

[14] Milliken, Randall, 1995:243. *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area, 1769-1810*. Ballena Press, Menlo Park, California.

[15] Ibid.

In 1842, Peralta divided his land among his four sons. Albany and Berkeley were deeded to Jose Domingo Peralta. The Peralta homestead was located in Berkeley, just across Codornices Creek from what is now the St. Mary's High School campus in Albany.

In 1849, the California Gold Rush brought an influx of new settlers to the shores of San Francisco Bay. The Peraltas began to lose control of their land as squatters settled on the Rancho. Between 1852 and 1854, Domingo Peralta sold a portion of his land, including present-day Albany, to J.J. Fleming. Fleming raised livestock on the property.

By the late 1870s, the manufacturing of gold mining explosives had begun on Albany Hill, which was then known as Cerrito Hill. The Judson and Shepherd Chemical Works were established along the shoreline in the area now occupied by Golden Gate Fields. There were several serious explosions, including one in 1883 which killed 30 workers and leveled the Chemical Works. Judson Powder relocated to the north side of Albany Hill soon after, planting eucalyptus trees as a buffer to address the concerns of residents nearby. In 1905, a violent blast destroyed the factory again, resulting in its permanent closure.

The area continued to be rural through the latter part of the 19th Century. There is pictorial evidence of a number of rural homesteads in the area between 1860 and 1890.[16] Around 1890, Edward Gill acquired 104 acres west of current-day San Pablo Avenue (e.g., the "Gill Tract") and established a homestead that would later become Codornices Village and then University Village. In 1891, the lavish four-story Peralta Park Hotel opened on what is now the St. Mary's College High School campus. The hotel was converted to academic use shortly after it opened. It was partially destroyed by a fire in 1946 and demolished in 1959.

After the 1906 earthquake, thousands of displaced San Franciscans migrated to the East Bay. Albany's landscape was still mostly open grassland, with a salt marsh along the water and creeks meandering from the hills to the marsh. Families purchased property near San Pablo Avenue, which was an unpaved road at the time. The community became known as Ocean View. Larger subdivision tracts were being created in the vicinity. For example, prominent developer John Spring established the Regents Park tract in 1906 and began selling lots for just a few hundred dollars each.

Alameda County tax assessor records from 2014 indicate there are 15 structures remaining in Albany that pre-date 1906, with the oldest having been built in 1895 (1063 Curtis) and the second oldest in 1899 (1119 Kains). All 15 structures are single-family or two-family homes. Another 17 one- and two-family homes built in 1906 and 1907 are still standing in the City today.[17] There are no civic or commercial structures dating from the pre-incorporation period.

Incorporation and Large-Scale Subdivision. Ocean View residents voted to incorporate in 1908, largely as a strategy to stop Berkeley residents from dumping their garbage in the community.[18] A temporary school was established in a refurbished barn near what is now the corner of San Pablo and Brighton Avenues. The barn was also the site of the first City Council meetings. The first official

[16] Albany Historical Society, 1983. *Stories of Albany, Pioneer Family Discovered.*

[17] Based on Alameda County Tax Assessor parcel data for "Year Built", 2014.

[18] Karen Sorensen and Albany Historic Society, 2007. *Images of America: Albany,* Arcadia Publishing.

public building constructed was Cornell School, located on the same site at Solano and Talbot Avenues occupied by modern-day Cornell School. A firehouse was constructed nearby on Cornell Avenue.

The town changed its name to "Albany" in 1909 to avoid confusion with other nearby communities named Ocean View. Albany, New York was the birthplace of Frank Roberts, who was Mayor at the time. A City Hall was built in 1915 on Solano Avenue between Adams Street and San Pablo Avenue, and a new firehouse was built at Washington and San Pablo. The Police Department eventually located next door to the firehouse on San Pablo Avenue. A second school was built in 1917 at the corner of Marin and Santa Fe Avenues—the site of today's Marin School. Sidewalks were installed on San Pablo Avenue in 1910 and streetcar tracks were laid on both San Pablo and Solano Avenues. A trip to San Francisco on the streetcar and ferry cost 20 cents and took about 45 minutes.

Development of the City continued at a rapid pace through the 1910s and 20s. Promoters dubbed Albany the "Bungalow City." A promotional brochure at the time said "The modern bungalow strongly appeals to the person of moderate means and is fast becoming the favorite home for our residents on the East Bay shore."[19] More than 1,600 single-family homes were built during the 1920s, establishing the basic form and character of Albany's neighborhoods. More than 600 homes were built in 1925 and 1926 alone, the years of peak construction.

Figure IV.K-1 shows the number of homes existing in Albany today (2014) based on their year of construction. This information is based on data from the Alameda County Tax Assessor, and includes homes built before 1940 only. Most of the structures noted are single-family detached residences. A few are two-family homes designed to resemble single-family cottages, or single-family homes that were converted into two or three units.

A large number of commercial buildings were added during the 1920s and 1930s, principally along San Pablo and Solano Avenues. Many of these buildings remain today. They have been altered to varying degrees over the years, with some bearing little resemblance to the original structures and others more or less intact. Current tax assessor records indicate only four remaining commercial structures which pre-date 1920, 43 commercial structures built between 1920 and 1929, and 37 commercial structures built between 1930 and 1939.[20] These structures are mostly single-story retail buildings, although a few are single-family homes converted to offices, and several are automotive buildings. A number of automobile dealerships opened along San Pablo Avenue during the 1930s. Other familiar commercial buildings, including the Albany Theater, were established during the 1930s.

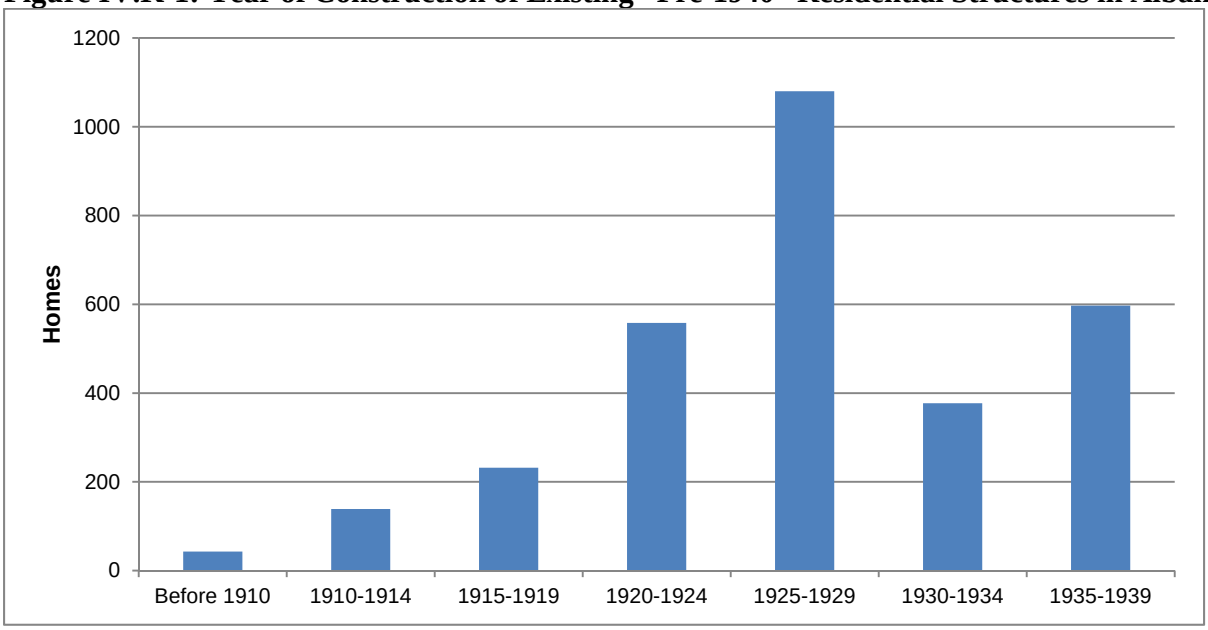
Civic structures were built as the City grew, although these buildings proved to be less durable than the City's residential structures. For example, a hospital was built on Marin Avenue near Evelyn Street in the late 1920s. It was razed in the early 1990s, and replaced by the new Albany Community Center and Library. Albany High School, first completed in 1934, was deemed seismically unsound and replaced in 1997. The 1908 Cornell School was demolished in 1946-47 and replaced by a new

[19] Ibid.

[20] "Year Built" data from the County Assessor generally applies to the primary structure if multiple structures are present.

school on the same site. A few civic buildings of this period, including the Post Office (built in 1938), remain today.

Figure IV.K-1: Year of Construction of Existing "Pre-1940" Residential Structures in Albany



Source: Alameda County Tax Assessor Data, 2014

Beginning in the late 1920s and continuing through the 1930s and early 1940s, most new single-family housing in the city was built by Charles M. MacGregor, a local builder and developer. During the Great Depression, two- and three-bedroom "MacGregors" could be purchased for $500 down and monthly payments of $45, for a total purchase price of $4,000 to $5,000.[21]

World War II. Albany saw significant changes during World War II (1939-1945). The City's proximity to the Kaiser Shipyards brought an influx of residents and a need for wartime housing and defense-related land uses. At the same time, completion of the Eastshore Highway created new opportunities for development along the shoreline.

Just before the War, Fleming Point was graded to expand the City's land area into the Bay and create a level building site for Golden Gate Fields. The racetrack opened in 1940 but closed in 1941. During the War years, the site was used by the Army and Navy for naval landing craft repair and storage. The racetrack reopened in 1947. The Western Regional Research Center opened its Albany facility on a portion of the Gill Tract in 1940. Most of the rest of the Gill Tract had been acquired by the University of California some years earlier. During the War, Codornices Village was built on the site to provide housing for servicemen and shipyard workers. A railroad was built to carry employees to the shipyards, and an elementary school was added in 1944. A decade after the War's end, the site was converted to student family housing.

[21] Karen Sorensen and Albany Historic Society, 2007.

Population increases during World War II required the opening of two new elementary schools. A 1946 bond measure enabled the development of Vista School on Jackson Street and MacGregor School at the San Gabriel Street/Brighton Street intersection. Both of these schools later ceased to operate as elementary schools when enrollment declined, and MacGregor School has been demolished. Commercial development, including a number of small family-owned markets, drug stores, restaurants, and department stores, continued to expand along San Pablo Avenue and Solano Avenue during this period.

Post-War Era. By the 1950s, Albany's began to look for new growth frontiers. A proposal was made to remove the top 200 feet off Albany Hill and build a luxurious development of 300 homes. The proposal faced local opposition and was not pursued. A subsequent proposal was made for 2,500 apartment units on the west side of the hill. This project was scaled down dramatically, and ultimately resulted in the Gateview condo towers in the early 1970s and the Bridgewater and Bayside Commons condos in the 1980s. Meanwhile, several apartment buildings were located on Taft Street on the east side of the hill through the 1960s and 1970s, capitalizing on new construction technologies which enabled hillside development. Citizen-led campaigns led to the acquisition of most of the remaining undeveloped land on Albany Hill as parkland.

The shoreline was further modified through the creation of the Albany Neck and Bulb, and the use of the Bulb area as a landfill. As on Albany Hill, large scale development proposals were made for the shoreline, including various schemes to create islands, bridges, hotels, shopping areas, and housing. Such proposals continued to be considered through the 1970s and 1980s, ultimately leading to a voter initiative which now requires citizen approval for any future changes of use in the area. San Pablo Avenue continued to function as an auto-oriented thoroughfare during this period, with regional traffic shifting to Interstate 80 (I-80). In 1966, City Hall was relocated to its current location. Marin Avenue was extended to join Buchanan, providing a more direct route to the freeway. The BART tracks were installed in the mid-1960s. A number of commercial buildings and large apartment buildings which typify the modernist architectural styles of the time were built during the 1950s and 60s. Most of these buildings remain today. Substantial reconstruction and upgrading of school campuses also took place in the mid-1970s, following the adoption of new seismic standards.

c. Identified Cultural Resources. Recorded archaeological resources and built-environment resources in Albany that qualify as historical resources under CEQA are listed in Table IV.K-1. Recorded cultural resources in Albany consist of: (1) prehistoric archaeological resources; (2) a 1906 residence; and(3) a circa 1939 civic facility. A summary of these resources is discussed in the appropriate subsection, below.

(1) Paleontological Resources. A fossil locality search conducted for the Draft General Plan at the UCMP on February 26, 2015, did not identify recorded paleontological resources (fossils) in Albany. Vertebrate fauna of the Rancholabrean Land Mammal Age (circa 240,000 to 11,000 years before present), however, including mammoth, bison, camel, and horse, have been identified in the East Bay. These fossils have been identified in Pleistocene sediments, which are mapped in Albany at (or near) the surface and may underlie more recent Holocene alluvial fan deposits at unknown depth.[22]

[22] Helley, E.J., and R.W. Graymer, 1997, op. cit.

(2) Archaeological Sites. Four recorded archaeological resources are recorded within the City of Albany. Recorded prehistoric resources in Albany tend to cluster near water sources such as creeks and near the historical extent of the bayshore. Additional prehistoric archaeological resources may be located within the City, and project-specific reviews would need to be done to assess potential impacts to archaeological sites. Areas that are near natural water sources, e.g., riparian corridors and near tidal marshland, should be considered of high sensitivity for prehistoric archaeological deposits and associated human remains. Buried archaeological sites have been identified in every major valley and the bayshore plains of the San Francisco Bay region.[23] In the East Bay, for example, several buried sites and site components have been identified, dating from the middle and late Holocene.[24] The extent of the buried site phenomenon in central California is largely attributable to regional processes of landscape evolution that occurred during human prehistory, starting during the Late Pleistocene and involving periods of relative landform stability and episodic erosion and deposition. In the Bay Area, prehistoric archaeological deposits can be associated with buried Holocene landforms, and the absence of surface materials or soils indicative of an archaeological deposit does not preclude the possibility of significant subsurface archaeological deposits.

The archaeological sites recorded in Albany include midden deposits (i.e., soils indicative of human occupation); human remains; and lithic and shell scatters representing detritus as a result of subsistence and resource processing. Recorded archaeological sites in Albany are briefly described below.[25]

- **CA-ALA-304.** CA-ALA-304 consists of a Native American "shellmound." Archaeologist Nels Nelson originally recorded CA-ALA-304 in 1907 as a Native American "shellmound" near tidal marsh. Nelson noted four mounds in the vicinity of CA-ALA-304 that had been "leveled down" by cultivation. In 1999, archaeologists with Tremaine & Associates identified a remnant of CA-ALA-304 during monitoring for a fiber optic cable installation. Marine shell, a chert flake, a groundstone fragment, and fire-affected rock were identified.
- **CA-ALA-305.** Nelson's original record of CA-ALA-305 from 1907 indicates a Native American shellmound that included human remains. Archaeologists last recorded CA-ALA-305 in 1952 and described it as a "former habitation site: traces of shell remain."
- **CA-ALA-306.** Nelson's original record of CA-ALA-306 from 1907 indicates a Native American shellmound and indicates that "a well preserved human skull" had been uncovered by workmen. No subsequent records of CA-ALA-306 are on file at the NWIC.
- **CA-ALA-625.**[26] The County Coroner prepared the first record for CA-ALA-625 on June 3, 1959. The Coroner described a Native American skeleton that had been unearthed in a residential backyard. The skeleton was identified in a matrix of "shells, shell fragments and other organic debris, including fish bones." Five obsidian projectile points and obsidian debris were also identified with the burial. Archaeologist Albert Elsasser completed a site

[23] Meyer, Jack, and Jeffrey Rosenthal, 2007. *Geoarchaeological Overview of the Nine Bay Area Counties in Caltrans District 4.* Far Western Anthropological Research Group, Davis, California.

[24] Meyer, Jack, and Jeffrey Rosenthal, 2007:8, 10.

[25] Locations of archaeological sites are not disclosed to the public due to their confidential nature and in pursuance of Public Resources Code sections 6254.10 and 6254(r), and California Code of Regulations Section 15120(d).

[26] This site is also referred to in records on file at the NWIC as CA-CCO-29.

record in 1959 subsequent to the discovery of human remains at the site and described a Native American occupation site containing "dark ashy midden with shell." Elsasser and Labay have completed additional undated records for CA-ALA-625 that indicate the presence of midden with shell, obsidian and chert, projectile points, and bedrock mortars.

Archaeologist David Chavez conducted an archaeological investigation at this site in 1998, which included excavation of 16.3 m^3 of soil and laboratory analysis of recovered materials. The excavations identified cultural materials and human burials that indicate a village site that was inhabited year round, beginning in the Middle Archaic/Early Period. Middle Archaic occupation of this site is evidenced by a radiocarbon date of 3,940 RCYBP obtained from a piece of charcoal associated with a human burial at a depth of 120-130 cm.

No historical archaeological deposits have been identified within Albany. Such deposits may exist, however, and can include hollow-filled features (e.g., wells and privies), structural remains, and trash scatters. Although Albany has witnessed extensive commercial and residential development, such development does not preclude the possibility of intact historic archaeological deposits. The possibility of such deposits, however, must be evaluated on a project-specific basis.

(3) Historic Built-Environment Resources. Based on the records search at the NWIC completed for the project, there are two built-environment resources in Albany that are historical resources for purposes of CEQA (Table IV.K-1). Table IV.K-1 is not an exhaustive list of built-environment resources within the City; it lists only those buildings that have been identified as eligible for listing in either the National Register of Historic Places or California Register of Historical Resources. Other built-environment resources in the City may meet the criteria for listing in the National Register of Historic Places or California Register of Historical Resources. Identification of such resources, however, must be done on a project-specific basis.

There is only one building in Albany that has been formally listed on the National Register of Historic Places. This is the Peterson House, a private home located at 1124 Talbot Avenue. The house was built in 1906 and is considered significant for its post and beam construction, which was unusual at the time. The house was one of the first constructed in the Regents Park tract, which was developed in the months after the San Francisco earthquake.

As noted earlier in this chapter, there are at least 32 homes in the City that pre-date the 1908 incorporation, with the oldest dating to 1895. The oldest buildings are not concentrated on a particular street or in a specific neighborhood.

Roughly 2,000 homes in Albany - half of the single-family housing stock in the City - are 85 years old or more, including many homes built by C.M. MacGregor. Collectively, this housing creates an ambiance and character that is important to Albany residents and representative of an important period in the Bay Area's history. The City has adopted Residential Design Guidelines which recognize the value of the traditional architectural features of the early 20th century period, and which strive to protect the integrity of these features as homes are updated or expanded.

None of the City's civic or commercial structures have been designated as historic buildings. Some of the City's oldest structures are commercial businesses operating in structures originally built as single-family homes. For example, a seismic retrofit business occupies a former single-family home built in 1915 at 427 San Pablo Avenue and a hair salon occupies a former single-family home built in 1916 at 1151 Solano Avenue. While there is a large inventory of commercial buildings from the

1920s along San Pablo and Solano Avenue, they have not been systematically evaluated for their historic significance.

The City's civic buildings generally date from the second half of the 20th Century. However, there are a few exceptions. Most notably, the mission-style Veterans Memorial Building (1325 Portland) was completed in 1932. Albany United Methodist Church was built in 1927 and is the oldest still existing church in the City. Other churches - Mosaic Bay Church (1938), Church on the Corner (1948), the Buddhist Priory (1950), and St. Albans (1955) - are more recent. The USDA facility is representative of the federal buildings of the late 1930s and was recently found eligible for listing in the National Register of Historic Places and California Register of Historical Resources.[27] It has also been recognized by the American Chemical Society as a National Historical Chemical Landmark due to the pioneering work on frozen foods conducted there.

Historically important features may also include districts, landscapes, the sites of important events, and places that are associated with particular persons. In this regard, interest has been expressed in researching the significance of the Albany and Berkeley waterfronts as a cultural landscape. The area is considered to have high artistic values and has played an important role in shaping the development of the Bay Area and California. No formal listing as such has been proposed for the area at this time.

Table IV.K-1: Recorded Cultural Resources in Albany

Address	Resource Identification Number[a]	Resource Type	OHP Status Code[b]	Description
–	CA-ALA-304	Archaeological Site	None	Midden Site
–	CA-ALA-305	Archaeological Site	None	Midden Site with Human Remains
–	CA-ALA-306	Archaeological Site	None	Midden Site with Human Remains
–	CA-ALA-625	Archaeological Site	None	Midden Site with Human Remains
800 Buchanan St	P-01-011361	Civic Building	2S2	USDA Western Regional Research Center
1124 Talbot Ave	P-01-005726	Residence	1S	Peterson House

[a] As assigned by the California Office of Historic Preservation.
[b] California Office of Historic Preservation (OHP) Status Code:
1S Individual property listed in National Register by the Keeper. Listed in the California Register;
2S2 Individual property determined eligible for National Register by consensus through Section 106 process. Listed in the California Register

Source: Northwest Information Center, Sonoma State University, 2015.

(4) Tribal Cultural Resources. Pursuant to the requirements of Government Code Sections 65352.3 and 65352.4, the City has consulted with eligible local Native American representatives to preserve or mitigate impacts to places, features, and objects described in Public Resources Code Sections 5097.9 and 5097.993 (Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine located on public property) that are located within its jurisdiction. Using the tribal list provided by NAHC, representatives of four tribes were contacted. One representative replied, indicating he would like to be kept apprised of any major City plans. Each of

[27] Hibma, Michael, 2012. *Historical Resources Evaluation Report for the Buchanan Street Bicycle/Pedestrian Path Project.* LSA Associates, Inc., Point Richmond, California.

the tribal representatives will be contacted again upon release of the Draft General Plan and EIR, inviting their review of the documents

Debbie Pilas-Treadway, Environmental Specialist III with the NAHC, responded in a faxed letter on March 11, 2015, that "A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area."

d. Regulatory and Legislative Context. CEQA, sections of the California Public Resources Code, the Conservation, Recreation and Open Space Element of the City's General Plan, and sections of the City Municipal Code comprise the regulatory framework for cultural resources in the project area, and each of these are described below.

(1) CEQA Requirements. CEQA applies to all discretionary projects undertaken or subject to approval by the State's public agencies (California Code of Regulations [CCR] Title 14(3) §15002(i)). Under the provisions of CEQA, "A project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment" (CCR Title 14(3) §15064.5(b)).

CEQA §15064.5(a) defines a "historical resource" as a resource which meets one or more of the following criteria:

- Listed in, or eligible for listing in, the California Register of Historical Resources;
- Listed in a local register of historical resources (as defined at PRC §5020.1(k));
- Identified as significant in a historical resource survey meeting the requirements of §5024.1(g) of the Public Resources Code; or
- Determined to be a historical resource by a project's lead agency (CCR Title 14(3) §15064.5(a)).

A historical resource consists of "Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California…Generally, a resource shall be considered by the lead agency to be 'historically significant' if the resource meets one or more of the criteria for listing in the California Register of Historical Resources" (CCR Title 14(3) §15064.5(a)(3)).

If the cultural resource in question is an archaeological site, CEQA (CCR Title 14(3) §15064.5(c)(1)) requires that the lead agency first determine if the site is a historical resource as defined in CCR Title 14(3) §15064.5(a). If the site qualifies as a historical resource, potential adverse impacts must be considered in the same manner as a historical resource (California Office of Historic Preservation 2001:5). If the archaeological site does not qualify as a historical resource but does qualify as a unique archaeological resource, then the archaeological site is treated in accordance with PRC §21083.2 (CCR Title 14(3) §15069.5(c)(3)). In practice, most archaeological sites that meet the definition of a unique archaeological resource will also meet the definition of a historical resource.[28]

[28] Bass, Ronald E., Albert I. Herson, and Kenneth M. Bogdan, 1999:105. *CEQA Deskbook: A Step-by-Step Guide on how to Comply with the California Environmental Quality Act*. Solano Press Books, Point Arena, California.

If an impact to a historical or archaeological resource is significant, CEQA requires feasible measures to minimize the impact (CCR Title 14(3) §15126.4 (a)(1)). Mitigation of significant impacts must lessen or eliminate the physical impact that the project will have on the resource.

(2) Public Resources Code 5024.1: California Register of Historical Resources. Section 5024.1 of the PRC established the California Register. Generally, a resource is considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing on the California Register (California Code of Regulations [CCR] Title 14(3) Section 15064.5(a)(3)). For a cultural resource to qualify for listing in the California Register it must be significant under one or more of the following criteria:

Criterion 1: Associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

Criterion 2: Associated with the lives of persons important in our past;

Criterion 3: Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

Criterion 4: Has yielded, or may be likely to yield, information important in prehistory or history.

In addition to being significant under one or more of these criteria, a resource must retain enough of its historic character and appearance to be recognizable as a historical resource and be able to convey the reasons for its significance (CCR Title 14 Section 4852(c)).

(3) Government Code Sections 65352.3 and 65352.4. Prior to the adoption or amendment of a General Plan proposed on or after March 1, 2005, Government Code Sections 65352.3 and 65352.4 require a city or county to consult with local Native American tribes that are on the contact list maintained by the Native American Heritage Commission. The purpose is to preserve or mitigate impacts to places, features, and objects described in Public Resources Code Sections 5097.9 and 5097.993 (Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine located on public property) that are located within a city or county's jurisdiction.

(4) Health and Safety Code and Public Resources Code: Human Remains. The California Health and Safety Code (HSC) Section 7050.5 states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner's authority. If the human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

Section 5097.98 of the California Public Resources Code states that the NAHC, upon notification of the discovery of Native American human remains pursuant to Health and Safety Code §7050.5, shall immediately notify those persons (i.e., the Most Likely Descendent or "MLD") it believes to be descended from the deceased. With permission of the landowner or a designated representative, the

MLD may inspect the remains and any associated cultural materials and make recommendations for treatment or disposition of the remains and associated grave goods. The MLD shall provide recommendations or preferences for treatment of the remains and associated cultural materials within 48 hours of being granted access to the site.

(5) Public Resources Code: Cultural and Paleontological Resources. California Public Resources Code (PRC) Section 5097.5 provides for the protection of cultural and paleontological resources. This PRC section prohibits the removal, destruction, injury, or defacement of archaeological and paleontological features on any lands under the jurisdiction of State or local authorities.

(6) Albany Municipal Code. The Planning and Zoning chapter (Chapter XX) of the City's Municipal Code includes Section 20.24.040.F. This section of the Planning and Zoning chapter establishes performance standards that are applicable to the Residential Hillside Development (RHD) District, which encompasses the area included in the Albany Hill Area Specific Plan. These performance standards permit the Community Development Department or the Planning and Zoning Commission to require technical studies for development within the RHD District, including cultural resource surveys.

e. 1992 General Plan Goals, Policies, and Actions. The current 1992 General Plan includes the following policy that addresses cultural resources.

- **Policy LU 9.1:** Retain the historic character of Solano Avenue as a local-serving, pedestrian-oriented shopping district. Special amenities such as outdoor seating and landscaping should be encouraged in the Design Review Ordinance, and considered as part of the Capital Improvements Program.

2. Impacts and Mitigation Measures

This section provides an assessment of the potential cultural resources impacts related to implementation of the Draft General Plan. This section begins with the criteria of significance, which establishes the thresholds for determining whether an impact is significant. The latter part of this section identifies potential impacts and evaluates how they relate to policies and actions of the Draft General Plan. Where potentially significant impacts are identified, mitigation measures are recommended.

a. Criteria of Significance. Implementation of the Draft General Plan 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 CEQA Guidelines Section 15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- Disturb any human remains, including those interred outside of formal cemeteries.

b. Impact Analysis. The following sections provide an evaluation and analysis for the potential less-than-significant, significant and cumulative impacts of the Draft General Plan for each of the criteria of significance listed above.

(1) Historical Resources. The proposed General Plan Update would have a significant effect on the environment if it would cause a substantial adverse change in the significance of a historical resource as defined in *CEQA Guidelines* Section 15064.5. A "substantial adverse change" to a historical resource includes physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resources would be materially impaired (*CEQA Guidelines* Section 15064.5(b)(1)).

Built Environment Resources (Architecture). Albany has two buildings that have been identified as historical resources under CEQA: the USDA Western Regional Research Center at 800 Buchannan Street and a private residence at 1124 Talbot Avenue. Numerous other buildings in Albany may have historical value as well, including those that are not formally listed in, or have been previously evaluated for, the California Register of Historical Resources or National Register of Historic Places. These include single-family residences, civic buildings, and commercial buildings 50 years old or older.

The Land Use Element of the Draft General Plan encourages new high density transit-oriented mixed-use development along commercial corridors. Most growth in the City under the Draft General Plan is anticipated to occur in mixed-use projects along San Pablo Avenue (and secondarily along Solano Avenue). The Solano Avenue/San Pablo Avenue intersection is identified as a "node" where more intense development may be appropriate. This development has the potential to directly (i.e., demolition) or indirectly (i.e., adverse effects to historical setting from adjacent construction) impact historical buildings and structures that may be eligible for listing in the California Register of Historical Resources or National Register of Historic Places. The Draft General Plan contains policies and actions that would mitigate potentially adverse impacts, listed below:

- **Action LU-2C: Architectural Prototypes**. Develop an inventory of architectural "prototypes" that describes the prevailing design styles and features of homes in each Albany neighborhood.
- **Policy LU-6.1: Historic Preservation**. Encourage expanded recognition, public education, and appreciation of Albany's large inventory of early 20th Century homes and commercial buildings. Such buildings help define Albany's sense of place and identity.
- **Action LU-6.D: Preservation Advocacy**. Explore the feasibility of a formal historic preservation program for Albany. Such a program would include a potential register of locally important historic buildings, markers and plaques which acknowledge key landmarks and sites, provisions to protect and enhance the defining qualities of the City's older buildings, and education and outreach on local resources and the benefits of preservation.
- **Action LU-6.G: Cultural Resource Identification**. Pursue an agreement with the Northwest Information Center (NWIC) at Sonoma State University to identify properties on which further field studies of cultural resources may be required in the event demolition or construction on those properties is proposed. Where such resources are present, the City may require preconstruction surveys and project-specific recommendations to protect significant archaeological, paleontological, or historic resources.

The policies listed above include expanded public recognition and public education of early 20th century homes and commercial buildings in Albany (Policy LU-6.1); developing an inventory of architectural "prototypes" for the City to be considered as part the design of future alterations and infill development (Action LU-2C); and exploring the feasibility of a historic preservation program (Action LU-6D). In addition, Action LU-6.G would reduce potential impacts to historical built-environment resources that could result from development allowed under the Draft General Plan

through: (1) the identification of such resources during the early project-planning stage with archival research and field survey; and (2) the establishment of recommendations for mitigating impacts to such resources, as appropriate and based on the outcome of the archival research and field survey.

Given the above goals, policies, and actions, the proposed Draft General Plan will have a less-than-significant impact on historical resources and no additional mitigation measures are required.

Archaeological Deposits. Under CEQA, archaeological sites can also qualify as historical resources (CCR Section 15064.5(c)). For purposes of this discussion, the impacts of the Draft General Plan to archaeological deposits are discussed below under the section addressing archeological resources.

(2) Archaeological Resources. The Draft General Plan would have a significant effect on the environment if it would cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.

As discussed in this chapter, Albany includes four recorded archaeological sites. These are prehistoric sites that include Native American subsistence remains (e.g., shellfish remains and animal bone), various artifacts, and human remains. Additional, previously unknown, prehistoric and historic-period archaeological sites could be identified in Albany and may be present beneath artificial fill or Holocene-age landforms. Development allowed under the Draft General Plan has the potential to unearth unknown archaeological sites. The Draft General Plan contains policies and actions, in addition to those listed above, that would identify and avoid potentially adverse impacts to archeological resources, listed below:

- **Action LU-5.B: Prehistoric and Archaeological Resource Protection.** Continue to maintain standard conditions of approval for new development which require consultation with a professional archaeologist in the event that any subsurface prehistoric or archaeological remains are discovered during any construction or preconstruction activities on a development site. This includes consultation with Native American organizations prior to continued site work in the event such remains are discovered.
- **Policy LU-5.4: Archaeological Resources**. Protect Albany's archaeological resources, including remains and artefacts from Native American settlement. The City will coordinate with local tribal representatives and follow appropriate mitigation, preservation, and recovery procedures in the event that important resources are discovered during development.
- **Policy W-1.4: Archaeological Resources**. Protect and preserve archaeological resources in the event such resources are identified as shoreline park improvements are completed.
- **Policy CON-1.4: Albany Waterfront**. Protect and sustain the Albany waterfront and surrounding wetlands as a natural and cultural resource, a vital ecosystem, a place of scenic beauty, and a defining feature of Albany's physical environment.

Additionally, the City requires the following standard condition of approval for construction projects:

- In the event subsurface archeological remains are discovered during any construction or preconstruction activities on the site, all land alteration work within 100 feet of the find shall be halted, the Community Development Department notified, and a professional archeologist, certified by the Society of California Archeology and/or the Society of Professional Archeology, shall be notified. Site work in this area shall not occur until the archeologist has had an opportunity to evaluate the significance of the find and to outline

appropriate mitigation measures, if deemed necessary. If prehistoric archeological deposits are discovered during development of the site, local Native American organizations shall be consulted and involved in making resource management decisions.

Potential impacts to archeological resources also would be mitigated through protection and preservation elsewhere in Albany (Policy LU-5.4) and from identification of potential impacts to such resources during the planning process (Action LU-6.G). While Action LU-6.G and the City's Standard Condition of Approval regarding review and protection of potential cultural resources if discovered would reduce potential impacts to archaeological resources, including those that qualify as historical resources under CEQA, additional mitigation measures are necessary to protect unknown cultural resources.

Impact CULT-1: Potential development under the Draft General Plan could impact archaeological deposits that may qualify as historical resources. (S)

Mitigation Measure CULT-1a: Prior to approval of development permits for projects that include significant ground-disturbing activities, City staff may require that the applicant review the most recent and updated Northwest Information Center (NWIC) list: Historic Property Directory to determine if known archaeological and paleontological sites underlie the proposed project. If it is determined that known cultural resources are within ¼ mile of the project site, the City shall require the project applicant to conduct a records search at the NWIC at Sonoma State University to confirm whether there are any recorded cultural resources within or adjacent to the project site. The NWIC will provide recommendations based on previously identified resources, as well as environmental and archival indicators of sensitivity (e.g., proximity to watercourses or historic map information). The studies may include identification efforts for historical buildings and structures, archaeological resources, fossils, and human remains. Consistent with Policy LU-5.4, coordination with local Native American communities shall be done when significant prehistoric archeological sites are identified as part of pre-approval site analysis. Based on that research, the City shall determine whether field study by a qualified cultural resources consultant is recommended.

Mitigation Measure CULT-1b: Should City staff determine that field study for cultural resources is required, the project applicant shall have a cultural resource professional meeting the Secretary of the Interior's Standards in history and/or archaeology conduct a pre-construction survey to identify significant cultural resources – including archaeological sites, paleontological resources, and human remains – in the project site and provide project-specific recommendations, as needed.

Pursuant to the recommendations of the consulting archaeologist, and in consultation with City officials and potential stakeholders such as tribal representatives, additional mitigation to offset potential impacts to cultural resources shall be required should the resources at issue qualify as historical or unique archaeological resources under CEQA (cf. PRC Section 21084.1 and 21083.2, respectively). Such mitigation may include further intensive recording/documentation or excavation and analysis according to professional archaeological standards. (LTS)

With the inclusion of the new policies and actions and the two-part Mitigation Measure CULT-1, potential impacts to archaeological resources would be reduced to a less-than-significant level on a program-level basis. Please note that cultural resource impacts generally must be determined on a project-specific basis.

(3) Paleontological Resources. The Draft General Plan would have a significant effect on the environment if it directly or indirectly destroys a unique paleontological resource or site or unique geologic feature.

There are no recorded paleontological resources (fossils) within Albany nor does the City include a unique geological feature associated with paleontological resources. As described in this chapter, the project site is underlain by Holocene-age landforms that are too recent to contain significant fossils. Older Quaternary (i.e., Pleistocene) and Franciscan Complex deposits are mapped in Albany. These older deposits have a potential to contain significant fossils, such as bison, mammoth, ground sloths, saber-toothed cats, dire wolves, cave bears, rodents, birds, reptiles, amphibians.

The Draft General Plan contains no policies that address potential impacts to paleontological resources. Adoption of the Draft General Plan, therefore, has the potential to significantly impact paleontological deposits as a result of new ground-disturbing developments that may occur on or within older landforms.

Impact CULT-2: Ground-disturbing activities associated with development allowed under the Draft General Plan could adversely affect significant paleontological deposits under CEQA. (S)

> Mitigation Measure CULT-2: Implement Mitigation Measure CULT-1 to determine the potential for paleontological deposits within a project site and, if present, to ensure project-specific mitigations for such resources are identified and incorporated as conditions of project approval. (LTS)

With implementation of the above mitigation measure, potential impacts to paleontological resources would be reduced to a less-than-significant level by preserving the resources or the scientific information associated with them.

(4) Human Remains. The project would have a significant effect on the environment if it results in disturbance to human remains, including those interred outside of formal cemeteries.

Human remains interred outside of formal cemeteries have been identified in association with prehistoric archaeological sites in Albany, and development allowed under the Draft General Plan has the potential to unearth previously unidentified Native American human remains. This potential impact is mitigated through coordination with local tribal representatives (Policy LU-5.4) and with implementation of the appropriate procedures outlined under Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98. With implementation of this policy and appropriate State laws regarding the treatment of Native American human remains and implementation of Mitigation Measure CULT-1, the Draft General Plan would have less-than-significant impacts on such remains. This less-than-significant impact is achieved through: (1) coordination between the City, project applicant, and the Native American Most Likely Descendent (MLD) in the event that remains of Native American origin are identified during development; and (2) appropriate and respectful treatment of these remains in consultation with the MLD.

c. Cumulative Impacts. Implementation of the Draft General Plan, in conjunction with other development in the City, has the potential to cumulatively impact cultural resources. For built-environment historical resources, proposed development allowed under the Draft General Plan could adversely affect such resources due to their demolition or incompatible site designs that could impact the historical integrity of nearby historical buildings. Development within the City also has the potential to adversely affect archaeological resources, paleontological resources, and human remains through their destruction or disturbance. Before mitigation, therefore, developments within the City, as well as other local recent and current developments, have the potential to cause adverse cumulative impacts to cultural resources due to their destruction or loss of historical integrity.

However, it should be noted that each development proposal received by the City will undergo environmental review, consistent with the City's current procedures, and would be subject to the mitigation measures proposed above. Neither the proposed Draft General Plan nor other development projects are expected to cumulatively result in significant impacts to cultural resources, provided that appropriate pre-development environmental review occurs (i.e., Mitigation Measure CULT-1) and appropriate mitigation measures, including but not limited to preservation in place, capping, data recovery, or compliance with the U.S. Secretary of Interior Standards for the Treatment of Historic Properties, are implemented as a condition of development. Therefore, implementation of project-specific mitigation measures and appropriate Draft General Plan Policies and Actions encouraging environmental review and mitigation reduce any potential cumulative impacts related to cultural resources to a less-than-significant level.

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L. PUBLIC SERVICES AND RECREATION

This section evaluates the effects of implementation of the Draft General Plan on public services, including fire, police, and school services, and parks and recreation facilities. The setting section describes the existing conditions for each service provider and also includes a description of applicable regulatory and/or policy documents. The setting section is based on information provided in the Draft General Plan and by consultation with public service providers.

The impacts and mitigation measures section discusses potential impacts to public services that could result from implementation of the Draft General Plan. This section begins with the significance criteria, which establishes the thresholds used to determine whether an impact is significant. The latter part of the section evaluates the Draft General Plan and identifies mitigation measures, as necessary. The analysis of potential environmental impacts on public services that could result from implementation of the Draft General Plan is primarily based on the potential increase in demand that would require the need for new facilities and whether construction of these facilities could generate physical environmental impacts.

1. Setting

The following section describes existing conditions related to: fire and emergency medical services (EMS); police services; public schools; community facilities; and parks and recreational facilities. Figure IV.L-1 shows the location of the City's public facilities.

a. Fire Protection and Emergency Medical Services. The Albany Fire Department (Department) is located in the City Hall complex at 1000 San Pablo Avenue**.** It provides fire protection, emergency and disaster response, paramedic services, and community education services to Albany residents and businesses. The Department offers a number of programs to promote health and wellness, including CPR, first aid, blood pressure screening, home safety, earthquake preparedness, and smoke detector installation for elderly and disabled residents. The Department's responsibilities include fire suppression, arson investigation, hazardous materials mitigation, and search and rescue. Their capacity is supplemented through mutual aid agreements with all of the fire departments in Alameda County and with the State of California, which allows for expanded resources in the event of a major emergency. There is also an Automatic Aid Agreement with the City of Berkeley for emergency response within Albany.

(1) Staffing and Equipment. Department resources include 18 firefighters, one full-time chief, and two part-time fire inspectors. There has been a slight decrease in the number of personnel in the last two decades. The Department has been given an Insurance Service Office (ISO) rating of 4 (ratings are on an interval scale from 1 to 10 with a "1" being the best rating for insurance purposes).

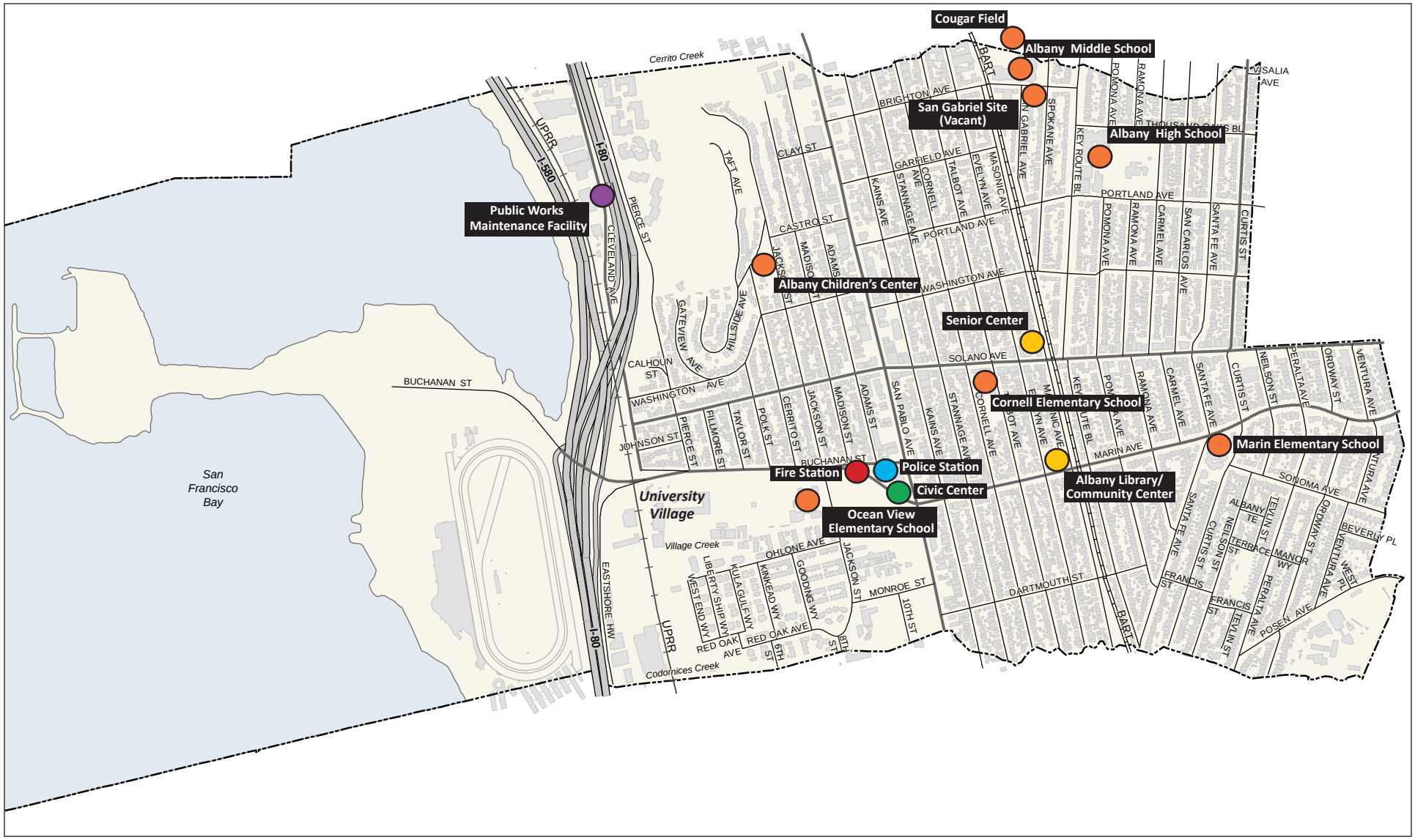
As of January 2015, Department equipment included:

- 1 front line Advanced Life Support (ALS) engine
- 1 Reserve engine
- 1 ALS Quint (combination truck/engine)
- 1 Type 6 Wildland Engine
- 1 Chief Command Vehicle
- 1 Fire Prevention Vehicle/backup command vehicle
- 1 Front Line ALS ambulance
- 1 Reserve ALS ambulance

(2) Service Calls and Response Time Goals. In 2014, the Department received a total of 1,818 service calls. Rescue and EMS related calls accounted for 1,120 calls or 61.6 percent of all calls received by the department. "Good Intent" service calls consisted of 329 calls and include calls that are cancelled en route, smoke scares, and cases where no incident is found on arrival. False alarm calls accounted for 142 calls or 7.8 percent of total calls and include cases where smoke detectors activated with no fire, malfunctioning alarms, and other unintentional calls. Miscellaneous service calls consisted of 110 calls that are related to animal rescue, police matters, assisting persons with mobility impairments, and water problems. Calls related to fires consisted of 63 calls or 3.5 percent of all calls. Fire related calls included 10 building fires, 13 cooking fires, 20 outdoor waste fires, 7 vehicle fires, 3 vegetation fires, and a variety of other fire incidents.

Figure IV.L-2 shows the total number of service calls from 2010 to 2014. An increase in call volumes occurred between 2010 and 2012; however the total number of calls has remained relatively flat over the last three years. The total number of EMS calls has increased 23 percent since 2010, growing from 815 calls in 2010 to 1,003 in 2014. The total number of fires trended upward from 2010 to 2012 but has been relatively stable since 2012. The number of "good intent" calls is substantially higher now than it was four or five years ago, with a much higher number of calls that are dispatched and cancelled en route**.**

The Department is under contract with the Alameda County EMS Agency to respond to emergency medical calls in no more than 8 minutes and 30 seconds, 90 percent of the time. Initial unit response goals are 4 minutes, 90 percent of the time for all other calls and 8 minutes, 90 percent of the time for a full structure fire alarm response. The response times are recorded when the fire unit receives the call to when the unit arrives on scene.



LSA

LEGEND

- Albany City Limit
- Freeway
- BART Tracks
- Railroad Tracks
- Building
- Public Schools
- Fire Station
- Police Station
- Library/Community Center/Senior Center
- Civic Center
- Public Works Maintenance Facility

N

0 660 1320

FEET

FIGURE IV.L-1

City of Albany General Plan EIR

Public Facilities

SOURCE: CITY OF ALBANY, 2015.

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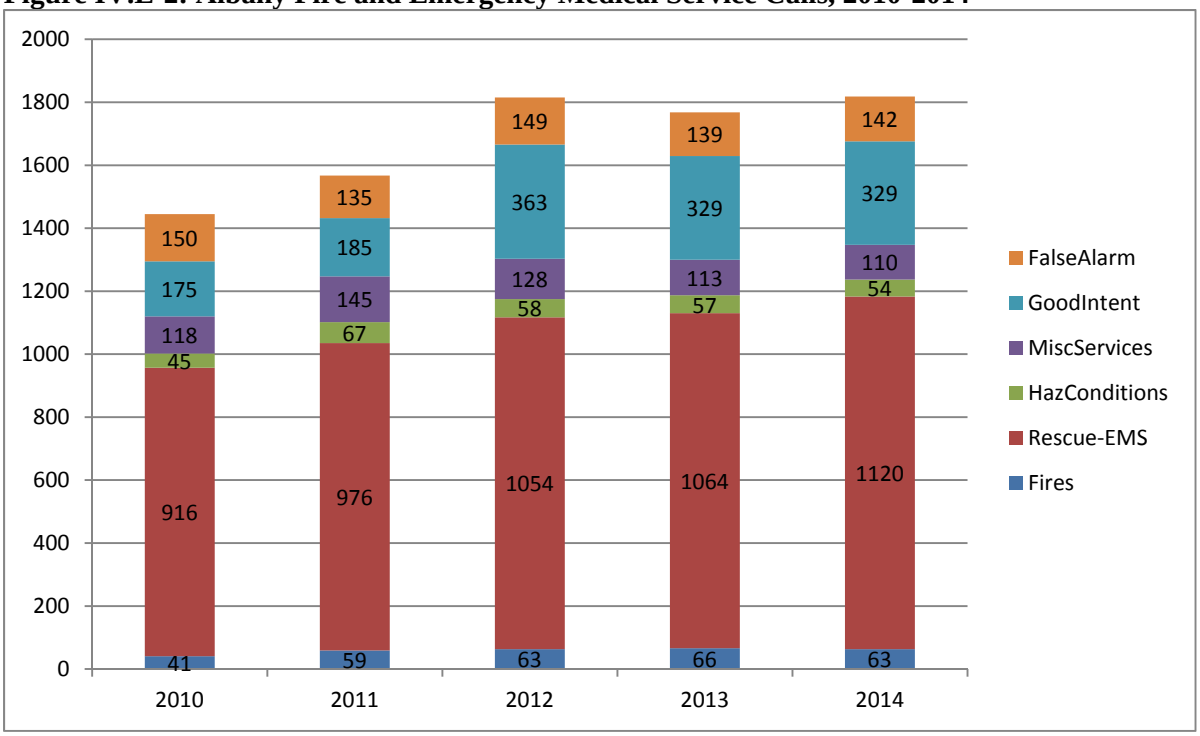
Figure IV.L-2: Albany Fire and Emergency Medical Service Calls, 2010-2014



Source: Albany Fire Department, 2015.

(3) Fire Prevention Programs. The prevention of fires, accidents and injuries is the main priority of the Fire Department. The Department includes a Fire Prevention Bureau which implements a yearly weed abatement program, a photo-electric smoke detector compliance program, and plan checking for fire code requirements. Albany adopted the 2013 California Fire Code and enacted several, more restrictive modifications specific to the City. Additional requirements include a stricter sprinkler ordinance and a mandate for the use of photoelectric smoke detectors only. The City also implements a business and residential inspection program that requires businesses and residential buildings with four or more units to be inspected on a regular basis.

The Department also coordinates Community Emergency Response Team (CERT) Training for Albany residents. The CERT program identifies block captains on each block in the City to help organize neighbors and improve preparedness in the event of an earthquake or other disaster. The Department organizes periodic disaster drills, training programs, and communication programs to improve readiness. It also participates in the operation of the Emergency Operations Center located at the Albany Civic Center between the Fire Station and the Police Department. The City has conducted several full-scale drills at the center and implements the Regional Information Management System program to ensure coordinated disaster response and recovery.

(4) Issues and Future Needs. The Department has both immediate and longer term capital facility needs. Immediate needs include technological upgrades and new vehicles/equipment, including improvements to the 9-1-1 center and mobile dispatch terminals in emergency response apparatus. The Department also needs to replace its reserve Fire Engine, Reserve Ambulance, and

Wildland vehicle. Longer-term needs would be associated with the increased demands of a larger population, and a population that is aging and becoming more diverse. Additional personnel and additional mutual aid or inter-jurisdictional taxing agreements may be needed to close future service funding gaps as the City grows. An increase in equipment use may require additional funding for supplies and more frequent replacement of emergency vehicles. The Department will continue to work with the Community Development Department to review plans for new development to ensure an adequate water supply and emergency vehicle access will meet future fire-fighting and EMS needs.

Rapid, effective response to fires is another important part of the Department's mission. While water supply and pressure is generally adequate to meet fire flow requirements, there are a number of areas in the City that have reduced or inadequate flows according to the National Fire Protection Agency (NFPA).[1] There are also a number of narrow streets with restricted turning radii, including several dead-end streets.

b. Police Services. The Albany Police Department is located in City Hall at 1000 San Pablo Avenue. The Police Department's mission is to provide the highest quality police services through efficient and professional policing. The Police Department preserves public peace, enforces laws, protects life and property, and provides police services to the community. The Police Department responds to 9-1-1 calls 24 hours a day and maintains an answering point for routine telecommunications services as well.

(1) Staffing and Patrol Areas. The Police Department is comprised of a Patrol Division and a Support Services Division. The Patrol Division responds to calls for police services and conducts initial investigations for crime reports, traffic enforcement, parking enforcement, and uniformed crime prevention activities. The Patrol Division also operates the Reserve Officer program. The Support Services Division provides investigation services, operates the dispatch center, and maintains evidence and records. The dispatch communications unit handles all emergency phone calls for police, fire, and medical services as well as non-emergency phone calls for police.

As of January 2015, the Police Department has an authorized staffing level of 42.4 employees. The Department includes a chief, two lieutenants, six sergeants, seventeen police officers, six communications clerks, and two police services technicians. There are also 1.2 full-time equivalent (FTE) clerk typist positions, a 0.75 FTE community engagement specialist, four 0.75 FTE parking enforcement/ traffic control technicians, and six 0.6 FTE school crossing guards. In January 2015, actual staffing levels stood at 39.4 FTE, with two vacant officer positions and a vacant communications clerk position. Three volunteer reserve officers supplement the Police Department staff.

The Police Department's budget is funded primarily through the City's General Fund. Its staff levels have shifted in recent years to achieve greater operational efficiency and respond to budget constraints. As a result, the Police Department has reduced the number of authorized officers from 27 and slightly increased support staff. The increase in support staff has helped the Police Department respond to increasing regulatory and service demands. The City is divided into two police beats. Beat 1 consists

[1] Albany Fire Department, 2015. Written communication from Lance Calkins, Chief, with Barry Miller, Planning Consultant. January 15.

of the area north of Solano Avenue and Beat 2 consists of the area south of Solano Avenue including Golden Gate Fields.

(2) Response Time Call Volumes. While the Police Department has not adopted a formal response time standard, its response times are generally considered good. Albany's compact geography enables a fairly quick response to 9-1-1 calls and non-emergency calls for service. The Police Department participates in the California Law Enforcement Mutual Aid Plan and has mutual response agreements in place with multiple Alameda County law enforcement agencies. In 2014, the Department received 12,976 calls for service and logged an additional 16,904 officer initiated incidents. This activity resulted in 188 felony arrests and 438 misdemeanor arrests. Officers produced 1,264 crime reports, 101 traffic collision reports, and 22 missing person reports. Table IV.L-1 provides a summary of police incident, arrest, and report data for 2014.

Emergency call volumes have significantly increased with the proliferation of cellular telephones and completion of the California Department of Technology's "RED" Project. The "Red" project allows routing of cellular emergency calls to local Public Safety Answering Points (PSAPs) instead of California Highway Patrol dispatchers. Since 2009, completed emergency calls to the Albany PSAP have increased 85.7 percent and total emergency calls have increased 121 percent, placing unprecedented demand on emergency communications dispatchers. Emergency call volume continues to increase steadily with January 2015 call volume up 14 percent over January 2014. Data on 9-1-1 calls is shown in Table IV.L-2.

Table IV.L-1: Albany Police Data, 2014

All Incidents	
Calls for Service	12,976
Officer Initiated Incidents	16,904
Traffic Stops	4,934
Other Officer-Initiated Activity Incidents	11,970
Bus/Building Checks	1,415
Vehicle/Pedestrian Check	1,521
Total	**29,880**
Officer Reports	
Accident	101
Crime	1,264
Missing Person	22
Trial by Declaration	36
Utility	645
Vehicle	199
Unclassified Reports	21
Total	**2,288**
Misdemeanor & Felony Arrests	
Misdemeanor Arrests	435
Felony Arrests	188
Total	**623**
Citations	
Bicycle	59
Moving	2,081
Parked	377
Person	136
Unclassified	27
Total	**2,680**

Source: Albany Police Department, 2015.

(3) Law Enforcement Issues. Albany is a relatively safe community, with crime rates well below the national average. The majority of reported crimes are against property rather than persons. The Federal Bureau of Investigation (FBI) uniform crime statistics for the City between 2005 and 2014 are summarized in Figure IV.L-3. The data indicates a general decline in the crime rate, with drops in both violent crime (aggravated assault, forcible rape, murder and robbery) and property crime (arson, burglary, larceny-theft, and motor vehicle theft). In 2013, crimes within Albany included: one rape, 24 robberies, 4 assaults, 557 incidents of property crime, 94 burglaries, 388 larceny-thefts, 75 motor vehicle thefts, and seven incidents of arson.

Table IV.L-2: 9-1-1 Call Volumes, 2009-2014

Year	911 Calls	Abandoned 911 Calls	Total 911
2009	1,981	287	2,268
2010[a]	523	49	572
2011	2,412	334	2,746
2012	3,031	409	3,440
2013	3,256	472	3,728
2014	3,678	635	4,313
Total	**14,881**	**2,186**	**17,067**

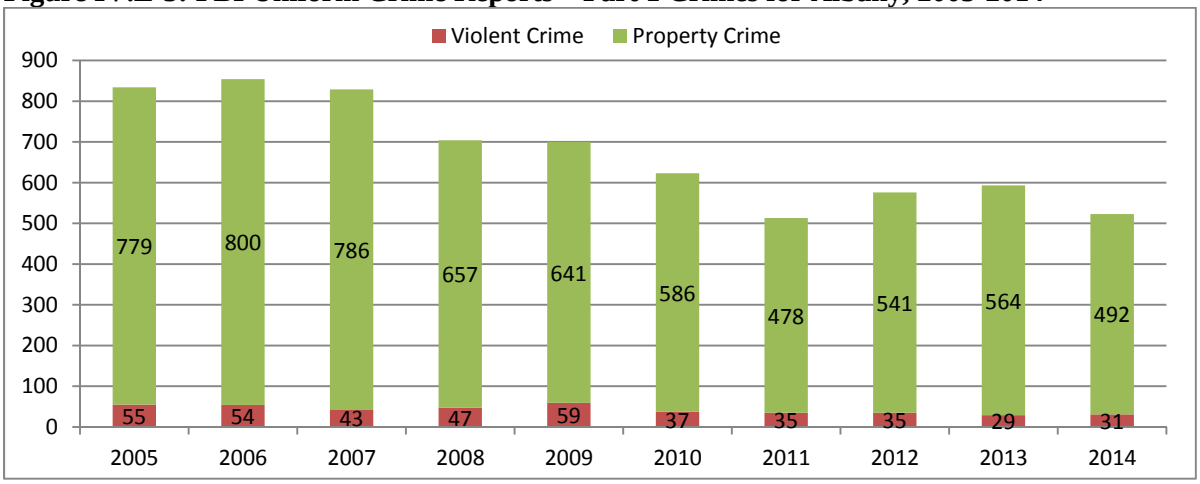
[a] Abandoned 911 calls are calls that have been disconnected by the caller before the PSAP has answered the call.

Source: Albany Police Department, 2015

(4) Public Safety Programs. The Police Department manages a variety of programs to reduce crime, improve crime response, and create a positive relationship with the community. Community-oriented programs include: Police Youth Academy; the Police Activities League; Neighborhood Watch; Coffee with the Cops; National Night Out; and the annual Safety Palooza event which introduces residents to their local officers. The Department also collaborates with the School District to carry out programs at Albany High School, operate the school crossing guard program, and offer station tours and site visits for elementary schools and child care centers. The Police Department participates in the Albany Civics Academy, sponsors safety-oriented events such as bike rodeos, and provides tips to residents on how to improve home safety and deter crime. The Police Department also facilitates civil conflict resolution, abatement of blighted property cases, and the prescription drug take-back program. The Police Department utilizes social media (Facebook, Twitter, etc.), the City website, and e-notification services to keep community members informed about public safety programs and activities.

The Police Department contracts with the City of Berkeley for Animal Control Services, consisting of field services for the cities of Berkeley and Albany and shelters animals from Berkeley, Albany, Piedmont, and Emeryville.

Figure IV.L-3: FBI Uniform Crime Reports – Part 1 Crimes for Albany, 2005-2014



Source: Albany Police Department, 2015.

(5) Future Needs. Like other City Departments, the Police Department may be impacted by long-term growth. Additional population typically translates into additional calls for service, while job growth and new economic activities can create new types of service demand. Presently, the Police Department's greatest needs are related to space. Office space is very limited and is considered insufficient for current demands. Storage for property and police equipment, including vehicles, is also insufficient. Security is also a concern at the current facility.

Given that much of Albany's future growth will occur through multi-family or mixed-use housing, it will be important to follow design principles which reduce the potential for criminal activity. The concept of Crime Prevention Through Environmental Design (CPTED) encourages "eyes on the street" in new development, with site planning and architecture used to minimize criminal hiding places, ensure adequate lighting, and reduce the likelihood of vandalism or other crimes. The City is also anticipating increases in bicycle and pedestrian travel in the future; this may increase the potential for collisions and place new demands on the traffic enforcement division. Other issues associated with higher densities, such as noise (in mixed-use development), could increase service calls.

c. Schools. Albany is served by the Albany Unified School District (AUSD). AUSD is governed by a five-member elected school board and School Superintendent. District boundaries are coterminous with the City limits. AUSD's stated mission is to provide excellent public education empowering all to achieve their fullest potential as productive citizens.

AUSD is known as one of the best public school systems in the San Francisco Bay Area, with a graduation rate exceeding 90 percent. As of 2015, AUSD offices are located in temporary facilities on the University Village property at 1051 Monroe Street.

AUSD operates a pre-school (children's center), three elementary schools, a middle school, a high school, and a continuation high school. Enrollment in each school by grade during the 2013-2014 school year is shown in Table IV.L-3. AUSD had approximately 3,839 students enrolled during the 2013 – 2014 school year. Distribution across grades is fairly even, with between 250 and 325 students in each grade.

In March 2014, AUSD approved a Facilities Master Plan. A brief profile of each school and the Facilities Master Plan recommendations are provided below:

- **Albany Children's Center** (formerly Vista School) is located at 720 Jackson Street. This is a year-round pre-school for children ages three to five. The 37,700 square foot facility was formerly an elementary school but presently accommodates pre-school students. The site is located on the slopes of Albany Hill which creates a number of planning and vehicle access challenges. The 2014 Facilities Master Plan identified a number of infrastructure, code compliance, and HVAC upgrades to improve the functionality and safety of the facility.
- **Ocean View Elementary School** is located at 1000 Jackson Street on the University Village campus in southwest Albany and is a K-5 elementary school. The 46,100 square foot school was built in 1975 and was originally designed as a middle school. It has 30 classrooms, a multi-purpose room, a library, and several play areas. Enrollment is about 640 students. The Facilities Master Plan presents two options for this school, including one

to upgrade various building systems (including seismic strengthening) and add a new classroom building, and a second to replace the school with a new building.

- **Marin Elementary School** (1001 Santa Fe Avenue) is a K-5 elementary school with approximately 540 students. The current campus was built in 1973 and includes 24 classrooms, a multi-purpose room, a library, and outdoor play areas. Marin School consists of multiple small buildings in a configuration that was popular in the early 1970s but does not meet current needs. As a result, facility planning options include a major remodel and re-orientation of the existing buildings or demolition and replacement.
- **Cornell Elementary School** (920 Talbot Avenue) is a K-5 school with about 590 students. AUSD's recent facility evaluation considered two options for the school. Option 1 would involve adding a new classroom building at the south end of the campus along Talbot and Option 2 would feature a new building along Solano, replacing the existing multi-purpose building. Both options also include removal of portables and extensive modernization of existing facilities.
- **Albany Middle School** (1259 Brighton Avenue) is a 71,000 square foot facility built in 1997 on the 4.2-acre former Hill Lumber site. It serves all Albany public school students in grades 6-8. School facilities include classrooms, a gymnasium, locker rooms, a library, a multi-purpose room, and administrative offices. Enrollment in 2013-14 was approximately 890 students. The Facilities Master Plan recommendations include modernization, including upgrades to infrastructure and mechanical systems and an enclosure of the lunch shelter area.
- **Albany High School** (603 Key Route Blvd) has a 1,200 student enrollment in grades 9-12. The school includes 118,000 square feet of floor space, including a multi-purpose room, library, theater, gymnasium, classrooms, administrative offices, and portables. Much of the campus was modernized in the late 1990s. Albany High is located on the western half of a block that also contains Memorial Park. The campus' sports fields are located two blocks to the north in the City of El Cerrito. The Facilities Master Plan calls for demolition and replacement of the Arts/Theater building, removal of an outdoor amphitheater, and various infrastructure and system upgrades.
- **MacGregor School/San Gabriel Site** (601 San Gabriel Avenue). MacGregor was a small, alternative school serving students 16 and older in Grades 10-12. The school formerly occupied a one-story building on a 0.9-acre site on San Gabriel Avenue. However, the structure was demolished in 2014 and the site is now vacant. AUSD is considering alternatives for its future use.

(1) Enrollment. Figure IV.L-5 summarizes total enrollment in AUSD schools over a 19-year period (from 1996 to 2015). According to the State Department of Education, the number of students enrolled in AUSD has been consistent since 2006. However, between 2000 and 2006, there was a 29 percent increase in enrollment, with nearly 850 more students enrolled in the 2006-2007 school year than in the 1999-2000 school year. The increase coincided with the reconstruction of the University Village family housing, as well as an increase in the number of children in the City, an increase in household size, and inter-district transfers. Some schools have seen steady or even declining enrollment, while others have seen substantial increases. For instance, enrollment at Albany High declined by about 100 students between 2009 and 2013, while enrollment at Ocean View Elementary increased by 100 students.

(2) Impact Fees. Albany collects a school impact fee on new development to offset effects on school facility needs. State law authorizes the collection of such fees for both residential and non-residential development. State law also limits the maximum amount of these fees to $3.36 per square foot for residential development and $0.54 per square foot for commercial and industrial development, subject to a fee justification study.

AUSD completed an impact fee justification study in January 2015. The study determined that the actual impact associated with development was $8.06 per square foot for residential development and $1.20-$4.99/ square foot for non-residential development. In other words, the maximum fee allowed by the State covers less than half the actual cost of facility improvements associated with growth. On January 27, 2015, the School Board adopted revised fees of $3.36 per square foot for residential development and $0.54 for commercial and industrial development. Projects adding less than 500 square feet of floor space are exempt.

(3) Student Generation Rates. Student generation rates are used by many school districts to estimate the number of students in a "typical" single-family or multi-family home. This data may be used to estimate the expected impact of new housing units on school enrollment, which in turn helps inform facility planning. The rates are based on actual data on student yields at existing development in the District or on State of California standards.

Statewide, the student generation factors are 0.7 students per dwelling unit, including 0.5 students in K-8 and 0.2 students in grades 9-12. The rates tend to be higher in single-family homes than in multi-family units. Albany's student generation rates are slightly lower than the State average, reflecting the relatively large number of multi-family dwelling units in the City. The 2015 Fee Justification Study reports a yield of 0.6 students per housing unit, including 0.356 K-5 students, 0.133 students in grades 6-8, and 0.111 students in grades 9-12. Based on address data for students enrolled at AUSD facilities, a "typical" multi-family unit generally yields between 0.16 and 0.41 students. The distinction between the multi-family rate and the single-family rate is important because housing construction in Albany is anticipated to consist primarily of multi-family dwelling units. In general, student yields are lower in multi-family units than in single-family homes due to the smaller number of bedrooms. Additionally, senior housing developments are not expected to generate students due to the age restriction requirements associated with that type of development.

In the recent past, changes in enrollment have primarily been driven by births, the extent of inter-district transfers, and turnover in the existing housing stock rather than new housing construction. Non-resident students accounted for nearly 13 percent of enrollment in 2012-2013, which is down from nearly 18 percent in 2005-2006. Continued reductions in (or cessation of) inter-district transfers are occurring to ensure adequate long-term capacity.

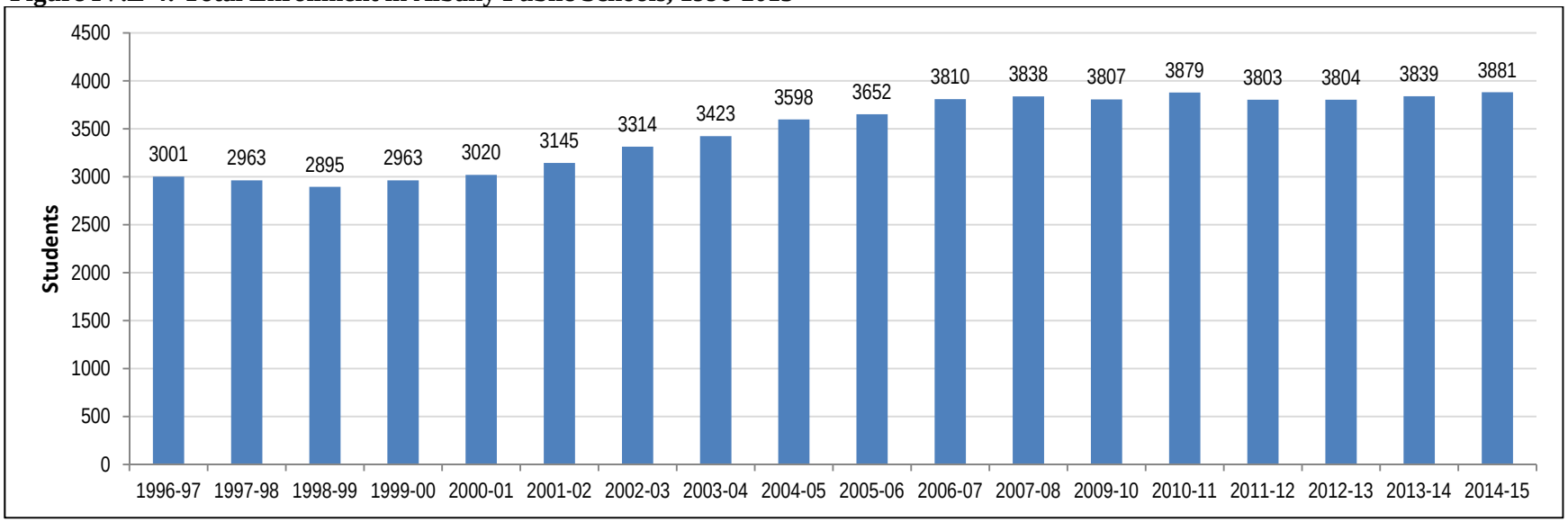
Table IV.L-3: Enrollment by Grade at AUSD Facilities 2013-2014

School	Grade													Total
	K	1	2	3	4	5	6	7	8	9	10	11	12	
Cornell Elementary	89	105	80	104	102	107	0	0	0	0	0	0	0	**587**
Marin Elementary	91	80	81	81	102	103	0	0	0	0	0	0	0	**538**
Ocean View Elementary	145	102	117	106	99	77	0	0	0	0	0	0	0	**646**
Albany Middle	0	0	0	0	0	2	260	302	303	0	0	0	0	**867**
Albany High	0	0	0	0	0	0	0	0	1	311	297	285	288	**1,182**
Macgregor High (Continuation)	0	0	0	0	0	0	0	0	0	0	0	8	9	**17**
District Non-Public Non-Sectarian Schools [a]	0	0	0	0	0	0	0	1	0	0	1	0	0	**2**
TOTAL	**325**	**287**	**278**	**291**	**303**	**289**	**260**	**303**	**304**	**311**	**298**	**293**	**297**	**3,839**

[a] Nonpublic, nonsectarian school means a private, nonsectarian school that enrolls individuals with exceptional needs.

Source: California Longitudinal Pupil Achievement Data System (CALPADS); Data as of March 24, 2014.

Figure IV.L-4: Total Enrollment in Albany Public Schools, 1996-2015



Source: California Department of Education (DataQuest), 2015.

(4) Capacity and Forecasts. California has developed School Facility Program standards to estimate the capacity of classrooms by grade. These figures generally range from 20 to 27 students per classroom. The AUSD's most recent impact fee justification study indicated districtwide capacity for 3,487 students. Current enrollment exceeds capacity by 11 percent. Elementary schools are operating at 124 percent of capacity, the Middle School is at 115 percent of capacity, and the High School is at 94 percent of capacity.

Five-year enrollment projections (through the 2019-2020 school year) indicate a projected increase of about 180 students (4.7 percent over current levels). This is based primarily on demographics (the number of children in each age cohort) rather than assumptions about housing construction. The additional enrollment would exacerbate capacity shortages, particularly at the elementary school level. The District plans to construct additions to its K-5 and middle school campuses to address the shortfall, and may also use portable classrooms while permanent facilities are being constructed. Without new classrooms, larger than normal classroom sizes will be necessary to accommodate future growth.

(5) School Facility Planning Issues. The City's schools exist within the context of a dense urban environment, creating the potential for conflicts due to the level and type of activities that take place on each campus. Primary planning issues are related to circulation and parking, particularly student drop-off and pick-up, faculty and staff parking on residential streets, student parking around the high school, and the safety of students walking and bicycling to school. The scale and character of school construction is also an important issue for many neighboring residents.

AUSD and the City work collaboratively to address facility planning and operational issues. As AUSD prepares to implement a major modernization and rebuilding program, it must also address construction impacts on neighbors and land use compatibility issues associated with new or redesigned facilities. AUSD also works with the City on joint use issues, including school access to City parks and public access to schoolyards and tot lots during non-school hours. The School Board and City Council convene periodic joint meetings to address issues of mutual concern.

(6) Private Schools. Several private schools are located within Albany. The largest, St. Mary's College High School, occupies a 12.5 acre campus in the southeast part of the City. In 2012, approximately 619 students were enrolled in grades 9-12. The school recently received approval of a Campus Master Plan which includes the addition of two new buildings and renovation of other campus buildings. The additional buildings include a music building and a campus chapel. The improvements also include a 14,000 square foot addition to one of the existing classroom buildings, a larger kitchen at the student center, and a new drainage plan.

Other private schools in Albany include Tilden Preparatory School and Bright Star Montessori. Tilden Preparatory is located at 1231 Solano Avenue in a mixed-use building in the Solano Avenue commercial district and has an existing enrollment of 76 students in grades 6-12. Bright Star Montessori located at 1370 Marin Avenue and has an existing enrollment of 20 students in pre-K and kindergarten.

d. Libraries. Library services are provided to Albany through the Alameda County Library system (ACL). ACL operates 10 branch libraries in the cities of Albany, Dublin, Fremont, Newark, and Union City, and in the unincorporated communities of Castro Valley and San Lorenzo. ACL also operates mobile services through the Bookmobile and various outreach programs. The library is primarily funded by Special District property taxes, with additional revenue from State grants and contracts with cities. Supplemental funding is provided by local non-profits, including Friends of the Library in Albany. ACL's stated mission is to offer opportunities and resources for lifelong learning and enjoyment that support individual and community growth. The library strives to provide welcoming spaces, outreach, materials, expertise, technology, partnerships, and innovation.

(1) Existing Facilities. The Albany Public Library is located at 1247 Marin Avenue. The Library is housed in part of the Albany Community Center, a multi-purpose City-owned facility at 1249 Marin Avenue that also offers City-sponsored recreation classes and programs. The building was constructed in 1994 and includes two wings joined by a foyer. A basement level provides storage space, as well as offices for the Albany Historical Society, Friends of the Library, and the KALB cable channel. The Community Center includes meeting/reception rooms and a commercial-style kitchen, making it a popular location for community events, lectures, programs, and private event rentals.

ACL maintains statistical data on library services for each of its branches and publishes this data in an annual report on its website. Highlights from 2013-2014 are provided below.

The Albany Library is 15,300 square feet, including approximately 12,200 square feet on the main floor and 3,000 square feet in the basement. Given that the facility serves 18,400 residents, there are 0.82 square feet of library space per capita in Albany (0.65 if the basement is excluded). Albany's square foot per capita is greater than the average of 0.35 square feet per capita in the other communities served by the ACL. Although the City's ratio is higher than the county average, Albany's Library serves a relatively high number of non-residents and its service area is larger than the numbers suggest. More than 50 percent of the borrowers registered at the Albany Library are non-Albany residents.

System-wide circulation in the library system has been increasing during recent years, driven in part by an increase in e-book checkouts. However, the e-book checkouts are not reflected in the statistics for the Albany Library, resulting in data that shows a slight decrease in circulation between 2012-2013 and 2013-2014. In 2013-2014, there were 402,860 check-outs or renewals at the Library, or 21.81 per capita, compared to a system-wide average of 12.35 per capita. The Library's assets include 65,471 books and 18,037 audio-visual materials. There are 18 employees, although many are part-time.

More than 5,000 persons use the Albany Library per week, making the facility the most visited library per capita in the ACL system. It also has the highest number of items (books and audio-visual materials) per capita in the ACL system. While this demonstrates the importance of the library as an Albany institution, it is also indicative of a facility that is relatively crowded and has little space flexibility. Whereas other libraries in the system may have opportunities for adding automated materials handling systems, additional rooms for computers, storage, and technological improvements, there is almost no underutilized space on the Albany Library property. Space for programs and activities is limited. Some of the existing programs share space, or occur simultaneously in the same rooms.

The Library has also seen an increase in programming and participation in recent years. An active calendar of events is maintained, and attendance is high. The facility also hosts community-oriented activities such as registration for the Covered California health care program, programs for seniors and children, and Albany Reads, a citywide book discussion group.

The Library will continue to be an integral part of the Albany community during the time horizon of the Draft General Plan. As noted above, the facility's greatest challenge is that it is space-constrained and has limited opportunity to expand. The Library is also now more than 20 years old and continues to adapt to changing technology and user preferences. Upcoming initiatives include a "laptops to go" program which enables residents to borrow laptops and tablets for use in the Library, an expansion of the Blu-Ray disc collection, and relocation of telecom equipment. Longer-term initiatives may be needed to create the additional space needed to meet the demands of a larger population and to accommodate new technology. The addition of about 1,800 residents over 20 years (consistent with Draft General Plan forecasts) would translate into almost 1,500 square feet of additional floor space demand if the current square footage per capita is to be maintained. It will be difficult to meet this demand without reconfiguration of the Community Center floor plan.

e. Parks and Recreation. The following describes parks and recreation facilities within the City of Albany.

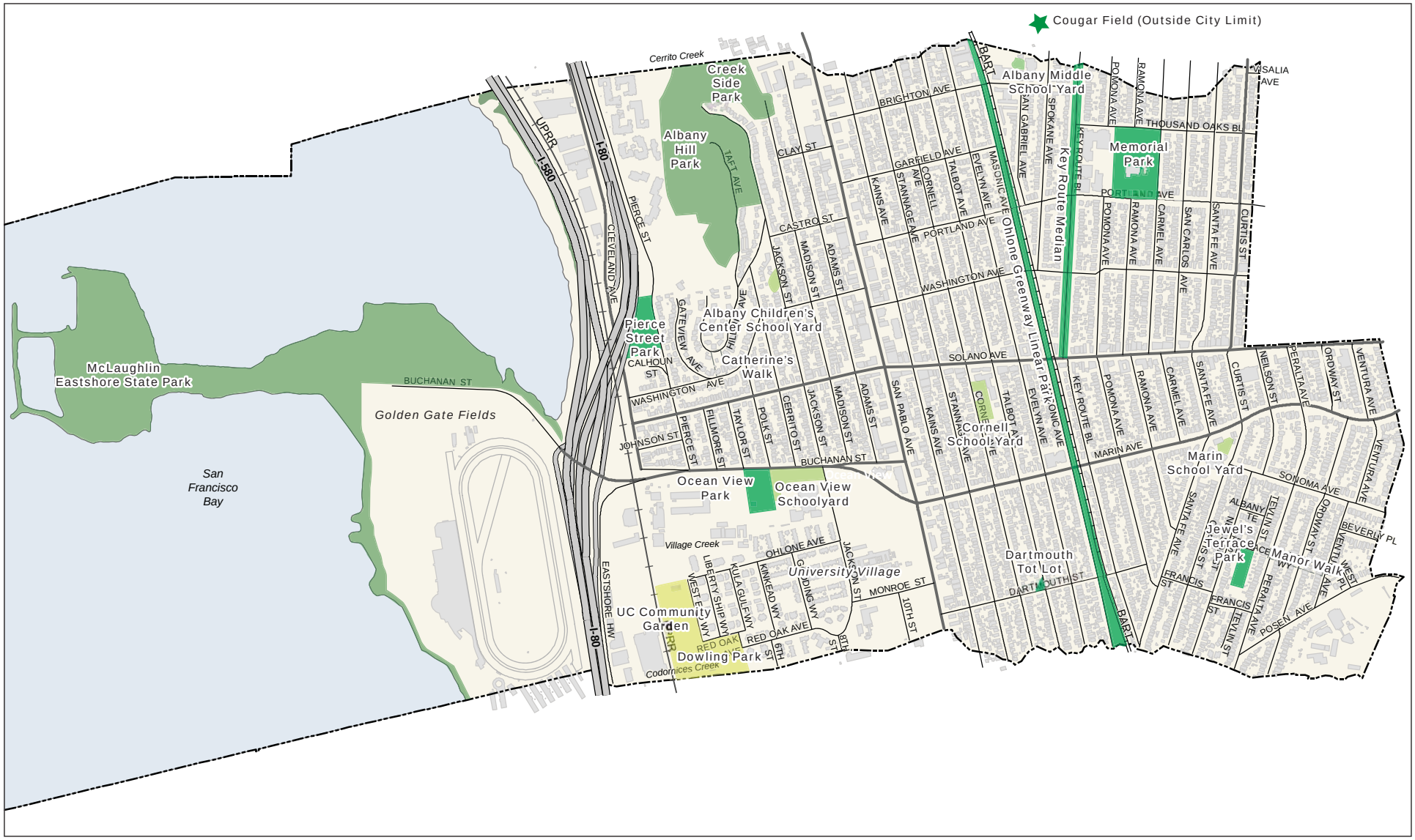
(1) Existing Facilities. Albany's parks include City-owned and operated properties, a linear greenbelt beneath the BART tracks, and a large, mostly unimproved open space area along the waterfront. The latter area is currently the focus of a transition planning process as part of the creation of McLaughlin Eastshore State Park, which extends along the east shore of San Francisco Bay in Oakland, Emeryville, Berkeley, Albany, and Richmond. The 2014 General Plan Existing Land Use Survey identified 112 acres of open space in Albany, including 21 acres of active open space and 91 acres of passive open space. In addition to the 112 acres, another 22 acres of public land is associated with school yards and athletic fields at Albany's schools, University Village recreation areas, and public buildings serving recreational purposes such as the senior center and community center.

Table IV.L-4 lists parks and open space areas in the City of Albany. These areas are mapped in Figure IV.L-5. The table excludes the conservation easements on the hillsides behind the high-density residential areas along Pierce Street. It also excludes submerged lands and tidal areas along the shoreline. The data is generally taken from the 2004 Albany Parks, Recreation, and Open Space Master Plan.

Table IV.L-4: Albany Park Inventory

Park Name	Type	Acreage	Comments
Active Park Areas			
Dartmouth Tot Lot	Mini-Park	0.07	Children's playground
Ocean View	Neighborhood	3.61	Contains teen center, lighted softball field, two tennis courts, basketball court, open play area, picnic area, parking, trails
Jewel's Terrace	Neighborhood	1.32	Contains two tennis courts, basketball court, picnic area, playgrounds, restroom, pathway
Memorial	Community	6.75	Contains baseball field, soccer field, grassy area, children's playground, picnic area, restrooms, four tennis courts, Veterans Memorial Building, community garden, child care facility
Ohlone Greenway	Linear	8.89	Green space beneath elevated BART tracks with multi-use linear trail, lawns, benches, landscaping
Catherine's Walk	Linear	0.02	Pathway and stairs
Manor Walk	Linear	0.11	Mid-block pathway
Community Center	Special Use	1.04	Not a park, per se. Includes community center building and library, with extensive recreational programming
Senior Center Teen Building	Special Use	0.25	Not a park, per se. Includes senior center building and adjacent house
Total Active City Park Areas		**22.06**	
Other Active Open Space Areas			
Schoolyards and School Fields	Schools	7.19	Includes asphalt play areas at Albany Children's Center, Marin, Cornell, Ocean View, Albany Middle, and Albany High, and field at Ocean View. School buildings and landscaped/utility areas have been subtracted out. Excludes 4.2 acres at Cougar Field
Cougar Field	Schools	4.20	Located in El Cerrito, but serves AMS and AHS
University Village Community Garden	University	3.00	University property
University Village Playground	University	0.44	University property
Dowling Park	University	4.10	University property
Little League Fields	University	1.70	May be moved as part of University Village development
Key Route Median	Linear	1.40	Landscaped median; not considered a park at this time
Pierce Street Park	*Neighborhood*	*4.10*	*Still in planning stage; former I-80 ROW*
Total Other Active Open Space Areas		**22.03**	Pierce Street acreage excluded as park does not yet exist
TOTAL ACTIVE OPEN SPACE		**44.09**	
Passive Open Space Conservation Areas			
Albany Hill	Conservation	12.75	Total excludes 7.3 acres of privately owned conservation easement land on the eastern portions of the parcels containing Bayside Commons, Bridgewater, and Gateview
Creekside	Conservation	5.11	North end of Madison Avenue, extending to Cerrito Creek
McLaughlin Eastshore	Regional	73.00	Includes Albany Bulb, Neck, Plateau, and Beach areas. Some of this land is owned by the City of Albany and some is owned by EBRPD. At this time, improvements are limited to trails and a parking area. Total excludes Caltrans ROW and submerged or tidal lands.
Total Passive Open Space Areas		**90.86**	
GRAND TOTAL		**134.95**	

Source: *Albany Parks, Recreation, and Open Space Master Plan, 2004; Barry Miller Consulting, 2015.*



LSA

LEGEND

- Albany City Limit
- Freeway
- BART Tracks
- Railroad Tracks
- Building
- Active Parks (City Operated)
- School Yards
- Passive Parks
- University-owned Parks

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SOURCE: CITY OF ALBANY, 2/13/15.

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FIGURE IV.L-5

City of Albany General Plan EIR

Parks and Open Space

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Table IV.L-4 also indicates the "type" of park, reflecting the classification of each facility into the following categories:

- **Mini-Park.** Mini Parks are small, single purpose play lots designed primarily for use by small children and their parents. Due to their size, facilities are usually limited to a small grass/turf area, a tot lot, and a small picnic area.
- **Neighborhood Park**. Neighborhood Parks combine playgrounds and parks and are designed primarily for unorganized recreation activities. They are generally less than 5 acres and serve persons within an approximately 0.5 miles radius. Typical facilities include a children's playground, picnic areas, trails, open grassy areas for passive use, basketball courts, and multi-use sports fields for soccer and baseball.
- **Community Park.** Community Parks provide areas for active sports and organized recreation programs as well as unorganized recreation for individuals and families. Community Parks are larger than neighborhood parks, with more varied facilities and serve residents within 1-2 miles. In suburban settings, such parks are usually 10 acres or more, but acreages of 5-10 acres are common in denser areas. Community parks typically have facilities such as restrooms, parking, and recreation buildings. Sports fields or similar facilities are often the central focus.
- **Linear Park/Greenway.** Linear Parks are developed landscaped areas that follow corridors such as streams, railroads, canals, power lines, and other linear features. This type of park usually contains trails, landscaped areas, viewpoints, and seating areas. Such parks may also include mid-block paths and staircases.
- **Special Use Area.** Special Use Areas are miscellaneous public lands occupied by a recreational facility.
- **Regional Park.** Regional Parks are intended to serve the City as well as a larger regional area. Regional Parks are large in size and often have features such as beaches, forests, or unique aesthetic qualities. Regional parks typically focus on passive recreation, although in an urban setting they may include active recreation facilities. The McLaughlin Eastshore State Park along the Albany waterfront meets regional park criteria. Many portions of the State Park also meet the criteria for Conservation Open Space (defined below).
- **Conservation Open Space.** Conservation Open Space consists of undeveloped land left in its natural state. Public access may be controlled, and recreation uses are often a secondary objective or may not be appropriate in some locations due to sensitive habitat. This type of park includes steep hillsides, wetlands, and areas with unique or endangered species.
- **School Open Space.** School Open Space includes areas on school properties dedicated to recreational use including schoolyards, playgrounds, and sports fields. Private sports fields (e.g., St. Mary's College High School) are not included in this category due to public access restrictions.
- **University Village Open Space**. University Village Open Space includes the playground area, community garden, and little league fields. Open Space on the University Village property is not owned by the City; however, it provides recreational opportunities for a subset of the population and expand the options available to Albany residents.

Regional Parks. Residents within Albany have access to other parks within the neighboring cities of El Cerrito and Berkeley and within the East Bay Regional Parks District (EBRPD). The City of El Cerrito has a total of approximately 181.4 acres of publicly owned recreation and open space facilities including City-owned open space, City-maintained recreational facilities, and recreation areas owned and maintained by the school district.[2] The City of Berkeley has a total of 230 acres of parkland including recreation centers, City-owned parks, regional/state parks, UC Berkeley Open Space, and recreation facilities on school campuses.[3]

The EBRPD operates and maintains 65 parks and 29 regional inter-park trails covering more than 119,000 acres in Alameda and Contra Costa counties. The EBRPD also manages 40 miles of accessible shoreline including 3 bay fishing piers. The EBRPD operates swimming areas, campsites, golf courses, picnic areas, as well as educational centers and banquet facilities. The EBRPD maintains its natural areas, park areas, trees, landscaping, buildings, and other structures at the EBRPD's park sites and facilities.[4]

(2) Park Standards. The adequacy of park systems is often measured using a per capita standard for the number of acres per 1,000 residents. The standards are typically designed for growing suburban communities, and are not always well-suited for small, densely populated cities like Albany. However, the standards can provide benchmarks for estimating the amount of additional parkland needed to maintain current ratios or bring the City closer to national standards.

The City's 2004 Park, Recreation, and Open Space Plan indicates that the City maintains a ratio of 13.33 acres of parkland per 1,000 residents. This ratio includes inaccessible open space such as conservation areas and wetlands in San Francisco Bay. City parks and other public open spaces available for public use would result in 2.31 acres per 1,000 residents.

Per capita acreage standards are often supplemented by distance standards (the distance a resident has to walk, bike, or drive to reach a park) and standards for specific types of facilities. The National Recreation and Park Association (NRPA) has a guideline that all residents should be within 0.5 miles of a neighborhood or community park. Some parts of Albany do not meet this distance standard, including the high-density areas along Pierce Street and the east side of Albany Hill. The City has six ballfields, four soccer fields, and limited indoor recreation facilities (e.g., gymnasiums). Per capita standards (number of fields or facilities per 1,000 residents) were adopted in the City in the 2004 Master Plan. In each case, an aspirational goal was set to expand the existing inventory.

(3) Needs and Planned Improvements. The 2004 Parks, Recreation, and Open Space Master Plan has been used to identify funding priorities and capital improvement needs for the Albany Park system for the last decade. Many of these projects have been completed, while others remain unfunded. In 2007, the City completed a major renovation of Ocean View Park, including reconfigured playfields, lighting, playground facilities, a restroom, a drinking fountain, and renova-

[2] El Cerrito, City of, 1999. *El Cerrito General Plan: Public Facilities and Services.* August 30.

[3] Berkeley, City of, 2001. *City of Berkeley General Plan: A Guide for Public Decision-Making: Open Space & Recreation.* April 23.

[4] East Bay Regional Parks District, 2013. *The District Master Plan.* July 16.

tion of infrastructure. A similar renovation was completed at Jewel's Terrace Park, with renovations to the restroom, replacement of turf and drainage, upgrades to the picnic area, and resurfacing of paths and basketball courts. Memorial Park was also refurbished, with a reconstructed ballfield, turf renovations, new support facilities, and landscaping improvements. The Ohlone Greenway has been refurbished, with new lighting, irrigation, and trail surfaces. A number of upgrades to the Veterans Memorial Building were completed, and playground equipment was replaced at the Dartmouth Mini-Park. Playground surfaces continue to be replaced as part of on-going renovation and maintenance programs.

There continue to be a number of unmet needs. These include a major renovation of the Veterans Memorial Building, which is owned by Alameda County. City acquisition of this facility will continue to be explored in the future, although the building needs extensive and potentially costly seismic renovation and accessibility improvements. The Ohlone Greenway continues to be evaluated as a possible location for additional improvements, including a fitness trail, interpretive signage, fruit and nut trees, game courts, and drought-tolerant landscaping. Opportunities to expand existing parks through acquisition of adjacent sites are being explored at several parks, although funding constraints are considerable.

Plans for a new park on Pierce Street are moving forward. Once completed, the park will expand the City's inventory of park acreage and provide new recreational opportunities. The park will include an ADA-accessible path, an area for young children, and grassy lawn areas. Further improvements are being studied, subject to available funding and community input. The City may also consider future landscaping improvements to the Key Route Median and various beautification projects to enhance the usability of public space. Other plans for the park system yet to be implemented include additional linear trails along sections of Codornices Creek, as well as further trail improvements in Creekside Park and on Albany Hill.

The City is also working with the EBRPD on transition planning for the publicly owned lands along the waterfront. In late 2014, a planning process was initiated to develop strategies for implementing the Eastshore State Park Plan along the Albany waterfront. Planned improvements include extension of the Bay Trail, improvements to some of the existing spur trails, interpretive signage, seating areas, and improvements to Albany Beach. Site clean-up and debris removal, shoreline stabilization, and ecological restoration projects are also under consideration.

(4) Recreational Programs. Recreational services are provided to Albany residents through Albany's Recreation and Community Services Department (Recreation Department). The Recreation Department offers activities such as yoga, Aikido, tennis, ballet, and karate, as well as special interest classes such as cooking, calligraphy, painting, carpentry, writing, and math. Many of the programs are targeted to specific age groups, including tiny tots, youth, adults, and seniors. The Recreation Department coordinates sports programs, such as softball, kickball, basketball, running, and soccer, and hosts a number of special events, including Dinner with Albany (every two years), Music in the Park, Albany Local Week, the 4th of July celebration, and Bike About Town. The Recreation Department also coordinates volunteer services and provides staff support to the Parks and Recreation Commission, the Arts Committee, and a number of ad hoc and special-focus committees.

Based on the analysis in the Parks, Recreation, and Open Space Master Plan, major needs for recreational programming include arts, crafts, lifetime sport programs, career placement programs, informal

sports activities, concerts in the parks, and after school programs. The City has limited indoor spaces where such activities can be carried out. Joint use agreements with the schools provide supplemental space where City facilities are constrained or unavailable. City services are also supplemented by organizations such as the YMCA, the University of California, and private service providers.

The Recreation Department is responsible for operating the Senior Center, the Memorial and Ocean View After-School Care Centers, the Senior/Youth Annex, and the Community Center. The Recreation Department also maintains the Ocean View and Memorial Park ball fields. Most park maintenance responsibilities are assigned to the Public Works Department. City maintenance is supplemented by the activities of Friends of Albany Parks, sports organizations, and volunteers.

In general, maintenance and rehabilitation needs have increased due to aging equipment and higher facility usage. The City relies on the General Fund to cover most of these costs. Larger expenses, including major park renovations and new facilities, may be funded through the Capital Facilities Fund or through bond measures.

(5) Other City Facilities. Facilities operated by the City that have not been discussed include City Hall and the Public Works Maintenance Center. City Hall is located at 1000 San Pablo Avenue. The building was constructed in 1966 and has been renovated and expanded since that time. It includes municipal offices (City Manager, City Attorney, Finance, Treasurer, Human Resources, Community Development [including Planning and Building], and Environmental Resources) and the City Council Chambers. The Police Department is located in the north end of the building, and the Fire Department and Emergency Operations Center are located immediately to the west.

The City also operates a Public Works Maintenance Center in a former industrial building located at 544 Cleveland Avenue. The City has acquired a vacant 0.86 acre site adjacent to this building at 540 Cleveland Avenue for a replacement facility. The new 17,000 square foot maintenance facility, which is funded in the City's current Capital Improvements Program, will include two stories, including a ground level maintenance shop and vehicle storage area and second level office and storage space.

Figure IV.L-1 illustrates the location of community facilities in Albany, including schools, the Library, public safety buildings, and administrative and maintenance facilities.

f. Regulatory Framework. This section describes applicable State, regional and local plans and policies that pertain to public services and parks and recreation.

(1) The Quimby Act. Section 66477 of the Government Code (the Quimby Act) authorizes jurisdictions to establish ordinances requiring developers of residential subdivisions to dedicate parkland or pay in-lieu fees for park and recreation purposes as a condition of approval of a tentative map or parcel map subdivision. AB 1600 amended the Quimby Act in 1982 to hold local governments more accountable for imposing park development fees. The AB 1600 amendment requires agencies to clearly show a direct relationship, or nexus, between the park fee exactions and the proposed project. Local ordinances must include definite standards for determining the proportion of the subdivision to be dedicated and the amount of the fee to be paid by the developer. AB 2936 was adopted as an amendment to the Quimby Act in 2002, and allows counties and cities to spend up to 10 percent of their Quimby Act fees to prepare master plans for park and recreation facilities every three years.

(2) San Francisco Bay Trail Plan. Adopted by the Association of Bay Area Governments (ABAG) in 1989, the San Francisco Bay Trail is a regional initiative to create a public, multi-use trail that connects the communities surrounding the San Francisco Bay. The San Francisco Bay Trail Plan proposes development of a regional hiking and bicycling trail around the perimeter of San Francisco and San Pablo Bays. The Bay Trail Plan[5] was prepared by ABAG pursuant to Senate Bill 100 (passed in 1987), which mandated that the Bay Trail provide connections to existing park and recreation facilities; create links to existing and proposed transportation facilities; and be planned in such a way as to avoid adverse effects on environmentally sensitive areas. The Bay Trail Plan also contains policies to guide selections of the trail route and implementation of the trail system. Policies fall into five categories: trail alignment, trail design, environmental protection, transportation access, and implementation. The Bay Trail policies and design guidelines are intended to complement the adopted regulations and guidelines of local managing agencies. When complete, the Bay Trail will be a continuous 500-mile recreational corridor that will link all nine Bay Area counties and 47 cities.

Policies pertaining to parks and recreation found in the San Francisco Bay Trail Plan are listed below.

- *Trail Alignment Policy 1*: Ensure a feasible, continuous trail around the Bay.
- *Trail Alignment Policy 2*: Minimize impacts on and conflicts with sensitive environments.
- *Trail Alignment Policy 3*: Locate trail where feasible, close to the shoreline.
- *Trail Alignment Policy 6*: In selecting a route for the trail, incorporate local agency alignments where shoreline trail routes have been approved. Incorporate San Francisco Bay Conservation and Development Commission public access trails where they have been required.
- *Trail Alignment Policy 7*: Where feasible and consistent with other policies of this plan, new trails may be routes along existing levees.
- *Trail Alignment Policy 9*: In selecting a trail alignment, use existing stream, creek, slough and river crossings where they are available. This may require bridge widenings in some locations. In selecting trail alignments, new stream, creek and slough crossing should be discouraged. Where necessary because acceptable alternatives do not exist, bridging may be considered.
- *Trail Alignment Policy 10*: In order to minimize the use of existing staging areas along the shoreline and to reduce the needs for additional staging areas, the choice of trail alignment should take full advantage of available transit, including rail service (e.g., Caltrain, BART), ferries and bus service.
- *Trail Alignment Policy 11*: Connections to other local and regional trail and bikeway systems should be actively sought in order to provide alternatives to automobile access to the Bay Trail. In particular, opportunities should be explored for trail connections to the Bay Area Ridge Trail, which is envisioned to circle the Bay along the region's ridgelines.
- *Trail Design Policy 12*: Provide access wherever feasible to the greatest range of trail users on each segment.
- *Trail Design Policy 15*: Highlight the interpretive potential of certain trail segments, including opportunities for interpretation, education, rest and view enjoyment.
- *Trail Design Policy 16*: Incorporate necessary support facilities, using existing parks, parking lots, and other staging areas wherever possible.

[5] Association of Bay Area Governments, 1989. *The Bay Trail.* July.

- *Environmental Protection Policy 23*: The Committee is aware of the ecological value of wetlands; in many cases, they provide habitat for a variety of endangered species. In the San Francisco Bay Area, these areas serve as a vital link in the Pacific flyway for feeding, breeding, nesting and cover for migratory birds. To avoid impacts in wetlands habitats, the Bay Trail should not require fill in wetlands, and should be designed so that use of the trail avoids adverse impacts on wetland habitats.
- *Environmental Protection Policy 25*: The Bay Trail should not be defined as a continuous asphalt loop at the Bay's edge, but as a system of interconnecting trails, the nature of which will vary according to the locale and the nature of the terrain and resources in the vicinity of each particular trail segment.
- *Environmental Protection Policy 27*: The path should be designed to accommodate different modes of travel (such as bicycling and hiking) and differing intensities of use, possibly requiring different trail alignments for each mode of travel, in order to avoid overly intensive use of sensitive areas.
- *Implementation Policy 45*: Local agencies should be sensitive to the natural environment not only in project planning to implement segments of the Bay Trail, but also in maintaining and managing the trail once built.

(3) City of Albany 1992 General Plan. The following policies from the 1992 General Plan address public services and recreation:

- **Policy LU 4.5:** Actively encourage the appropriate future use of the School District-owned library site on Solano Avenue, giving consideration to its impact upon the commercial and pedestrian environment of Solano Avenue.
- **Policy LU 4.6:** Enhance and develop public spaces along Solano Avenue, including the area in front of the old Albany Library. Consider replacing the existing Kiosk with a better designed and maintained structure for posting notices and providing public information.
- **Policy LU 7.1:** Designate the UC lands along the San Pablo Avenue frontage and a portion of Buchanan Street at the intersection of San Pablo for commercial retail and compatible uses. Incorporate the recommendations in the San Pablo Avenue Design Guideline and Public Improvement Study as part of this effort. In addition, consider preserving a portion of the Gill Tract, particularly those portions with important and significant stands of trees, as open space when any re-use of this area is proposed.
- **Policy LU 7.2:** Participate actively in the UC Master Plan process for redevelopment of the Gill Tract and Albany Village. Specific concerns that must be addressed in this process include but are not limited to:
- A. Coordinated planning efforts for the City's, University's, and Albany School District's park, recreation, and open space lands to improve public access, improve parking capacity, increase use, and improve overall traffic safety in the area for students, pedestrians and automobiles.
- D. Specify and reach new agreements with the University for financial and/or in-kind support of City infrastructure, services and capital facilities that are used by U.C. Village, including but not limited to sanitary and storm sewers, public safety services, public streets, and parks and open spaces.
- **Policy LU 8.1:** Evaluate the potential impacts of future major development proposals upon Albany's schools, police, fire and emergency services, and park and recreational facilities.
- **Policy LU 8.2:** Continue to require appropriate public service and facility impact mitigation programs, including fees upon new development and expansions to existing development, in order to maintain and improve the quality of Albany's public services and facilities.

- **Policy LU 8.3:** Construct a new corporation yard facility to adequately house the City's maintenance equipment and workers.
- **Policy LU 8.5:** Assist and support the School District in its efforts to improve existing school facilities and provide for expanding enrollments.
- **Policy LU 9.4:** Designate the entire crest of Albany Hill for permanent open space use and seek public dedication of these lands at the time of private development proposals through the City's Subdivision Ordinance.
- **Policy CIRC 6.2:** Work to obtain funding sources to develop the Bay Trail in Albany and along the entire East Bay Shoreline corridor as an alternative, parallel route to 1-80.
- **Policy CROS 3.1:** Designate the crest of Albany Hill for open space and require dedication of this area for public use through the City's subdivision ordinance requirements (see Land Use Element Policies).
- **Policy CROS 6.1:** Update the 1974 Park and Recreation Master Plan for the City and establish specific goals, projects, funding sources and time schedules. This work should include detailed improvement and maintenance plans for the City's parks, and be coordinated with the Five Year Capital Improvement Projects Program.
- **Policy CROS 6.2:** Work in conjunction with all existing and potential recreational land-holding parties to promote joint planning, acquisition, development, and joint use and maintenance of park sites and recreational facilities, including childcare, community facilities and athletic fields.

  Specifically, encourage and support joint planning efforts for the University of California lands (University Village). Consideration should be given to moving the existing athletic fields and relocating other Village community facilities in order to achieve maximum coordination and benefits for both the Village residents and the City.
- **Policy CROS 6.5:** Continue to work with Alameda County on improving the operation and management of the Veterans' Memorial Building and increasing community access to the facility.
- **Policy CROS 7.1:** Implement the Bay Trail Plan along the Albany shoreline. Work with the landowner, the track operator, appropriate citizen and environmental groups, the State Department of Parks and Recreation, Caltrans, the East Bay Regional Park District, the Coastal Conservancy and ABAG to achieve this goal.
- **Policy CROS 7.2:** Consider the important, surrounding wildlife and vegetation resources that must be adequately protected when developing the alignment of the Bay Trail.
- **Policy CROS 7.3:** Require that public access to the shoreline and to Albany Point be a part of any future waterfront development plans, and that future automobile, pedestrian and bicycle access be consistent with and coordinated with future State and regional park and open space plans at the Waterfront.
- **Policy CROS 7.4:** Continue to work with the State Department of Parks and Recreation, the cities of Emeryville and Berkeley, and other State, regional, and local agencies to develop the former Albany landfill site into a State Waterfront Park and to develop the first phase of the Eastshore State Park.
- **Policy CROS 7.5:** Work closely with the EBRPD, the cities of Berkeley, Emeryville, Richmond and Oakland, and other State, regional and local groups to complete the acquisition, planning and development of the Eastshore State Park.
- **Policy CROS 7.6:** Assure that the planning for the East Shore State Park is consistent with the City's conceptual plan for the Albany portion of the East Shore State Park.

- **Policy CROS 8.1:** Continue working with the Albany Unified School District, the YMCA, U.C. Berkeley and other providers to develop and coordinate child care programs.
- **Policy CROS 9.1:** Take advantage of all available funding sources in maintaining and improving the programs at the Senior Center.
- **Policy CHS 1.2:** Review and revise City Codes and regulations to ensure that future construction of critical facilities (schools, police stations, fire stations, etc.) in Albany will be able to resist the effects of an earthquake of M 7.5 on the Hayward Fault and sustain only minor structural damage, remain operative, safe, and quickly able to be restored to service.
- **Policy CHS 2.4:** Maintain present level of fire protection service throughout Albany.
- **Policy CHS 2.5:** Ensure that police service to all areas of Albany maintains its present level of service.

2. Impacts and Mitigation Measures

This section provides an assessment of the potential public services and recreation impacts related to implementation of the Draft General Plan. The criteria of significance are identified followed by an analysis of the impacts associated with implementation of the Draft General Plan. Mitigation measures are recommended, as necessary.

a. Criteria of Significance. Development of the proposed project would have a significant impact on the environment related to public services and recreation if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: fire protection; police protection; schools; or parks;
- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

b. Project Impacts. The following discussion describes the potential impacts related to public services and recreation that would result from implementation of the proposed project.

(1) Result in Substantial Adverse Physical Impacts. As discussed in Section IV.B, Population and Housing, implementation of the Draft General Plan is anticipated to increase the population of the City by 1,800 residents and 815 housing units.

Fire Protection. The Draft General Plan includes the following policies and actions related to fire protection services:

- **Policy T-4.10: Emergency Vehicles**. Provide adequate access for emergency vehicles as development takes place and as road modifications are completed. The Albany Police and Fire Departments should participate in development review and transportation planning to ensure that adequate access is provided. Painted curbs should be used as needed to limit parking in areas where emergency vehicle access is needed or where vehicle parking would impede traveler safety.

- **Policy CSF-2.1: Levels of Service**. Maintain police and fire services at or above current levels. Regularly explore improvements and operational changes with the potential to improve readiness, reduce crime, lower the risk of urban structure fires, improve response time, and enhance overall public safety.
- **Policy CSF-2.4: Volunteers**. Maintain opportunities for Albany volunteers to assist the local police and fire departments.
- **Policy CSF-2.7: Fire Protection Capacity**. Ensure that fire protection facilities such as hydrants are regularly inspected and that water pressure and system capacity are sufficient to meet local fire-fighting needs.
- **Policy CSF-2.8: Mutual Aid**. Maintain collaborative relationships with police and fire departments in adjacent cities and with Alameda and Contra Costa Counties, to more effectively protect public safety and respond to major emergencies.
- **Policy CSF-2.9: Emergency Medical Services**. Ensure the provision of high quality emergency medical response services.
- **Policy CSF-2.10: Development Review**. Engage the police and fire departments in the review of major development applications to ensure that concerns about emergency vehicle access, crime prevention, and fire safety are adequately addressed.
- **Action CSF-2.B: Code Updates**. Periodically update city codes to incorporate State fire prevention requirements and other measures deemed necessary to reduce the risk of fires and the risk of structure damage or casualties in the event of a fire.
- **Action CSF-2.C: Balancing Complete Streets and Emergency Vehicle Access**. Work with the Fire Department to ensure that the implementation of "Complete Streets" and traffic calming initiatives do not reduce the ability to effectively and quickly respond to emergencies, or otherwise compromise emergency vehicle access.
- **Policy CSF-6.1: Water Supply, Storage, and Distribution**. Work with East Bay Municipal Utility District (EBMUD) to ensure the adequacy and safety of water utilities. The City will work with EBMUD to plan for an adequate long-term water supply, the safety of the water storage and distribution system, the adequacy of the system to support fire flow needs, and the safe treatment and disposal of Albany's wastewater.

The additional residents and housing units associated with implementation of the Draft General Plan would increase demand for fire protection and emergency medical services. In addition, development projected under the Draft General Plan would result in additional commercial development, which would also increase the need for fire protection services. The Fire Department does not maintain a staffing ratio based directly on population; staffing levels are identified based on service demand and other factors.

Potential impacts to emergency response times would be reduced through implementation of Draft General Plan Policies T-4.10, CSF-2.1, and CSF-2.8 and Action CSF-2.C (listed above). Draft General Plan Policies CSF-2.1 and CSF-2.8 would ensure the maintenance of adequate fire protection and facilities to serve the needs of the community and for the Fire Department to collaborate with adjacent cities to more effectively protect public safety. Adequate fire staffing levels and sharing services with other jurisdictions would assist in decreasing emergency response times. Draft General Plan Policy T-4.10 and Action CSF-2.C would ensure adequate access for emergency vehicles within the City. Draft General Plan Policy CSF-2.7 would ensure fire facilities are regularly inspected to meet the needs of local firefighters. Draft General Plan Policies CSF-2.10 and Action CSF-2.B would

ensure new developments incorporate the most up to date fire prevention requirements and that the Fire Department is involved in the review process. Draft General Plan Policy CSF-2.10 would allow the Fire Department to be involved in development review to ensure that emergency access and fire safety issues are adequately addressed. Action CSF-2.B would ensure periodic updates for City codes to incorporate State fire prevention requirements.

The increase in population associated with the implementation of the Draft General Plan would not result in the need to construct or alter existing fire department facilities.[6] The Draft General Plan would result in an increase in equipment use which may result in more frequent replacement of emergency vehicles and would potentially require additional personnel or additional mutual aid agreements. Additionally, the Fire Department would continue to maintain acceptable insurance service office ratings and response times. With implementation of the Draft General Plan policies, development associated with the Draft General Plan would have a less-than significant impact on emergency services within the City.

Police Protection. The Draft General Plan includes the following policies and actions related to police services:

- **Policy T-4.10: Emergency Vehicles.** Provide adequate access for emergency vehicles as development takes place and as road modifications are completed. The Albany Police and Fire Departments should participate in development review and transportation planning to ensure that adequate access is provided.
- **Policy CSF-2.1: Levels of Service.** Maintain police and fire services at or above current levels. Regularly explore improvements and operational changes with the potential to improve readiness, reduce crime, lower the risk of urban structure fires, improve response time, and enhance overall public safety.
- **Policy CSF-2.2: Community Policing.** Support a community-based approach to police services which emphasizes communication and transparency and involves a high-level of interaction between officers, residents, local businesses, and community groups.
- **Policy CSF-2.3: Youth Relations.** Maintain a positive relationship between law enforcement and Albany youth through Police Activities League programs, the Youth Academy, and other team-building programs that engender goodwill and fellowship.
- **Policy CSF-2.4: Volunteers**. Maintain opportunities for Albany volunteers to assist the local police and fire departments.
- **Policy CSF-2.8: Mutual Aid.** Maintain collaborative relationships with police and fire departments in adjacent cities and with Alameda and Contra Costa Counties, to more effectively protect public safety and respond to major emergencies.
- **Policy CSF-2.10: Development Review.** Engage the police and fire departments in the review of major development applications to ensure that concerns about emergency vehicle access, crime prevention, and fire safety are adequately addressed.
- **Action CSF-2.A: Technology and Crime Prevention.** Use mapped data on crime and traffic accidents to improve crime-solving capacity and keep the public informed of criminal activity and traffic hazards in the community.

[6] Albany Fire Department, personal communication with Barry Miller, Planning Consultant, 2015

- **Action CSF-2.D: Crime Prevention Through Environmental Design.** Adopt guidelines for preventing crime and creating "defensible" space through the design of new development and public spaces.
- **Action CSF-2.E: Public Safety Staff and Facilities.** Periodically evaluate the need for increased police and fire staff, facilities, vehicles, technology and other equipment, and take steps to provide for those needs in the budgeting and capital improvement programming processes.

Implementation of the Draft General Plan would increase the population of the City by approximately 1,800 residents and 815 housing units. These additional residents would increase demand for law enforcement services. In addition, development associated with the Draft General Plan would result in additional commercial development, which would also increase the need for law enforcement services. The Police Department does not maintain a staffing ratio goal based directly on population but instead staffing levels are identified based on service demand and other factors. It is anticipated that the population growth resulting from the implementation of the Draft General Plan would increase the demand for police services. The Police Department has not adopted a formal response time standard. Population growth associated with the Draft General Plan would increase the number of calls to the Police Department requesting emergency assistance. This increase in the number of calls could increase emergency response times.

Impacts to emergency response times would be reduced through implementation of Draft General Plan Policies CSF-2.1, CSF-2.8, CSF-2.A, and CSF-2.E. Draft General Plan Policies CSF-2.1 and CSF-2.8 would ensure the maintenance of adequate police services and facilities to serve the needs of the communities and for the Police Department to collaborate with adjacent cities to more effectively protect public safety. Adequate police staffing levels and sharing services with other jurisdictions would assist in decreasing emergency response times. Draft General Plan Policy CSF-2.A would ensure the use of technology to improve crime-solving capacities of the Police Department. Draft General Plan Policies CSF-2.10 and Action CSF-2.D would ensure new developments incorporate crime prevention strategies through design and that the Police Department is involved in the review process. Therefore with the implementation of Draft General Plan Policies, development associated with the Draft General Plan would have a less-than-significant impact on police services in Albany.

As previously described, implementation of the Draft General Plan would result in population growth and additional commercial development, resulting in an increased demand for law enforcement services. In addition to population, the Police Department uses multiple factors to assess its staffing level, including: crime statistics, traffic, service calls, and officer availability. For the purpose of this analysis, if population projections were used to identify staffing ratios, staffing levels would increase from 26 sworn officers under baseline conditions to approximately 29 sworn officers under Draft General Plan full implementation conditions. Under this analysis, the Police Department currently maintains a ratio of approximately 1.4 officers per 1,000 residents. Draft General Plan-related population growth would require the addition of 3 sworn officers, resulting in the need for additional vehicles, parking spaces, equipment, and facilities. The Police Department is currently over capacity in their existing office space and does not have sufficient storage space for police property and police equipment, including vehicles.[7] General Plan Action CSF-2.E would ensure that the City would

[7] Albany Police Department, personal communication with Barry Miller, Planning Consultant, 2015

evaluate the need for increased police staff, facilities, vehicles, technology, and other equipment and take steps to provide for those needs in budgeting and capital improvement programming processes. Therefore, with the implementation of Draft General Plan Policies and Actions, development associated with the Draft General Plan would have a less-than-significant impact on police services in Albany.

Schools. The Draft General Plan includes the following policies and actions related to schools:

- **Policy LU-4.1: Civic Facilities.** Provide outstanding schools and public facilities that meet the educational, social, and recreational needs of Albany residents. Such facilities should provide safe, attractive places for the delivery of services to Albany residents and businesses while fostering interaction among persons of all ages and interests.
- **Policy LU-4.2: Large-Scale Institutional Uses.** Work with community institutions such as St. Mary's College High School, the USDA, and the California Department of Rehabilitation Orientation Center to address neighborhood impacts and longterm facility planning issues. Such institutions are a valued part of the Albany community and should be sustained.
- **Policy LU-4.4: Mitigating Development Impacts.** Ensure that the effects of proposed development projects on civic uses, such as schools, parks, the Library, and other public buildings are considered before such projects are approved. Provisions to mitigate impacts and ensure that development "pays its way" through fees or improvements to public facilities should be included in project approvals.
- **Policy CSF-1.1: School Facility Improvements.** Support the AUSD's efforts to modernize and replace school facilities to ensure student safety and the District's ability to meet long-term academic needs.
- **Policy CSF-1.2: Coordinated Planning.** Involve AUSD in the review of development proposals with the potential to generate new students or otherwise impact school campuses. Conversely, monitor AUSD enrollment trends and forecasts so that potential impacts of changes in student enrollment or school service area boundaries can be considered in land use and transportation decisions.
- **Action CSF-1.A: School Impact Fees and Planning Studies.** Support Albany Unified School District efforts to collect school impact fees which pay for the cost of expanding school capacity and improving school facilities. The City will provide technical assistance to AUSD as needed on nexus studies for impact fees, facility master plans, and other long-range planning documents.
- **Action CSF-1.D: School Facility Renovation and Reconstruction.** Work with the School District in the implementation of the 2014 AUSD Facility Master Plan, including the rebuilding of Marin School and Ocean View School. Explore opportunities for the inclusion of facilities which provide collateral benefits to Albany residents, such as improved playgrounds and community meeting space.

Implementation of the Draft General Plan could result in a total of 815 new housing units. Approximately 175 housing units are associated with the Belmont Village/University Village Mixed-Use Project which are designated for senior housing and are not expected to generate students. Therefore, implementation of the Draft General Plan could result in 640 additional housing units that may have children present. For the purpose of this analysis, it is assumed that 85 percent of new housing would be multi-family units and 15 percent would be single-family. Therefore, approximately 544 units would be multi-family housing and 96 units would be single-family housing. Using a 5 percent vacancy rate, which is considered indicative of a healthy real estate market, this equates to 517 multi-family households and 91 single-family households.

Student generation rates are used to predict the number of students associated with new residential development and the rates are different for single-family and multi-family dwelling units. AUSD's student generation rate is 0.6 students per housing unit. AUSD has not established student generation rates specific to multi-family dwelling units; however, based on address data for existing students, a multi-family unit generally yields between 0.16 and 0.41 students. For this analysis, the more conservative 0.41 student per multi-family housing unit rate was used. Using the student generation ratios identified above, these additional housing units could generate approximately 266 students. Table IV.L-5 shows a summary of student generation yield by elementary school, middle school, high school.

Table IV.L-5: Student Generation Yield by School Type

	Housing Units Generating Students [a]	Elementary School Students [b]	Middle School Students [c]	High School Students [d]	Total Additional Students
Multi-Family	544	132	49	42	223
Single-Family	96	34	13	11	58
Total	**640**	**166**	**62**	**53**	**281**

[a] Units for senior housing associated with the Belmont Village/University Village Mixed-Use Project are assumed to not generate any students.
[b] Elementary school generation rates are 0.356 students for single-family and 0.242 students for multi-family
[c] Middle school generation rates are 0.133 student for single-family and 0.090 students for multi-family
[d] High school generation rates are 0.111 students for single-family and 0.078 students for multi-family

Source: City of Albany, 2014; AUSD, 2014; AUSD Fee Justification Study, 2015; LSA Associates, Inc., 2015.

AUSD's facilities have a District-wide capacity for approximately 3,487 students. Current enrollment exceeds capacity by 11 percent with approximately 3,881 students enrolled in AUSD facilities. Elementary schools are operating at 124 percent of capacity, the middle school is at 115 percent of capacity, and the high school is at 94 percent of capacity. The high school has an existing enrollment of 1,195 students with an excess capacity for approximately 76 students. Therefore, the existing high school facility has adequate capacity to serve the approximately 53 additional high school students that could result from the implementation of the Draft General Plan.

Growth associated with implementation of the Draft General Plan could exceed the capacity of public elementary and middle school facilities resulting in the need for additional school facilities to maintain acceptable service ratios. However, payment of school impact fees and AUSD's methods of implementing measures specified by Government Code 65996 are meant to offset increased student enrollment. Payment of school facility mitigation fees has been deemed by the State legislature (per Government Code Section 65995(h)) to constitute full and complete mitigation of impacts of a development project on the provision of adequate school facilities, even though, as a practical matter, additional funding, usually from statewide or local bond measures, are needed to create new school capacity. Specific school facility developments would be subject to environmental review on a project-by-project basis. Through the payment of associated development fees, compliance with applicable State and local regulations, the implementation of the Draft General Plan Policy LU-4.4 and Action CSF-1.A would have a less-than-significant impact on school facilities.

Parks and Recreation. The Draft General Plan includes the following policies and actions related to parks, recreation, and open space:

- **Policy PROS-1.2: Albany Hill.** Designate the crest of Albany Hill and adjacent upper slopes for open space and require dedication of this area for conservation and public access as a condition of approval for any proposed development on parcels along the ridgeline. Albany Hill should be considered an essential and valuable regional open space resource.
- **Policy PROS-1.3: Albany Waterfront.** Recognize the importance of the Albany waterfront as a multi-use open space area and a vital part of the cultural landscape of the East Bay. The City will work toward achieving the maximum feasible open space and recreational uses in the waterfront area and improved public access to and along the Albany shoreline. All future land use decisions for the area west of I-80 shall be consistent with State and regional park plans, trail plans, and Bay conservation and shoreline access plans.
- **Policy PROS-1.4: Urban Open Space**. Incorporate a variety of small open spaces, such as pocket parks, plazas, courtyards, rooftop gardens, tot lots, and landscaped areas, into new development.
- **Policy PROS-1.7: Creeks.** Recognize creeks as an important open space element, and a means of defining the edges of the city and bringing open space and nature into neighborhoods.
- **Action PROS-1.C: Albany Hill Conservation Easements.** Work the owner of the 11-acre vacant parcel south of Gateway Towers and land conservation organizations to develop a site plan for the property which maximizes the conservation of open space on the upper slopes and ridgeline portions of the site. Continue to work with owners of other private properties on Albany Hill to reduce fire hazards and manage the Hill's unique ecosystem.
- **Action PROS-1.F: Eastshore State Park.** Actively participate in the planning and development of McLaughlin Eastshore State Park.
- **Policy PROS-2.1: Park Hierarchy.** Maintain a hierarchy of mini-parks, neighborhood parks, and community parks in Albany, with guidelines to distinguish the types of uses and activities appropriate in each park type.
- **Policy PROS-2.2: Non-Traditional Parks.** Supplement traditional City parks with linear parks, conservation open spaces, school facilities, regional parks, and other unique parks that complement the network.
- **Policy PROS-2.3: Per Capita Service Standards.** Strive for a service standard of at least 3 acres of active parkland per 1,000 Albany residents. This standard should provide the basis for parkland dedication and in-lieu fee requirements for new development.
- **Policy PROS-2.5: New Parks.** Pursue the development of new parks that accommodate services and facilities not present in Albany today and that respond to increased demand for park and recreational space and facilities.
- **Policy PROS-2.6: New Facilities in Existing Parks.** Balance the demand for new recreational facilities and structures with the need for unprogrammed open space that meets other recreational needs. Where possible, the development of new recreational facilities and amenities should avoid displacing or crowding out other activities. Maintaining a mix of passive and active open spaces is important to the function and aesthetics of community, neighborhood, and regional parks.
- **Policy PROS-2.9: Park Expansion.** Explore opportunities to expand existing City parks on to vacant or underutilized land on the perimeter of each park site.
- **Action PROS-2.A: Parkland Fees and Dedication.** Maintain park in-lieu fees and/or dedication requirements to ensure that new development pays its fair share or otherwise provides for the demand for parkland and recreational facilities it creates.

- **Action PROS-2.B: Pierce Street Park.** Develop a new park on the 4.5-acre former freeway right-of-way site bounded by Pierce Street, Cleveland and Washington Avenues and the I-80 freeway. Development of the site should be phased based on the availability of funds and community input.
- **Action PROS-2.D: Master Plan Updates.** Periodically update the Parks, Recreation, and Open Space Master Plan to identify specific projects, funding sources, and time schedules for implementation. This should include detailed improvement and maintenance plans for the City's parks, which are coordinated with the five-year Capital Improvements Program.
- **Policy PROS-3.2: Modernization.** Continue to enhance and modernize recreational buildings such as the pre-school building and the senior center.
- **Policy PROS-3.3: Sports Fields.** Renovate and maintain City sports fields and continue to collaborate with areawide sports field users on field programming and maintenance. Explore opportunities to create new sports fields, including fields on locations outside of Albany, through joint powers agreements, and joint efforts with field users. In addition, to increase the usefulness of athletic fields, encourage field designs and configurations that can accommodate multiple sports rather than one sport alone.
- **Policy PROS-3.12: Funding and Grants.** Consider a variety of strategies to increase funding for capital projects and to enhance park maintenance, such as local fundraising, grants, development partnerships, and special taxing districts such as Landscape and Lighting Assessment Districts.
- **Policy PROS-5.2: University Village.** Work with the University of California to maintain baseball/ softball fields, a recreation center for Village residents, a community garden, and other amenities which benefit University Village residents and Albany as a whole. Promote access to the parks and athletic fields within University Village by Albany residents and sports teams, and encourage the University to maintain a "no net loss" policy for the recreational open space acreage within the University Village property.
- **Action PROS-6.B: Albany Hill Trails.** Provide for a dedicated trail easement through the 11-acre parcel on the west side of Albany Hill, with connections between Pierce Street, the end of Hillside Avenue, and existing trails in Creekside Park. Future trail alignments on Albany Hill should be sensitive to topography and avoid excessively steep grades. The implementation of these policies, in addition to the development of planned park, recreational, and open space areas, would ensure that sufficient park space would be available to accommodate anticipated population growth that would occur as a result of Draft General Plan implementation.
- **Action PROS-6.C: Cerrito Creek Trail**. Provide for a pedestrian bridge across Cerrito Creek between Albany Hill and the north side of the Creek in El Cerrito, consistent with the adopted Creekside Master Plan. Explore options to provide additional linear creek access between San Pablo Avenue and Albany Hill, including a potential future trail easement on the north end of the Orientation Center for the Blind.
- **Action PROS-6.D: Codornices Creek Trail.** Continue joint planning with the University of California and the City of Berkeley on improvements to the Codornices Creek Trail. Explore options for eventual spur connections to the Bay Trail.
- **Action PROS-6.F: Ohlone Greenway.** Pursue improvements to the Ohlone Greenway, such as game courts, interpretive signage (historic, natural, cultural, etc.), tot lots, toddler play facilities, a par course, and community gardens, where appropriate and compatible with noise levels, nearby residences, and other design factors.
- **Action PROS-6.G: Key Route Median.** Pursue trail improvements, landscaping, and other amenities on the Key Route Boulevard median between Solano Avenue and El Cerrito.

Population and housing growth resulting from implementation of the Draft General Plan would increase demand for parks, open space, and recreational facilities in and around Albany. Development under the Draft General Plan could result in a total population of 20,385 residents in Albany, which would require approximately 61 acres of active open space using the standard of 3 acres per 1,000 residents (Draft General Plan Policy PROS-2.3). The City would need an additional 16.91 acres of active open space beyond existing conditions to meet this goal.

The Draft General Plan identifies 140 total acres of designated open space. Draft General Plan Action PROS-2.B would ensure the development of Pierce Street Park on a 4.5 acre property bounded by Pierce Street, Cleveland Avenue, and Washington Avenue. Action PROS-6.G call for improvement of Key Route median with park amenities and Action PROS-6.F calls for additional recreational amenities in the Ohlone Greenway. In addition, Action PROS-1.C suggests that a substantial part of the 11-acre developable parcel on the west side of Albany Hill be set aside as permanent open space. Actions PROS-6.C and 6.D call for enhancement of recreational trails– potentially including more parkland– along Cerrito and Codornices Creeks. Draft General Plan Policy PROS-5.2 would ensure the City's collaboration with the University of California to maintain the parks and recreational opportunities at University Village.

Of the total 140 acres of designated open space approximately 91 acres would be passive open space areas and 49 would be active open space areas. Using the standard of 3 acres of active parkland per 1,000 residents, implementation of the Draft General Plan would not meet this goal. Under full implementation of the Draft General Plan there would be approximately 2.37 acres of active parkland per 1,000 residents. This amount is consistent with the City's current ratio of approximately 2.31 acres of active parkland per 1,000 residents.

No parks and recreational facilities would be removed as a result of Draft General Plan implementation. Population and housing growth resulting from implementation of the Draft General Plan would increase demand for parks, open space, and recreational facilities in and around Albany. There are recreational facilities within the City and the East Bay to serve any potential population increase associated with implementation of the Draft General Plan, and this increase in population would not require the construction of new or physically altered parks, recreational facilities and open space facilities causing significant environmental impact. This impact would be less than significant.

(2) Increase Usage Such That Substantial Physical Deterioration Would Occur. As previously described, the population of Albany is projected to increase by approximately 1,800 residents by 2035. The majority of growth is anticipated to occur along the commercial corridors of San Pablo Avenue and Solano Avenue. Existing neighborhood and regional parks would not be subject to substantial physical deterioration from the population increase associated with the implementation of the Draft General Plan because existing parkland and open space to serve existing and new residents are dispersed throughout the City and include different types of parks and recreational facilities. The Draft General Plan Parks, Recreation, and Open Space Element policies identified above address the maintenance of City's park and recreational facilities and City's priority to accommodate additional demand through the addition of park and open space resources. Implementation of the associated policies in the Draft General Plan would ensure the increased demand and use resulting from an increase in citywide population would not significantly accelerate the deterioration of existing park, recreational, and open space facilities. This impact would be less than significant.

(3) Include or Require Construction or Expansion of Recreational Facilities. The City will evaluate proposals for new facilities as they are proposed to determine and prepare appropriate environmental analysis.

As previously described, because of limited growth opportunities and the built-out nature of Albany, development of such recreational facilities are not likely to have significant physical effects to the environment. Pierce Street Park is located on land previously owned as right-of-way by Caltrans. While Policy PROS-2.3 does include language that the City should "strive" to meet the 3 acres/1,000 resident standard, there is no prescription that additional park areas be added to the City.

The Draft General Plan includes the following policies and actions related to recreation facilities and parks:

- **Policy PROS-1.2: Albany Hill.** Designate the crest of Albany Hill and adjacent upper slopes for open space and require dedication of this area for conservation and public access as a condition of approval for any proposed development on parcels along the ridgeline. Albany Hill should be considered an essential and valuable regional open space resource.
- **Policy PROS-1.3: Albany Waterfront.** Recognize the importance of the Albany waterfront as a multi-use open space area and a vital part of the cultural landscape of the East Bay. The City will work toward achieving the maximum feasible open space and recreational uses in the waterfront area and improved public access to and along the Albany shoreline. All future land use decisions for the area west of Interstate 80 shall be consistent with State and regional park plans, trail plans, and Bay conservation and shoreline access plans.
- **Policy PROS-1.7: Creeks.** Recognize creeks as an important open space element, and a means of defining the edges of the city and bringing open space and nature into neighborhoods.
- **Action PROS-1.A: Priority Conservation Area.** Maintain the undeveloped portions of Albany Hill as a regionally designated "Priority Conservation Area."
- **Action PROS-1.B: Creekside Master Plan Implementation.** Implement the open space management recommendations of the 2012 Creekside Master Plan, including vegetation management, trail improvements, signage and other park improvements.
- **Action 1.F: Eastshore State Park:** Actively participate in the planning and development of McLaughlin Eastshore State Park.
- **Policy PROS-2.4: Site Design and Planning Standards.** Observe standards for the design and development of parks and open space areas as presented in the Albany Parks, Recreation, and Open Space Master Plan. The site plan for each park should be appropriate to its specific conditions and context, and should maximize public access and visibility.
- **Policy PROS-2.5: New Parks.** Pursue the development of new parks that accommodate services and facilities not present in Albany today and that respond to increased demand for park and recreational space and facilities.
- **Policy PROS-2.6: New Facilities in Existing Parks.** Balance the demand for new recreational facilities and structures with the need for unprogrammed open space that meets other recreational needs. Where possible, the development of new recreational facilities and amenities should avoid displacing or crowding out other activities. Maintaining a mix of passive and active open spaces is important to the function and aesthetics of community, neighborhood, and regional parks.

- **Policy PROS-2.7: Resource Preservation.** Design and plan new parks in a manner that preserves and enhances natural resources, protects trees and significant topographic features, and is consistent with the sustainability principles articulated in the General Plan Conservation Element.
- **Policy PROS-2.9: Park Expansion.** Explore opportunities to expand existing City parks on to vacant or underutilized land on the perimeter of each park site.
- **Policy PROS-5.1: School District Facilities.** Support joint use agreements between the City of Albany and the Albany Unified School District to increase after-hours access to school facilities for Albany residents and school day access to facilities in City parks for Albany students.
- **Policy PROS-5.5: East Bay Regional Park District.** Work with the EBRPD to improve awareness of regional recreational facilities and parks among Albany residents, and to expand the regional park system for the benefit of all residents in Alameda and Contra Costa Counties, including those in Albany.
- **Policy PROS-5.6: Adjacent Cities.** Continue to foster partnerships and joint use opportunities with the cities of Berkeley, Richmond, and El Cerrito to improve park and recreational services and ensure the most efficient use of local resources.
- **Action PROS-5.E: Joint Use Agreement Updates.** Periodically update joint use agreements between the City and Albany Unified School District so that both parties have access to the greatest range of recreational services and facilities possible. Pursue future joint use or joint powers agreements with the University of California for access to University Village facilities.

Draft General Plan Policies PROS-2.4 PROS-2.5, and PROS-2.6 prioritize appropriate design of new parks that respond to existing demands while preserving existing programs and facility use. Draft General Plan Policy PROS-2.9 would promote the expansion of existing parks on vacant land adjacent to existing park sites. Draft General Plan Policies PROS-1.2, PROS-1.3, PROS-1.7, and PROS-2.7 and Actions PROS-1.A and PROS-1.B ensure the preservation of natural areas including Albany Hills and Albany Waterfront. Draft General Plan Policies PROS-5.1, PROS-5.6, PROS-5.5 and Actions PROS-1.F and PROS-5.E encourage cooperative arrangements with the school district and adjacent cities that allow the public to use of open space and recreation facilities not owned by the City. As described in the settings section, El Cerrito and Berkeley have a combined total of approximately 411 acres of open space and recreational facilities. The EBRPD manages approximately 119,000 acres of open space and recreation facilities throughout Alameda and Contra Costa counties. Implementation of Draft General Plan would result in a less-than-significant impact associated with recreation facilities and parks.

c. Cumulative Impacts. Cumulative impacts associated with police and fire protection services that would occur under the Draft General Plan would occur entirely within the Fire Department and the Police Department service areas. Expected increases in demand for fire and police services would thus be spatially limited and would not make a considerable contribution to increased demand for these public services in the region. Cumulative impacts to police services are expected to be less than significant. Additionally, the City will consider the environmental effects of new facilities at a project level when they are proposed over time, if required.

For school services, the geographic setting for cumulative impacts includes the AUSD service area, which is limited to Albany's City limits. As expected residential growth occurs within the City, increased demand would be placed on AUSD's services and facilities. The AUSD has a Facilities Master Plan that dictates how educational facilities would adapt to meet the needs of a growing

student population. The cumulative demand within AUSD is expected to increase as a result of implementation of the Draft General Plan. With current enrollment at AUSD nearing or exceeding capacity, implementation of the Draft General Plan would result in a potentially significant cumulative impact on schools. However, any development carried out under the Draft General Plan that may affect service levels within AUSD would be required to contribute school facility fees in conformance with State law and District requirements. School impact fees are deemed by statute to constitute full mitigation to reduce the impact of development projects on school facilities. Therefore, cumulative impacts of development on school district facilities would be less than significant. The school districts will conduct their own environmental analysis to address proposals for new facilities and will address project-level adverse environmental impacts on a case by case basis at that time.

Population growth associated with the Draft General Plan would contribute to the cumulative demand for and use of recreational facilities. However, as described above, implementation of Draft General Plan policies related to parkland and recreational facilities would ensure that there would be sufficient local and regional recreation land (e.g., McLaughlin Eastshore State Park, Pierce Street Park, etc.) and trail facilities (e.g., San Francisco Bay Trail) provided such that cumulative impacts associated with use of regional recreation and open space facilities would be less than significant.

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M. UTILITIES AND INFRASTRUCTURE

This chapter, prepared by LSA Associates, Inc., describes the existing utilities and infrastructure for the City of Albany, as well as the applicable regulatory framework regarding water, wastewater, and storm drainage facilities; solid waste and disposal; electricity; gas; and telecommunications.

1. Setting

This section describes the City of Albany's existing infrastructure, including the water supply and distribution system; the wastewater collection, treatment and disposal system; the stormwater collection system; and other utilities, including solid waste, energy and telecommunications.

a. Water. The following discussion provides background information on the City's water supply, water treatment facilities, water distribution system, and water demand.

(1) Water Supply. Potable water is provided to the City of Albany, and approximately 1.3 million customers throughout portions of Alameda and Contra Costa Counties, by a publicly owned utility, East Bay Municipal Utility District (EBMUD). EBMUD's territory includes 332 square miles of service area, and the City of Albany comprises approximately 1.4 percent of its customers.

The EBMUD water supply system consists of a network of reservoirs, aqueducts, water treatment plants, pumping plants, and other distribution facilities that collects, transmits, treats, and distributes water from its primary water source, the Mokelumne River. Approximately 90 percent of the water used by EBMUD comes from the Mokelumne River watershed, located in the Sierra Nevada. EBMUD conveys water from the Pardee Reservoir, located approximately 38 miles northeast of Stockton, approximately 91 miles to EBMUD water treatment plants and terminal reservoirs through the Pardee Tunnel, the Mokelumne Aqueducts, and the Lafayette Aqueducts.[1]

EBMUD has water rights that allow for delivery of up to 325 million gallons per day (mgd). However, this allocation may be constrained by: (1) upstream water use by prior water right holders; (2) down-stream water use and other downstream obligations, including protection of public trust resources; (3) drought, or less-than-normal rainfall for more than a year; and (4) emergency shortages. EBMUD's secondary water supply source is local runoff from the East Bay area watersheds that is stored in the terminal reservoirs located within service area boundaries. The availability of water from local runoff is dependent on hydrologic conditions and terminal reservoir storage availability.[2]

In addition, recycled water treatment facilities have been constructed at EBMUD's wastewater treatment plant, located at the foot of the Bay Bridge. EBMUD stores the recycled water in a 1.5 million gallon storage tank on the site and uses another 2.4 million gallons a day (mgd) at the wastewater treatment plant for various industrial processes and for landscape irrigation.

[1] East Bay Municipal Utility District, 2013. Water Resources Planning Division. *Urban Water Management Plan 2010*. August.

[2] Ibid.

EBMUD's Policy 73 requires that when non-potable water is available, customers use it for non-domestic purposes including landscape irrigation and industrial uses. One of the programs under this policy, launched in 2008, is the East Bayshore Recycled Water Project which will supply an annual average of 2.5 million gallons per day (mgd) of recycled water to portions of Alameda, Albany, Berkeley, Emeryville and Oakland upon completion. Pipeline construction began in 2012 between Emeryville and Albany. In 2013, EBMUD partnered with the City of Albany to install a recycled water pipeline along Buchanan Street from Pierce Street to San Pablo Avenue.

(2) Water Treatment Facilities. There are six water treatment plants in the EBMUD water supply and distribution system. Combined, the six plants have a treatment capacity of over 375 mgd. The Orinda Water Treatment Plant, which serves Albany, has the largest output with a maximum capacity of 200 mgd. All water delivered to customers is filtered through sand and anthracite, or carbon treatment and plants provide disinfection, fluoridation and corrosion control.[3]

(3) Distribution System. From the water treatment plants, water is distributed to EBMUD's service area which is divided into more than 120 pressure zones ranging in elevation from sea level to 1,450 feet. The EBMUD water distribution network includes 4,100 miles of pipe, 140 pumping plants, and 170 neighborhood reservoirs (tanks storing treated drinking water) generating a total capacity of 830 million gallons.[4]

(4) Water Demand. In fiscal year 2010, EBMUD's system demand was on average 174 mgd. By 2040, EBMUD projects that water demand will increase to approximately 312 mgd in its service area, although with successful completion of water recycling and conservation programs, this demand could be reduced to approximately 230 mgd.[5] In normal water years, EBMUD has sufficient water rights to meet demands through 2040; however, EBMUD's current water supply is insufficient to meet water demand during single- and multi-year droughts despite EBMUD's water conservation and recycled water programs.[6]

To meet projected water needs and address deficient supply during droughts, EBMUD is working to identify supplemental water supplies and recycled water programs. New water supplies will come from water transfers, groundwater storage and regional supply projects.[7]

[3] East Bay Municipal Utility District, 2013a. *Water Treatment*. Website: www.ebmud.com/our-water/water-quality/water-treatment-plants (accessed August 27, 2013).

[4] Ibid.

[5] The planning level of demand is used to assess demands as dictated by community policies. The EBMUD level of demand (312 mgd) does not include the short-term reduction and rebound in demand caused by the multi-year drought (2007-2010) and the downturn in the economy. The EBMUD's 2040 Demand Study projected, on average, less than a 1 percent growth each year in customer demand through 2030 followed by a much lower increase thereafter to a 2040 level of demand of 230 mgd (applying reductions from conservation and recycled water savings).

[6] East Bay Municipal Utility District, 2013, op. cit.

[7] East Bay Municipal Utility District, 2012c. *Water Supply Management Program 2040*. Website: www.ebmud.com/our-water/water-supply/long-term-planning/water-supply-management-program-2040 (accessed December 20, 2013).

EBMUD has also developed mitigation and adaptation strategies to address the changing climate and its effects on water resources. In 2008, EBMUD incorporated climate change into its strategic plan, and has developed and implemented a climate change monitoring and response plan to inform future water supply, water quality, and infrastructure planning.[8]

b. Wastewater. The following discussion provides background information on the City's wastewater collection system, treatment facilities, systemic inflow issues, and planned improvements.

(1) Wastewater Collection. The City's sewer system serves a population of about 18,500 residents within the Albany city limits. The system includes approximately 32 miles of gravity sewer mains. All wastewater is conveyed to the EBMUD North Interceptor, through which it is conveyed south to EBMUD's Main Wastewater Treatment Plant (MWWTP) located near the eastern terminus of the San Francisco-Oakland Bay Bridge. During periods of wet weather, when the capacity of the interceptor is exceeded, flows in the North Interceptor may be diverted north to EBMUD's Point Isabel Wet Weather Facility in Richmond for storage and/or discharge.[9]

Over 75 percent of Albany's sewer system consists of 8-inch and smaller diameter pipe, and over 90 percent is 12-inches and smaller. The oldest portions of the system date to the early 1900s. Most older sewer pipes are constructed of vitrified clay, with plastic materials used for newer sewer construction and rehabilitation. The sewer system also includes approximately 4,600 private sewer laterals, which connect individual homes with the City maintained system. The City assumes responsibility for the maintenance and repair of the lower portion of the laterals located within the public right-of-way to the sewer main.[10]

The City's collection system is generally designed with adequate capacity for existing and future developments and does not have a history of capacity-based sanitary sewer overflows (SSOs). The system was designed to handle peak wet weather flows, but because the collection system is largely built-out, capacity issues are increasingly caused by aging infrastructure. Since the late 1980s the City has been systematically rehabilitating its wastewater collection system. Closed-circuit television has been used to inspect 85 percent of the sewer pipelines in the City. Results indicate that 80 percent of the system has been rehabilitated or replaced, and 20 percent remain in structurally poor condition.[11]

(2) Wastewater Treatment and Disposal. Wastewater treatment is provided by EBMUD, with a network of 15 wastewater pumping stations and 8 miles of force mains that convey wastewater to the MWWTP. EBMUD provides primary treatment for up to 320 mgd and secondary treatment for a maximum flow of 168 mgd. The average annual daily flow into the MWWTP is approximately 80 MGD, representing 48 percent of the plant's secondary treatment capacity. Flows are treated, disinfected, dechlorinated, and discharged through a deep-water outfall (102-inch pipeline) 1.0 mile

[8] East Bay Municipal Utility District, 2012d. *Water Supply: Project and Long-Term Planning*. Website: www.ebmud.com/our-water/water-supply (accessed December 20, 2013).

[9] RMC Water and Environment, 2014. *City of Albany Sewer Master Plan Final Report*. May.

[10] Ibid.

[11] Ibid.

off the East Bay shore into the San Francisco Bay. Currently, there are no planned improvements to the wastewater treatment plant that would affect treatment capacity.

(3) Inflow/Infiltration. EBMUD's system is currently unable to handle storm drainage from the communities where sewer pipes leak heavily during rainstorms. Groundwater or stormwater entering the sewer system is referred to as inflow/infiltration, which leads to the dilution of sewage, decreasing the efficiency of treatment and potentially causing sewage volumes to exceed design capacity of the MWWTP. The issue of inadequate wet weather capacity has been particularly critical since 2009, when the San Francisco Regional Water Quality Control Board (RWQCB) issued an order prohibiting further discharges from EBMUD's wet weather facilities.

Flow modeling and hydraulic monitoring was conducted and focused on the City's trunk sewer network, primarily 10-inch and larger pipes, plus some 6- and 8-inch pipes, that conveys flow generated throughout the system to the EBMUD interceptor. The modeling indicated potential capacity deficiencies in a number of areas of the sewer system, the most significant being the 10-inch sewer in Marin Avenue from San Pablo Avenue to the Berkeley city limits.

(4) Planned Improvements. The City is committed to a program to replace sewers (and associated manholes and lower laterals) in the system that have not yet been rehabilitated or replaced since the 1980s, as well as identification and elimination of direct inflow sources and continued participation in a regional private sewer lateral compliance program that will result in replacement of upper laterals throughout the City. These improvements are anticipated to result in significant reductions in inflow/infiltration, and the only deficiency that will remain is the sewer in Marin Avenue which is recommended for upsizing in the City's 2013 Capital Improvement Program (CIP).[12] The CIP also includes recommendations to accelerate the replacement of sewers upstream of identified capacity deficiencies in order to minimize the risk of overflow prior to improvements being completed.[13]

c. Stormwater. The following discussion provides background information on the City's stormwater collection system and pollution control efforts.

(1) Stormwater Collection and Drainages. The City of Albany's storm drain system is a network of structures, channels and underground pipes that carry stormwater to the San Francisco Bay. The storm drain system is maintained by the City and is separate from the sewer system. Stormwater is discharged directly to the San Francisco Bay without treatment. In addition to the approximately 11 miles of storm drains in the City, five creeks flow within and along Albany's borders from the Berkeley hills to the San Francisco Bay.

[12] Albany, City of, 2013. *Albany Capital Improvement Program FY 2013-2014 through FY 2017-2018.* June 12.

[13] RMC, 2014, op.cit.

(2) Stormwater Pollution Control. Pursuant to Section 402 of the Clean Water Act (CWA)[14] and the Porter-Cologne Act, municipal stormwater discharges in the City of Albany are regulated under the San Francisco Bay Region Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit, Order No. R2-2009-0074, NPDES Permit No. CAS612008, adopted October 14, 2009 (MRP). The MRP is overseen by the Regional Water Board. MRP Provision C.3 addresses post-construction stormwater management requirements for new development and redevelopment projects that add and/or replace 10,000 square feet or more of impervious area. Provision C.3 requires the City to require incorporation of site design, source control, and stormwater treatment measures into development projects, to minimize the discharge of pollutants in stormwater runoff and non-stormwater discharges, and to prevent increases in runoff flows. The MRP requires that Low Impact Development (LID) methods are to be the primary mechanism for implementing such controls.

MRP Provision C.3.g pertains to hydromodification management. This MRP provision requires that stormwater discharges shall not cause an increase in the erosion potential of the receiving stream over the existing condition. Increases in runoff flow and volume shall be managed so that the post-project runoff shall not exceed estimated pre-project rates and durations, where such increased flow and/or volume is likely to cause increased potential for erosion of creek beds and banks, silt pollutant generation, or other adverse impacts on beneficial uses due to increased erosive force.

In compliance with provision C.10.c of the MRP, the City recently published a Long-Term Trash Load Reduction Plan, which describes pollution control measures it is implementing in order to meet the July 1, 2017, goal of 70 percent reduced waste loading in the storm drainage system.[15]

The City minimizes pollutant discharges and protects surface waters in local creeks and San Francisco Bay, in compliance with the NPDES permit, through its Clean Water Program.[16] The program is comprised of both flood control and pollution abatement. The program employs a multi-pronged approach, utilizing education, engineering, maintenance and enforcement. The Clean Water Program includes: permit and reporting requirements for private and public development or renovation projects; Best Management Practices (BMPs) for various types of businesses such as restaurants, car washes and automotive repair shops; and public awareness activities such as stenciling of storm drain inlets, creek clean-up and schools projects. Street sweeping and environmentally-friendly drainage improvements are also components of the Clean Water Program.[17]

Municipal activities that curtail stormwater pollution include street sweeping, storm drain maintenance, water utility operations, commercial and industrial inspections, construction site inspections, illicit discharge detection and elimination, pesticide toxicity controls, and public outreach and

[14] Federal regulations for controlling discharges of pollutants from municipal separate storm sewer systems (MS4s), construction sites, and industrial activities were incorporated into the National Pollutant Discharge Elimination System (NPDES) permit process by the 1987 amendments to the Clean Water Act (CWA) and by the subsequent 1990 promulgation of federal stormwater regulations issued by the U.S. Environmental Protection Agency (USEPA). In California, the EPA delegated its authority to the State Water Resources Control Board (State Water Board) to issue NPDES permits.

[15] Albany, City of, 2014. *Trash Long-Term Reduction Plan and Program Assessment Strategy.* February 1.

[16] Alameda Countywide Clean Water Program, 2010. Website: www.cleanwaterprogram.org (accessed July 1, 2014).

[17] Albany, City of, 2014. *Storm Drains*. Website: albanyca.org/index.aspx?page=1270 (accessed February 7, 2015).

education. Actions such as water quality monitoring and controlling pollutants of concern such as copper, mercury, and PCBs, are conducted through regional collaborations.

Additionally, development projects are conditioned to incorporate site design measures, source controls, treatment measures, and on larger projects only, flow duration controls. Since 2000, the City has required new construction to include "post-construction controls" in project design, and since December 2010, projects are required to implement additional post-construction stormwater management requirements for new development and redevelopment projects.

d. Solid Waste. The following section describes Albany's non-hazardous and hazardous waste disposal services and capacity.

(1) Non-Hazardous Solid Waste. Solid waste generated in the City of Albany is collected by Waste Management of Alameda County. The most recent franchise agreement with Waste Management was approved by the City Council in October 2011. Non-hazardous solid waste is taken to the Davis Street Resource and Recovery Complex in San Leandro for processing, and then hauled to the Altamont Landfill and Resource Facility near the City of Livermore. The Davis Street facility has a permitted maximum daily throughput of 5,600 tons. Demolition and construction debris is generally hauled by construction contractors to recycling facilities or the Vasco Road Landfill.

The Altamont Landfill facility has a total estimated capacity of 62 million cubic yards. As of 2000, the landfill's total estimated used capacity was approximately 16.3 million cubic yards, or 26 percent of the landfill's total capacity. The landfill has a permitted throughput of 11,500 tons per day and is anticipated to have sufficient capacity until 2045, its expected closure date. [18]

The Vasco Road Landfill facility has a total estimated capacity of 33 million cubic yards. As of 2000, the landfill's total estimated used capacity was approximately 23 million cubic yards, or 70 percent of the landfill's total capacity. The landfill has a permitted throughput of 2,250 tons per day and is anticipated to have sufficient capacity until 2019, its expected closure date.[19]

The City of Albany achieved a total solid waste diversion rate of 83 percent by 2006, which meets the Alameda County diversion goal of 75 percent. The California Department of Resources Recycling and Recovery (CalRecycle), formally known as the California Integrated Waste Management Board, implemented new targets that establish daily per-capita disposal rates, and replaces the historical diversion rate measurement that was used prior to 2006. In 2012, the City of Albany disposed of approximately 5,429 tons,[20] or 1.6 lbs/day per person and 6.9 lbs/day per employee of solid waste at

[18] Waste Management, 2015. *Sustainability*. Website: altamontlandfill.wm.com/sustainability/index.jsp (accessed August 14, 2015).

[19] California Department of Resources Recycling and Recovery, 2012. *Solid Waste Information System Facility/Site Listing*. Website: www.calrecycle.ca.gov/SWFacilities/Directory/search.aspx (accessed December 28, 2013).

[20] California Department of Resources Recycling and Recovery, 2014. *Disposal Reporting System (DRS): Multi-year Countywide Origin Summary*. Website: www.calrecycle.ca.gov/LGCentral/Reports/Viewer.aspx?P=ReportName%3dExtEdrsMultiYrCountyWide%26CountyID%3d1 (accessed January 29).

various disposal facilities, thereby meeting the target of 5 lbs/day per person and 19.3 lbs/per day per employee.[21]

Recycling services are provided to residents and businesses by Waste Management of Alameda County, in compliance with the 2012 Mandatory Recycling Ordinance of Alameda County.[22] Recyclable materials include the following: glass, aluminum and tin, motor oil, cardboard, magazines and newsprint, and plastic. Recyclable materials are delivered to the Davis Street Transfer Center where they are processed.

(2) Hazardous Solid Waste. City of Albany residents can dispose of household hazardous wastes such as paints, pesticides, fertilizers, cleaners and propane tanks at one of four Alameda County Household Hazardous Waste facilities. Household batteries, cell phones, and compact fluorescent light bulbs can be recycled curbside and unwanted medicine and electronics can be disposed of at the Albany Senior Center and at annual collection events.

e. Energy. The following section describes Albany's electricity and natural gas delivery service.

The Pacific Gas & Electric Company (PG&E) provides electricity and natural gas service to Albany. PG&E charges connection and user fees for all new development, in addition to sliding rates for electrical and natural gas service based on use.

Gas supplies in northern California come primarily from gas fields in the Sacramento Valley.[23] The PG&E gas transmission pipeline system serves approximately 4.2 million gas customers in northern and central California. However, PG&E produces much of its energy from renewable sources and has plans in place to increase reliance on renewable energy sources. Of the energy provided to PG&E customers in 2010, approximately 16 percent came from renewable resources. In 2010, 24 percent of energy provided to PG&E customers came from nuclear generation; 23 percent was from unspecified sources; 20 percent was from natural gas; 16 percent was from large hydroelectric facilities; and 16 percent was from renewable resources (e.g., wind, geothermal, biomass, small hydroelectric sources, and solar); and less than 2 percent came from coal and other fossil fuels.[24] Because many agencies in California have adopted policies seeking increased use of renewable resources (and have established minimum standards for the provision of energy generated by renewable resources), PG&E expects it will continue to meet future demand for energy via an increasing reliance on renewable resources, including small-scale sources such as photovoltaic panels and wind turbines, in addition to larger-scale facilities, such as wind farms.

[21] California Department of Resources Recycling and Recovery, 2014. *Countywide, Regionwide, and Statewide Jurisdiction Diversion/Disposal Progress Report.* Website: www.calrecycle.ca.gov/LGCentral/Reports/jurisdiction/diversiondisposal.aspx (accessed February 15)

[22] Recycling Rules Alameda County, 2012. *Mandatory Recycling Ordinance of Alameda County- Ordinance 2012-1.* Website:www.recyclingrulesac.org/docs/ordinance_2012-1_mandatory_recycling-executed.pdf (accessed February 12, 2014).

[23] Pacific Gas & Electric Company, 2012. *2012 California Gas Report.* Website: www.pge.com/pipeline/library/regulatory/cgr_index.shtml (accessed February 17, 2014). July.

[24] Pacific Gas & Electric Company, 2012b. *Clean Energy Solutions*. Website: www.pge.com/mybusiness/environment/pge/cleanenergy/index.shtml (accessed February 17, 2014).

Regulatory requirements for efficient use of electricity and gas are contained in Title 24, Part 6, of the California Code of Regulations, entitled "Energy Efficiency Standards for Residential and Non-residential Buildings." These regulations specify the State's minimum energy efficiency standards and apply to new construction of both residential and nonresidential buildings. The standards regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. Compliance with these standards is verified and enforced through the local building permit process.

f. Telecommunications. The following discussion provides background information on the City's existing telephone and cable delivery services.

AT&T provides telephone services within the City of Albany. AT&T also provides or hosts a variety of other telecommunication services, including Digital Subscriber Line (DSL), Internet Service Provider (ISP), web hosting, virtual private networking, U-verse, Multi-protocol Label Switching (MPLS), and wireless/cellular paging services.

The California Public Utilities Commission requires that AT&T anticipate and serve new growth. To meet this requirement, AT&T continually upgrades its facilities and infrastructure, adding new facilities and technology to remain in conformance with California Public Utilities Commission tariffs and regulations and to serve customer demand in the City.

Additions to the City's infrastructure and proposals for development would result in a need for expansion or changes to AT&T's infrastructure, which would involve suitable siting for equipment placement. Suitable sites must meet requirements for the physical transmission of telecommunication services and conform to the City's guidelines. AT&T also works with the City to ensure that construction of new facilities does not interfere with any new or newly paved streets.

2. Regulatory Framework

This section describes the regulatory framework associated with the provision of utilities.

a. Federal. This section describes the federal regulations for the provision of utilities.

(1) Safe Drinking Water Act. Drinking water is regulated by federal and State laws. The federal government sets minimum standards for water quality, including for drinking water and bodies of water. The Safe Drinking Water Act of 1974 (SWDA) and subsequent amendments gave the U.S. Environmental Protection Agency (USEPA) the authority to establish standards for contaminants in drinking water supplies. The National Primary Drinking Water Standards establish the maximum contaminant levels (MCLs) allowed in public distribution systems. The National Secondary Drinking Water Standards establish the MCLs that apply to potable water supplies at the point of delivery to the customer. The USEPA administers the SDWA at the federal level and establishes MCLs for bacteriological, inorganic, organic and radiological contaminants. [25]

[25] U.S. Code Title 42, and Code of Federal Regulations Title 40.

(2) Clean Water Act. The USEPA is the lead federal agency responsible for managing water quality. The Clean Water Act of 1972 (CWA) regulates the discharge of pollutants to waters of the United States from any point source. The Porter-Cologne Water Quality Act provides the basis for water quality regulation in California, and establishes the authority of the State Water Resources Control Board and the nine RWQCBs to protect and enhance water quality, including administration of the NPDES permit program for discharges, stormwater and construction site runoff.

(3) National Pollutant Discharge Elimination System. Treated wastewater is regulated for health and environmental concerns, and is included in the NPDES program. The San Francisco Bay RWQCB regulates operations and discharges from sewage systems through the NPDES permit adopted on October 14, 2009. The permit provides a uniform standard for wastewater and stormwater discharges for the counties and agencies surrounding the San Francisco Bay. Albany is mandated to comply with the NPDES Permit by State and federal laws, statutes, and regulations. By mid-2014, EBMUD and tributary agencies (including Albany) will enter into a Consent Decree with USEPA, the State Water Resources Control Board (SWRCB), and San Francisco Bay RWQCB intended to eliminate discharges from wet-weather facilities over an approximate 20-year period. For Albany, the Consent Decree-required "Work" includes specified annual amounts of sewer rehabilitation, inspection, cleaning, as well as continued implementation of private sewer lateral compliance.

(4) Energy Act 1992. The Federal Energy Regulatory Commission (FERC) regulates the transmission and sale of electricity in interstate commerce (including interstate gas pipelines that serve California), licensing of hydroelectric projects, and oversight of related environmental matters. As part of the license application process, the lead agency must conduct environmental analysis pursuant to the National Environment Policy Act (NEPA). FERC acts under the legal authority of the Federal Power Act of 1935, the Public Utility Regulatory Policies, and the Energy Act of 1992, in addition to several other federal acts. The Energy Act of 1992 addresses energy efficiency, energy conservation and energy management, natural gas imports and exports, and alternative fuels (including as used in motor vehicles). It amended parts of the Federal Power Act of 1935.

b. State. The following describes the State regulatory framework including regulations and agencies responsible for oversight.

(1) California Urban Water Management Planning Act. Pursuant to the California State Water Code requirements, water suppliers providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet (approximately 980 million gallons) of water annually must prepare and adopt an urban water management plan (UWMP) and update it every five years. The State Water Code requires water agencies to evaluate and describe their water resource supplies and projected needs over a 20-year planning horizon and to address a number of related subjects including water conservation, water service reliability, water recycling, opportunities for water transfers, and contingency plans for drought events.

(2) Water Conservation Act of 2009. In compliance with Senate Bill No. 7 (SBx7-7), adopted in November 2009, EBMUD is expanding water conservation programs for all service districts. SBx7-7 mandates a Statewide 20 percent reduction in per capital urban water use by December 31, 2020.

(3) Water Conservation in Landscaping Act. The Water Conservation in Landscaping Act of 2006 (Assembly Bill 1881, Laird) requires cities, counties, and charter cities and charter counties, to adopt landscape water conservation ordinances by January 1, 2010. Pursuant to this law, the Department of Water Resources (DWR) has prepared a Model Water Efficient Landscape Ordinance (Model Ordinance) for use by local agencies. Most new and rehabilitated landscapes are subject to a water efficient landscape ordinance. Public landscapes and private development projects including developer installed single-family and multi-family residential landscapes with at least 2,500 square feet of landscape area are subject to the Model Ordinance. Homeowner provided landscaping at single-family and multi-family homes is subject to the Model Ordinance if the landscape area is at least 5,000 square feet. However, the ordinance does not apply to registered local, State or federal historic sites; ecological restoration projects; mined-land reclamation projects; or plant collections.

(4) Water Supply Consultation. Senate Bill (SB) 610, codified as Sections 10910-10915 of the California Public Resources Code, requires local water providers to conduct a water supply assessment (WSA) for projects proposing over 500 housing units, 250,000 square feet of commercial office space (or more than 1,000 employees), a shopping center or business establishment with over 500,000 square feet (or more than 1,000 employees), or equivalent usage. Issuance of a WSA determination by the local water supplier for a proposed project verifies that the supplier has previously considered a proposed project in its UWMP and has adequate capacity to serve a project in addition to its existing service commitments, or alternatively, measures that would be required to adequately serve the proposed project.

(5) California Environmental Protection Agency. California Environmental Protection Agency (CalEPA) administers and enforces the drinking water program and has adopted its own SDWA, which incorporates the federal SDWA requirements, including some requirements specific only to California (California Health and Safety Code, Section 116350 and related sections).

(6) The California Office of Environmental Health Hazard Assessment. The California Office of Environmental Health Hazard Assessment (OEHHA) has initiated evaluation of several chemicals for which new MCLs have been promulgated by the USEPA, which triggers a requirement that OEHHA prepare a Public Health Goal (PHG) designed to define the level of pollutant at which no adverse health effect is expected to occur. PHG levels are concentrations of chemicals in drinking water that are not anticipated to produce adverse health effects following long-term exposures. These goals are advisory but must be used as the health basis to update the State's primary drinking water standards by the California Department of Public Health (DPH).

(7) Subdivision Map Act. The Subdivision Map Act of 1970 granted local jurisdictions the power to impose drainage improvements, fees, or assessments. Specifically, local jurisdictions may require the provision of drainage facilities, proper grading and erosion control, dedication of land for drainage easements, or payment of fees needed for construction of drainage improvements. The types of applicable standards for the improvements may be specified in the local ordinance.

(8) California Integrated Waste Management Act. In 1989, the California Legislature enacted the California Integrated Waste Management Act (AB 939), which requires the diversion of waste materials from landfills in order to preserve landfill capacity and natural resources. Cities and counties in California were required to divert 25 percent of solid waste by 1995, and 50 percent of solid waste by the year 2000. AB 939 further requires every city and county to prepare two documents

demonstrating how the mandated rates of diversion will be achieved. The Source Reduction and Recycling Element (SRRE) must describe the chief source of the jurisdiction's waste, the existing diversion programs, and current rates of waste diversion and new or expanded diversion programs. The Household Hazardous Waste Element (HHWE) must describe each jurisdiction's responsibility in ensuring that household hazardous wastes are not mixed with non-hazardous solid wastes and subsequently deposited at a landfill. Albany's SRRE and its HHWE was approved in 1995 by CalRecycle.

(9) California Public Utilities Commission. The California Public Utilities Commission (CPUC) regulates privately owned telecommunication, electric, natural gas, water, railroad, rail transit, and passenger transportation companies. General Order 121-d gives the CPUC permitting authority over construction of new and expanded power plants, electric transmission lines, and substations. Pursuant to CEQA, an environmental analysis must be conducted before issuance of construction permits by CPUC. CPUC Decision 95-08-038 contains the rules for the planning and construction of new transmission facilities, distribution facilities, and substations. The CPUC also regulates local natural gas distribution facilities and services, as well as interstate pipelines.

(10) California Energy Commission. The California Energy Commission (CEC) is the State's primary energy policy and planning agency. The CEC was created by the Legislature in 1974 and is responsible for the following: forecasting future energy needs and keeping historical energy data; licensing thermal power plants 50 megawatts or larger; promoting energy efficiency by setting the State's appliance and building efficiency standards; supporting public interest energy research that advances energy science and technology; supporting renewable energy by providing market support to existing, new, and emerging renewable technologies; developing and implementing the State Alternative and Renewable Fuel and Vehicle Technology Program to reduce the State's petroleum dependency and help attain the State climate change policies; administering more than $300 million in American Reinvestment and Recovery Act funding through State programs; and planning for and directing the State response to energy emergencies.

(11) Title 24 (California Building Standards). The California Code of Regulations 2013 (CALGreen) is a statewide regulatory code for all residential, commercial, hospital, and school buildings. The regulations are intended to encourage more sustainable and environmentally-friendly building practices, require low-pollution emitting substances that cause less harm to the environment, conserve natural resources, and promote the use of energy-efficient materials and equipment. Title 24 standards require that all new residential and non-residential development complies with several energy conservation standards through the implementation of various energy conservation measures, including ceiling, wall, and concrete slab insulation; vapor barriers; weather stripping on doors and windows; closeable doors on fireplaces; insulated hearing and cooling ducts; water heater insulation blankets; and certified energy efficient appliances. CALGreen became mandatory on January 1, 2011, for new residential and commercial construction.

c. Local. The following section describes the local regulatory framework.

(1) City of Albany General Plan. The following existing 1992 General Plan[26] policies address water and sewer issues:

- **Policy CROS 4.2:** Publicize the adverse water quality impacts of dumping residential toxics into domestic waste systems.
- **Policy CROS 4.6:** Develop a comprehensive water conservation policy for City facilities and new development, including requirements for drought-resistant landscaping, water-conserving fixtures, and continue to support EBMUD public information campaigns to reduce water consumption.
- **Policy LU 8.2:** Continue to require appropriate public service and facility impact mitigation programs, including fees upon new development and expansions to existing development, in order to maintain and improve the quality of Albany's public services and facilities.

(2) City of Albany Climate Action Plan. The Albany City Council adopted the Climate Action Plan[27] (CAP) in April 2010. The CAP is comprised of polices and measures that, when implemented, will enable the City to meet its target for greenhouse gas emission reductions. The document encourages water conservation in new and existing buildings and landscapes through the following measures:

- **Measure WC 1.1:** Encourage residential and commercial users to participate in EBMUD's free water audit program.
- **Measure WC 1.2:** Encourage 50 percent reduction in outdoor potable water usage for existing residential and commercial properties.
- **Measure WC 2.1:** Require new construction and major remodels to achieve indoor water efficiency 20 percent above the California Building Standards Code.
- **Measure WC 2.2:** Require new landscape projects to reduce outdoor potable water use by 50 percent.

(3) City of Albany Municipal Code. Albany Municipal Code Section 20.64, Water Reuse, implements State policies requiring the use of recycled water for non-potable water uses within the designated recycled water use area when the City determines that there is not an alternative higher or better use for the recycled water, its use is economically justified, and its use is financially and technically feasible for a project.[28]

Albany Municipal Code Section 20.68 Green Building and Bay Friendly Landscape Ordinance requires the use of Green Building Standards of Compliance in all municipal development projects in order to conserve energy, water, and material resources and create buildings that are healthier, safer, and more comfortable to live in. The Section also requires the use of Bay-Friendly Landscape practices on all municipal properties. The Bay-Friendly Landscape guidelines promote an array of techniques that conserve water and improve water quality including integrated pest management

[26] Albany, City of, 1992. *City of Albany General Plan and Final EIR.* December 7.

[27] Albany, City of. 2010. *City of Albany Climate Action Plan.* Website: www.albanyca.org/index.aspx?page=256 (accessed June 24, 2014). April.

[28] Albany, City of, 2013. *Municipal Code.* Website: clerkshq.com/default.ashx?clientsite=albany-ca (accessed February 4, 2014).

techniques, low flow irrigation systems, and the incorporation of native drought tolerant plants. The ordinance also encourages Albany residents and businesses to apply these techniques to private landscapes.

Sewer system maintenance and capital improvements are funded solely by the Sewer Enterprise Fund, which receives its revenue from sewer service charges and new connection fees. The City's sewer service charge has been gradually increased over the last ten years to fund the Sewer System Management Plan (SSMP), as described below. Additionally, it is the responsibility of homeowners to perform all required maintenance and to keep the upper lateral in good condition as defined by subsection 15-1.1 and as set forth in the Upper Sanitary Sewer Lateral Compliance Plan.[29]

(4) Sanitary Sewer Management Plan. In July 2005 the RWQCB requested the formal preparation of a SSMP from all agencies in the region in order to uniformly address sanitary sewer overflows (SSOs). The City adopted its SSMP on July 6, 2009. One major objective of the SSMP is to reduce the potential for SSOs by reducing the amount of infiltration and inflow of groundwater/ stormwater into the sewer system, which reaches the EBMUD Trunk Sewers. The City of Albany has been a leader in the San Francisco Bay region by implementing the Upper Sanitary Sewer Lateral Compliance Plan, which requires that homeowners provide verification of the condition of upper laterals on their property prior to the sale of their home or construction of major improvements.

(5) Alameda County Waste Reduction and Recycling Act 1990. Through the Waste Reduction and Recycling Act 1990 (Measure D), Alameda County adopted waste reduction goals above AB 939 in 2010 to reduce total tonnage of landfill materials generated in the County by 75 percent.

(6) City of Albany's Zero Waste Plan. The City of Albany provides both residential and commercial collection services for recycling, organics, and trash through a franchise agreement with Waste Management of Alameda County. A new franchise agreement with Waste Management was approved by City Council in October 2011. The new agreement provides a number of new services for the community to help reach the goal of "zero waste" (90 percent diversion from the landfill).

(7) City of Albany Construction and Demolition Debris Ordinance. In 2006, the City of Albany adopted a Construction and Demolition Debris Recycling Ordinance that supports Measure D goals and mandates the diversion of all asphalt, concrete and similar material, as well as 50 percent by weight of all other material during construction projects.

(8) City of Albany Green Building Ordinance. In 2006 Albany adopted a Green Building and Bay Friendly Landscaping Ordinance which requires that municipal and private development projects comply with standards of green building that meet Leadership in Energy and Environmental Design (LEED) or Greenpoint Rated checklists. The checklists provide a standard by which to rate projects based upon the type of green building techniques and materials that are included, and address topics such as the utilization of green building materials, water and energy saving devices, and efficient mechanical systems.

[29] Albany, City of, 2011. *Upper Sanitary Sewer Lateral Compliance Plan.* Revised, October.

3. Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to utilities and infrastructure that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds to determine if an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and the recommended mitigation measures, if required. Cumulative impacts are also addressed.

a. Criteria of Significance. Development of the proposed project would result in a significant impact related to utilities and infrastructure if it would cause:

- Water demand to exceed available supply or distribution capacity;
- Wastewater treatment to exceed requirements of the East Bay Municipal Utility District.
- Construction of new water or wastewater treatment facilities or storm water drainage facilities, or expansion of such existing facilities, the construction of which could cause significant environmental effects;
- Solid waste levels to exceed available disposal capacity; or
- Solid waste levels in non-compliance with federal, State, or local regulations related to solid waste (e.g., recycling requirements).

b. Project Impacts. The following discussion described the potential impacts related to utilities and infrastructure that would result from implementation of the Draft General Plan.

(1) Water Supply. The 2010 Urban Water Management Plan takes Albany's projected water demand into consideration when developing demand and supply analysis. EBMUD's water demand projections are based on projected populations from ABAG Projections 2009. Implementation of the Draft General Plan would increase Albany's total population to approximately 20,385 by 2035 which is higher than ABAG's 2009 population projection of 19,300 residents by 2035. Either of these projections make up approximately 1 percent of EBMUD's projected service area of 1,751,000 residents for the year 2035, indicating that Albany's projected population growth is sufficiently accounted for in EBMUD water demand projections.

Implementation of the Draft General Plan would result in an increase in demand for water due to projected population and employment growth. EBMUD estimates that average daily potable water demand in 2010 was 216 mgd for approximately 1.3 million customers,[30] which indicates an average of 166 gallons per customer per day. For the purposes of this analysis, it is assumed that water demand per customer would remain constant. Using the average water demand, the increase in population that could result from implementation of the Draft General Plan could increase water demand within Albany to approximately 3.38 mgd. This increase would represent approximately 1.47 percent of EBMUD's projected 2035 water demand.

[30] The East Bay Municipal Utilities District does not identify water supply generation rates, and therefore, the analyses uses information contained in the East Bay Municipal Utility District, 2013. Water Resources Planning Division. *Urban Water Management Plan 2010.* August.

Development and population increases that would occur with implementation of the Draft General Plan are not expected to create demand for water that would exceed EBMUD's projected water supply. As previously described, under EBMUD's 2010 Urban Water Management Plan, EBMUD's water system has sufficient water rights to meet demands through 2040; however, EBMUD's current water supply is insufficient to meet water demand during single- and multi-year droughts despite EBMUD's water conservation and recycled water programs. To meet projected system-wide water needs, EBMUD may need to supplement water supplies and improve recycled water programs.

To reduce impacts on water demand the City would implement Draft General Plan Policies CON-6.2, CON-6.8, CON-6.9, CON-6.10, and CSF-6.5 which promote the conservation of water and reduce potable water demand through recycled water programs. Additionally, Draft General Plan Actions CON-6.A and CON-6.H would promote water efficiency through the requirement of water efficiency standards and replacement of inefficient irrigation infrastructure. Draft General Plan Policy CSF-6.1 and Action CSF-6.E would require that the City would work with EBMUD to ensure adequate supply and safety of water and support the regular updates of the Urban Water Management Plan. The Draft General Plan would ensure continued implementation of best management practices and enforcement of water efficiency regulations. The policies and actions identified above follow:

- **Policy CON-6.2: Energy and Water Audits.** Promote the use of energy audits and water audits by Albany residents and businesses to identify and eliminate sources of waste, conserve resources, and reduce utility costs. Lead by example by performing such audits on municipal buildings and properties, and undertaking appropriate improvements to address energy and water inefficiencies in City facilities.
- **Policy CON-6.8: Water Conservation Measures.** Conserve water in City facilities and new development by maintaining requirements for bay-friendly landscaping and water-conserving plumbing fixtures, and by continuing to support EBMUD's public information campaigns to reduce water consumption
- **Policy CON-6.9: Reducing Water Usage.** Partner with EBMUD, PG&E, Stopwaste.org and other organizations to achieve water efficiency and reduced usage and support indoor and outdoor conservation practices. (CAP Obj WC-2)
- **Policy CON-6.10: Reclaimed Water.** Support the use of reclaimed water, both on an individual basis (e.g., gray water recycling for private residences) and on a citywide basis for landscaping and irrigation. (new)
- **Action CON-6.A: Green Building Code.** Require new construction to meet or exceed California Green Building Code standards for energy and water efficiency. Albany's building codes should be regularly reviewed and periodically amended to meet or exceed state requirements.
- **Action CON-6.H: Irrigation Efficiency.** As funding allows, replace existing City irrigation infrastructure with more efficient infrastructure that reduces losses from evapotranspiration and creates the opportunity for the future application of reclaimed water.
- **Policy CSF-6.1: Water Supply, Storage, and Distribution.** Work with East Bay Municipal Utility District (EBMUD) to ensure the adequacy and safety of water utilities. The City will work with EBMUD to plan for an adequate long-term water supply, the safety of the water storage and distribution system, the adequacy of the system to support fire flow needs, and the safe treatment and disposal of Albany's wastewater.
- **Policy CSF-6.5: Reclaimed Water.** Continue to work toward the expanded application of reclaimed water from the EBMUD treatment plant for a variety of purposes, such as landscape irrigation.

- **Action CSF-6.E: Urban Water Management Plan.** Support EBMUD in regular updates of its Urban Water Management Plan to reflect current forecasts, water supply conditions, and best practices in water management.

With the adopted 2010 EBMUD Urban Water Management Plan, existing regulations, and the implementation of more stringent Citywide water conservation strategies, supplies to meet increased water demand should be adequate to serve demand for water generated by projected growth associated with the Draft General Plan, and impacts associated with water supply and demand would be less than significant. New or expanded entitlements for water supplies for EBMUD would not be required and impacts related to water supply would be less than significant.

(2) Exceed Wastewater Treatment Requirements. As previously described, future development within Albany must comply with programs and regulations currently in place that regulate storm drainage facilities including NPDES Municipal Regional Permit (Draft General Plan Policy CON-4.4) regulations and the City's Stormwater Management Regulations. The policy identified above follows:

- **Policy LU-4.4: Mitigating Development Impacts.** Ensure that the effects of proposed development projects on civic uses, such as schools, parks, the Library, and other public buildings are considered before such projects are approved. Provisions to mitigate impacts and ensure that development "pays its way" through fees or improvements to public facilities should be included in project approvals.
- **Policy CSF-6.1: Water Supply, Storage, and Distribution**. Work with East Bay Municipal Utility District (EBMUD) to ensure the adequacy and safety of water utilities. The City will work with EBMUD to plan for an adequate long-term water supply, the safety of the water storage and distribution system, the adequacy of the system to support fire flow needs, and the safe treatment and disposal of Albany's wastewater.
- **Policy CSF-6.2: Sanitary Sewer System.** Ensure the safe management, operation, and maintenance of Albany's wastewater collection system.
- **Action CSF-6.A: Capital Improvement Program.** Maintain an ongoing capital improvement program that identifies infrastructure needs, priorities, timing, and funding sources for the next two to five years.
- **Action CSF-6.B: Sewer Master Plan Implementation.** Implement the recommendations of the 2014 Sewer Master Plan to ensure that the sanitary sewer system can support current and future needs while improving water quality.
- **Policy CON-4.4: Municipal Regional Permit.** In compliance with the Clean Water Act, participate in the Alameda Countywide Clean Water Program and NPDES Municipal Regional Permit (MRP) to reduce stormwater discharges to local waterways and San Francisco Bay. In accordance with the MRP, ensure that post-runoff conditions on any development site shall not exceed pre-project rates and durations.

The MRP establishes a uniform stormwater discharge standard for the jurisdictions surrounding the San Francisco Bay. The discharge of stormwater from the City's storm drainage system is regulated by the Federal NPDES Nonpoint Source Program (established through the Clean Air Act). Albany is under the jurisdiction of the RWQCB and City compliance with the MRP is mandated by State and federal laws, statutes, and regulations. Therefore, implementation of the Draft General Plan would not exceed wastewater treatment requirements, and the impact would be considered less than significant.

(3) Construction of New Wastewater Treatment Facilities. New growth and development associated with implementation of the Draft General Plan would increase overall sanitary sewer flows and require the upgrading or replacement of existing deficient City sewer mains. The 2014 Albany Sewer Master Plan[31] analyzes sewer capacity based on future wastewater flows. The Sewer Master Plan utilized information in the City of Albany Housing Element as well as the proposed plans for University Village Mixed-Use Development. Flows were estimated based on typical unit flow factors of 170 gpd for multi-family residential units and 0.1 gpd/square foot of building floor space for non-residential uses. The Sewer Master Plan concluded that the additional wastewater flow associated with potential growth would be negligible and would not result in impacts to capacity of the existing sewer system. The Sewer Master Plan recommends implementing a capital improvement program to prioritize sewer pipes for rehabilitation and replacement.

Albany is located in EBMUD's Special District 1 and therefore wastewater from Albany is treated at EBMUD's Main Wastewater Treatment Plant (MWWTP) in Oakland. EBMUD's MWWTP operates in compliance with all relevant San Francisco Bay RWQCB requirements. EBMUD provides secondary treatment for a maximum flow of 168 MGD. Primary treatment is provided for up to 320 MGD. Storage basins provide plant capacity for a short-term hydraulic peak of 415 MGD. On average, about 63 million gallons of wastewater are treated every day.[32]

For the purpose of this analysis, it is assumed that the generation of wastewater consists of approximately 90 percent of total potable water used. The remaining 10 percent is assumed to be consumed or used for irrigation purposes. Using this standard, implementation of the Draft General Plan would produce approximately 3.04 mgd of wastewater. (90 percent of the anticipated water demand 3.38 mgd as described above). This additional wastewater would comprise approximately 1.80 percent of the remaining secondary treatment flow and 0.95 percent of the primary treatment capacity and would not exceed the remaining capacity for secondary or primary treatment. This increase in wastewater would be adequately treated by existing EBMUD treatment facilities. Implementation of the Draft General Plan would not require the construction of new water or wastewater treatment facilities or the expansion of existing facilities, and impacts associated with the collection and treatment of wastewater would be less than significant.

Impacts related to wastewater treatment would be further reduced by implementation of the following Draft General Plan Policies:

- **Policy CSF-6.1 Water Supply, Storage, and Distribution.** Work with East Bay Municipal Utility District (EBMUD) to ensure the adequacy and safety of water utilities. The City will work with EBMUD to plan for an adequate long-term water supply, the safety of the water storage and distribution system, the adequacy of the system to support fire flow needs, and the safe treatment and disposal of Albany's wastewater.
- **Policy CSF-6.2: Sanitary Sewer System.** Ensure the safe management, operation, and maintenance of Albany's wastewater collection system.

[31] Albany, City of, 2014. *City of Albany Sewer Master Plan.* May.

[32] East Bay Municipal Utility District, 2015. *Wastewater Treatment* . Website: www.ebmud.com/wastewater/collection-treatment/wastewater-treatment/treatment (accessed August 12, 2015).

- **Policy CSF-6.4: Sewer Inspections and Maintenance.** Maintain regular inspection, maintenance, replacement, and enforcement programs for the local sewer and storm drainage systems. Ensure the proper design and construction of all laterals by contractors and other third parties.
- **Action CSF-6.B: Sewer Master Plan Implementation.** Implement the recommendations of the 2014 Sewer Master Plan to ensure that the sanitary sewer system can support current and future needs while improving water quality.

(4) Solid Waste. As previously described, non-hazardous solid waste produced in the City is transported to the Davis Street Transfer Station and Resource Recovery Complex in San Leandro and then hauled to the Altamont Landfill and Resource Recovery Facility. The Davis Street facility has a permitted maximum daily throughput of 5,600 tons and a permitted capacity of 9,600 tons per day. The Altamont Landfill facility has a total estimated capacity of 62 million cubic yards. As of 2014, the landfill had a remaining 68.4 percent capacity.[33] The landfill has a permitted throughput of 11,500 tons per day. [34] The Altamont Landfill has a disposal capacity through 2045.[35]

Construction and operational activities associated with Draft General Plan growth would generate additional solid waste in the City. Estimated growth would add an additional 1,800 residents to the City by 2035. In 2012, the City disposed of approximately 5,429 tons or 1.6 pounds per person per day of solid waste. Keeping the average daily output of solid waste per person constant, implementation of the Draft General Plan could increase solid waste disposal demand by approximately 1.44 tons per day. This amount would represent approximately 0.02 percent of Altamont's permitted daily capacity and, therefore, would not result in a significant impact related to solid waste capacity.

The Draft General Plan policies and actions related to solid waste are as follows:

- **Policy CON-7.1: Zero Waste.** Work toward an ultimate target of "zero waste" by continuing to reduce solid waste generation and expand local recycling and composting programs. The City will pursue a 90 percent diversion target by 2030.
- **Policy CON-7.2: Expanded Waste Diversion.** Work with stopwaste.org and other organizations to adopt local ordinances which expand the scope of recycling and waste reduction. A particular emphasis should be placed on increasing the diversion rate for multi-family buildings and commercial businesses and expanding recycling of construction and demolition debris.
- **Policy CON-7.3: Waste Reduction**. Support regional, statewide, and national initiatives to reduce waste through such measures as eliminating junk mail, reducing excessive product packaging, increasing e-waste recycling, promoting the sharing and reuse of consumer goods in lieu of individual consumption and expanding the market for recycled goods and products.
- **Policy CON-7.4: Education and Outreach.** Expand education and outreach on the importance and benefits of waste reduction.

[33] Waste Management, 2014. *Altamont Landfill and Resource Recovery Facility Fact Sheet.* Available online at: www1.wmsolutions.com/pdf/factsheet/Altamont_Landfill.pdf (accessed February 18, 2015).

[34] California Department of Resources Recycling and Recovery, 2012. *Solid Waste Information System Facility/Site Listing*. Website: www.calrecycle.ca.gov/SWFacilities/Directory/01-AA-0009/Detail (accessed February 18, 2015).

[35] Waste Management, 2015, op. cit.

- **Policy CON-7.5: Commercial and Household Hazardous Waste.** Continue and expand efforts to reduce, collect, and ensure the proper disposal of household hazardous waste, commercial business waste, electronic waste, bulky goods, and other waste that cannot be easily recycled through conventional pick-up.
- **Action CON-7.A: Municipal Waste Reduction.** Implement measures to reduce municipal waste and increase the use of recycled products and salvaged materials for City operations. This could include environmentally friendly purchasing practices, installation of recycling receptacles in parks and public spaces, city sponsored composting programs, and environmental education initiatives.
- **Action CON-7.B: Waste Reduction Program.** Maintain a solid waste reduction and management program that is coordinated with the Countywide Stopwaste.org program. Components of this program include trash collection, compost and recycling collection, education and outreach, and other components to minimize landfilled waste.
- **Action EH-3.C: Household Hazardous Waste Day.** Work with Stopwaste.org to establish an annual household hazardous waste (HHW) collection day in Albany, or alternatively to establish a partnership with nearby cities that enables Albany residents to more easily dispose of household hazardous waste.

Potential impacts to solid waste facilities would also be reduced through the implementation of Draft General Plan policies. The Draft General Plan supports efforts and measure to maximize waste reduction and recycling within the City. Implementation of Draft General Plan Policies CON-7.1 through CON-7.5 would reduce impacts related to solid waste generated by planned growth by reducing the waste stream, meeting local waste diversion requirements, and continuing to exceed the 2006 75 percent waste diversion rate for the City. Implementation of Draft General Plan Policy CON-7.1 would reduce the amount of solid waste generated in the City, thereby increasing the life span of the landfill, and require Citywide participation in waste reduction and recycling efforts. In regard to construction waste, development projects would be required to comply with the City's Construction and Demolition Debris Ordinance, which would reduce a portion of the solid waste sent to the landfill.

Implementation of the Draft General Plan policies and actions and the City's existing programs designed to minimize the waste stream would ensure that construction of new solid waste disposal facilities or substantial expansion of existing facilities would not be required in Alameda County. As such, implementation of the Draft General Plan would not generate a demand for solid waste disposal that could not be accommodated by existing landfills, and this impact would be less than significant.

(5) Regulations Related to Solid Waste. State law requires that 50 percent of solid waste be diverted from landfills. In 2010, Albany had an 84 percent diversion rate, the highest diversion rate in the County. Therefore, the City is in compliance with State law. Additionally, Albany has committed to the waste reduction programs, plans, and policies discussed above in the regulatory subsection. Therefore, implementation of the Draft General Plan would not conflict with a federal, State, or local statue or regulation related to solid waste disposal. This impact would be less than significant.

(6) Energy and Telecommunications. As described in the setting section, PG&E provides electricity and natural gas service to Albany. PG&E charges connection and user fees for all new development, in addition to sliding rates for electrical and natural gas service based on use. As required and regulated by the California Public Utilities Commission, PG&E will continue to meet future demand for energy within the City of Albany.

Regulatory requirements for efficient use of electricity and gas are contained in Title 24, Part 6, of the California Code of Regulations, entitled "Energy Efficiency Standards for Residential and Non-residential Buildings." These regulations specify the State's minimum energy efficiency standards and apply to new construction of both residential and nonresidential buildings. The standards regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. Compliance with these standards is verified and enforced through the local building permit process.

In regards to telecommunications, the California Public Utilities Commission requires that AT&T anticipate and serve new growth. To meet this requirement, AT&T continually upgrades its facilities and infrastructure, adding new facilities and technology to remain in conformance with California Public Utilities Commission tariffs and regulations and to serve customer demand in the City.

Given, that energy and telecommunications service providers are required to anticipate and serve new growth, implementation of the Draft General Plan would result in a less-than-significant impact to the provision of energy and telecommunication services. The Draft General Plan policies and actions related to the conservation of energy are as follows:

- **Policy LU-1.7: Sustainable Development**. Ensure that future development mitigates its environmental impacts to the greatest extent possible and is designed and constructed to advance the principles of sustainability. This should include the use of greener building practices, greater energy and water efficiency, and the design of new development in a way that encourages walking and bicycling.
- **Action LU-1.B: Sustainable Infrastructure**. Ensure that the City's capital improvement program places a priority on sustainable infrastructure projects, such as renewable energy, composting and recycling facilities, bicycle racks, and electric vehicle charging stations.
- **Policy CSF-6.8: Communication Infrastructure**. Work with internet, cable, and telecommunication service providers to improve service to Albany residents and businesses.
- **Action CON-3.A: CAP Progress Reports and Updates**. Provide periodic progress reports on the implementation of Climate Action Plan (CAP) measures regarding building energy and water efficiency measures. Update the CAP at least once every five years to reflect the completion of specified actions, the development of new actions, the availability of resources and technology, and new targets for greenhouse gas reduction.
- **Policy CON-6.2: Energy and Water Audits**. Promote the use of energy audits and water audits by Albany residents and businesses to identify and eliminate sources of waste, conserve resources, and reduce utility costs. Lead by example by performing such audits on municipal buildings and properties, and undertaking appropriate improvements to address energy and water inefficiencies in City facilities.
- **Policy CON-6.3: Energy Retrofits**. Encourage the retrofitting of residential and commercial buildings to increase energy efficiency and maximize the use of renewable energy.
- **Policy CON-6.4: Cool Roofs and Pavement**. Encourage the design of roofs, pavement, and other exposed surfaces in a manner that mitigates the heat island effects of development and improves energy efficiency.
- **Policy CON-6.5: Solar Access**. Preserve solar access rights in a way that is consistent with state law and supports the use of photovoltaic energy systems.

- **Policy CON-6.7: Renewable Energy**. Support low cost financing programs which incentivize private investment in energy efficiency and renewable energy systems. This could include measures such as solar energy empowerment districts and alternative financing for solar installations.
- **Action CON-6.A: Green Building Code**. Require new construction to meet or exceed California Green Building Code standards for energy and water efficiency. Albany's building codes should be regularly reviewed and periodically amended to meet or exceed state requirements.
- **Action CON-6.B: Zero Emissions Municipal Buildings**. Pursue a zero emissions target for City buildings through the development of renewable energy systems, performance data displays, and energy efficiency improvements to public buildings.
- **Action CON-6.D: Energy Outreach**. Develop outreach programs to increase energy efficiency and renewable energy investments in the city, and partner with other organizations such as PG&E and Stopwaste.org to carry out their energy education and outreach efforts. The City will continue to hold events such as the annual Arts and Green Festival to raise awareness of environmental issues and opportunities for more sustainable living.
- **Action CON-6.E: Point of Sale Energy Requirements**. Continue to evaluate point of sale energy efficiency upgrade requirements for homes and businesses. Consider ordinances requiring such upgrades.
- **Action CON-6.F: Multi-Family Energy Use Monitoring**. Continue working with Stopwaste.org to develop and implement a benchmarking pilot program which assists landlords and tenants in gauging utility usage over time. Encourage PG&E, EBMUD, and other utilities to provide comparative conservation metrics on utility bills.

c. Cumulative Impacts. The utilities identified below are generally provided or delivered on a local level, but often originate from sources outside of the City and/or as part of a regional distribution system. Development associated with the Draft General Plan would contribute to regional impacts associated with the provision of utilities, which would be considered less than significant unless otherwise noted below.

(1) Water Supply. Potable water is provided to the City of Albany, and approximately 1.3 million customers throughout portions of Alameda and Contra Costa Counties, by EBMUD. EBMUD's territory includes 332 square miles of service area, and the City of Albany comprises approximately 1.4 percent of its customers. New urban land uses within the surrounding area and development associated with implementation of the Draft General Plan would be dependent on the EBMUD's water supply.

Within EBMUD's service district, potable water demand is projected to increase by 6,725 acre feet per year from 2015 to 2035. The increase in demand would account for all the anticipated growth in water demand in Albany during this 20-year period. Existing cumulative demand is approximately 249,957 acre feet per year; with implementation of the Draft General Plan, cumulative demand would increase. Albany's contribution to cumulative demand would be less-than-significant (i.e., less than 2 percent). EBMUD's current water supply is insufficient to meet water demand during single- and multi-year droughts despite EBMUD's aggressive water conservation and recycled water programs. To meet projected water needs, EBMUD would need to supplement water supplies and improve recycled water programs. The Draft General Plan would ensure continued implementation of best management practices and enforcement of water efficiency regulations. As a result, Albany's contribution would not be cumulatively considerable and therefore, would not result in a cumulative impact to water supply resources.

(2) Wastewater Treatment. Implementation of the Draft General Plan would contribute additional wastewater treatment demand. However, as previously described, EBMUD has sufficient capacity for current dry and wet weather loads and for future system-wide load projections, and there are no plans for expansion of the WWTP. Therefore, implementation of the Draft General Plan would not make a significant cumulative contribution to impacts on wastewater treatment demand. This impact is considered to be less than significant.

(3) Solid Waste. New development estimated to occur under the Draft General Plan would increase the generation of solid waste in Albany. Additional growth in surrounding communities like Berkeley, El Cerrito, and Emeryville would also generate solid waste. However, solid waste management is generally provided by the respective jurisdictions and not on a regional basis. The City of Berkeley and City of Emeryville solid waste stream is transferred to Altamont Landfill in Livermore, and the waste streams of the City of El Cerrito are transferred to the West Contra Costa Sanitary Landfill. Since growth associated with the Draft General Plan would represent 0.02 percent of Altamont's permitted daily capacity, it is anticipated that the landfill would have adequate capacity to accommodate solid waste generation from Albany. Therefore, implementation of the Draft General Plan would not make a significant cumulative contribution to impacts on solid waste management. This impact is considered to be less than significant.

N. VISUAL RESOURCES

This section describes the existing visual resources within the City of Albany and evaluates potential impacts of the Draft General Plan on these resources. Included in this section is a description of existing visual conditions within Albany as well as an evaluation of the potential effects on visual resources that would result from implementation of the Draft General Plan. The visual analysis is based on field observations within the City of Albany, background reports prepared for the General Plan Update, and publically-available planning documents.

Visual resources include the elements that provide a "sense of place" within Albany and contribute to its unique identity. These elements encompass both natural and human-made features of the local environment, as well as cultural characteristics that contribute to how Albany is perceived, or "read" as a place. The setting section describes the primary features contributing to Albany's natural setting, such as gateways, scenic views, scenic highways, and creek corridors, in addition to the issue of night lighting and glare.

1. Setting

The following section describes Albany's regional and local visual setting.

a. Regional Setting. Albany is the northernmost city in Alameda County and is located on the east shore of the San Francisco Bay. Albany is located close to two prominent natural features San Francisco Bay which acts as the western border of the City and Albany Hill, which rises to approximately 330 feet in the western part of the City. Albany is located in an urbanized area and borders the Contra Costa County cities of Richmond on the northwest and El Cerrito on the north, and the Alameda County city of Berkeley on the east and south. Land uses, building types, and densities are similar in the adjacent cities and consist of primarily low rise development.

b. Local Setting. For the purpose of describing the urban setting, Albany has been divided into seven contiguous geographic areas, as shown in Figure IV.N-1. The neighborhood areas are listed below.

- Waterfront
- Freeway
- Albany Hill
- University Village
- Central and Eastern Albany
- San Pablo Avenue
- Solano Avenue

Each of Albany's primary geographic areas is defined by a commercial, industrial, or residential district. Albany has an urban visual character, characterized by lower-rise buildings (mostly one to two stories in height), extensive landscaping, and a moderate intensity of uses. More dense and urban areas with taller buildings and more concentrated commercial activity are located along San Pablo Avenue and Solano Avenue.

c. Neighborhood Area Characteristics. The visual characteristics of each neighborhood are described below.

(1) Waterfront. The Albany waterfront is characterized by expansive open spaces and has visual qualities associated with unimproved parkland, such as open fields, trails, a beach, and dense ground cover. The area has been modified by a century of landfill, including the creation of the Albany Neck and Bulb which extend from the natural shoreline west one-half mile into San Francisco Bay. The artificial nature of the landscape is apparent, as scattered construction debris and exposed metal are visible, and construction rubble exists along the shoreline. A small eucalyptus grove is present near the Albany Beach, and other non-native trees such as canary palms, Australian tea trees, and acacia are present. The freeway creates a strong eastern edge to the area and separates the waterfront from the rest of the City.

Golden Gate Fields is a dominant visual feature of the shoreline environment. It includes a multi-story grandstand seating 8,000 people and a large club and concessions building. The grandstand and track are visible from much of the Central East Bay, including from Interstate 80 (I-80), the south side of Albany Hill, and the Berkeley Hills. Much of the racetrack property is open space, including parking lots, the interior turf area, and the track itself. A variety of fencing, lighting, and storage facilities are also present. The horse stables at the south end of the track are located in Berkeley.

San Francisco Bay adds to the expansive visual quality of this area and creates an outward focus toward the water. Visual character is defined primarily by long-range views to the horizon. There are also views northward toward Point Isabel and southward toward Cesar Chavez Park along the Berkeley waterfront. Short- and mid-range views take in shoreline features (such as concrete debris and rip rap), abundant scrub and low trees, trails, and tall grasslands. The Albany Bulb has an eclectic collection of outdoor folk art, much of it fashioned from refuse, that contributes to the wild and remote character of the area and provides a visual cue to the history of the Bulb and its origin as a landfill. The art includes a mix of elements that are transient and elements that are durable and familiar to visitors, including human figures crafted from driftwood.

(2) Freeway. The I-80 and Interstate 580 (I-580) freeways are among the dominant visual features of the city and create a strong edge between the waterfront and Albany's neighborhoods. I-80 is 10 lanes wide as it passes through Albany, with auxiliary and merge lanes making it appear even wider. South of Buchanan, frontage roads, ramps, and grade separations give the freeway an expansive presence. North of Buchannan, the I-80 and I-580 freeways run parallel to one another, with a narrow wedge of light industrial uses and a railroad in between. Elevated ramps at the interchange, and the slight curve of I-80 as it approaches Albany Hill create a change in aspect for drivers and form a memorable transition between the upper Eastshore area (from Richmond northward) and the shoreline area. The I-80/I-580 interchange itself includes an elevated segment of I-80, as well as flyovers and ramps which visually dominate the southern slope of Albany Hill and the approach to the freeways from Buchanan Street.

LSA

LEGEND

- Albany City Limit
- Freeway
- BART Tracks
- Railroad Tracks
- Building
- Waterfront
- Eastshore Area
- University Village
- Central/Eastern Albany
- Albany Hill
- Solano Avenue
- San Pablo Avenue
- Gateways

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SOURCE: CITY OF ALBANY, 2/13/15.

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FIGURE IV.N-1

City of Albany Draft General Plan Update EIR

Albany Visual Analysis Subareas

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Albany's small industrial district is confined to the linear strip immediately adjacent to the freeway area. Visually, the industrial district is linked to the freeway, with many of its businesses incorporating signage designed for visibility by passing traffic. The building scale is auto-oriented and the architecture is functional, consisting of a number of office-warehouse and industrial buildings. Newer buildings such as the Target store and a recently completed auto showroom incorporate a contemporary-industrial aesthetic that includes metal and glass. The railroad forms a strong boundary between this area and University Village to the west. North of Buchanan, the character is more eclectic, with vacant land, open storage, and older manufacturing buildings.

(3) Albany Hill. Albany Hill is visually important not only because it is a major topographic landmark but because the hill itself affords panoramic views across Albany, Berkeley, Richmond, El Cerrito and San Francisco Bay. Each side of Albany Hill has a different visual character, shaped by the street pattern, vegetation, scale of development, and adjacent uses. The north side of the hill is the least developed, with most of the land contained in a City park. The area is heavily wooded, steep, and somewhat difficult to access. The west side of the hill is dominated by the multi-colored high-rise towers at Gateview and the mid-rise condominiums to the north. The towers (roughly 15-18 stories tall, but still lower than the summit of Albany Hill) are a visual cue to I-80 motorists of the transition between the suburban communities north of Albany and the urban core of the East Bay. The freeway is a dominant presence here, creating a strong horizontal element along the western edge. Eucalyptus woodlands provide a green backdrop to the east and south, softening the presence of the high-rise buildings, and providing a buffer between this area and the rest of the City.

The south and east sides of Albany Hill are mostly urbanized. Views on the south slopes face the Bay, the freeway and racetrack, and points south. As the street grid becomes rectilinear, steep grades are common, creating dramatic panoramas. Tree cover is sparse, resulting in expansive views in almost all directions. The building stock consists of smaller cottages and bungalows generally dating from 1910-1940, and small apartment buildings from the 1950s and 60s. On the east side of Albany Hill, there is a large stock of multi-family housing and townhouse development from the 1960s and 70s, with many structures built into the hillside with stepped foundations, multi-level decks, and wood shingle finishes. These areas look eastward toward Berkeley and Kensington, with views taking in the UC Campus, the hill neighborhoods, and most of Albany. Features such as the BART tracks, San Pablo Avenue, and Solano Avenue provide visual orientation.

(4) University Village. University Village is somewhat self-contained within Albany. Its street network, "master planned" architectural style, building scale, open space pattern, defined edges, and function set it apart from the rest of Albany, although it is easily accessed from surrounding neighborhoods. With the completion of the redevelopment project in 2008, the area presents itself as an aesthetically pleasing, attractively landscaped complex of three-story apartments and townhomes. A consistent color palette, building type, signage program, and landscaping treatment unifies the development. Views from this area generally take in Albany Hill and the distant East Bay Hills, with filtered views west to the Bay.

Other features which define the aesthetic setting in University Village include the approximately 10-acre Gill Tract at the corner of Buchanan and San Pablo Avenue. The use of the tract for agricultural research in an otherwise urban context is noteworthy.

(5) Central and Eastern Albany. The remainder of Albany is characterized by mostly residential uses, fairly consistent in form and density, organized on a rectilinear street grid. Two commercial corridors—San Pablo and Solano Avenues—bisect the grid and provide community gathering places, business districts, and civic activities. The two corridors have been called out as separate neighborhoods and are described later in this chapter.

The character of the residential neighborhoods is eclectic. There is a predominance of one and two story stucco and wood single-family bungalows on lots that generally range from 2,500 to 5,000 square feet. Most of the housing stock dates from 1910-1945, although many homes have been expanded, remodeled, and updated. There is tremendous architectural diversity, including Tudor, Mission, Spanish Revival, Craftsman, and Contemporary styles. The color palette of the homes also is diverse, although pastel and earth-tones are predominant. The combination of small lots, consistent scale, eclectic architecture, front porches, narrow driveways, and mature trees gives the neighborhoods a comfortable and pleasant quality that is highly valued.

Most homes include small landscaped front yards, featuring a mix of ornamental plants, shrubs, and native species. Street trees are present on most blocks, but the overall tree canopy is somewhat sparse. Large specimen trees, including redwoods, Monterey pine, palms, and eucalyptus, occur in scattered locations, providing visual orientation. For the most part, utility lines are above ground and telephone poles and overhead wires are a recurring element of the streetscape.

Many homes were built as single story bungalows of less than 1,400 square feet. The desire to expand and update such homes has accelerated as their value has increased and as family size and income have increased. Given the narrow dimensions and small size of most lots, adding on often requires a second story. Albany has adopted design guidelines intended to reduce the perceived mass of two-story homes from the street, minimize the effect of such additions on adjacent properties, and promote architectural compatibility. On some homes with second story additions, the upper floor is recessed from the front facade, maintaining a lower profile at the street.

Some homes in Central and Eastern Albany have filtered or partial views of nearby landmarks, particularly San Francisco Bay and the hills of Marin County, the Golden Gate, San Francisco skyline, Berkeley Hills, El Cerrito Hills, and Albany Hill. Most views are short-range, taking in landscaped yards, nearby homes, street trees, and adjacent streets. In the eastern part of Albany, the terrain is gently sloped.

Concentrations of multi-family development exist on the blocks between Brighton Avenue and El Cerrito Plaza, and along Adams Street and Kains Avenue. Multi-family structures are generally two to four stories in height, with many incorporating modernist or mid-century modern designs typical of apartment construction in the 1950s and 60s. Some are “soft story” buildings with tuck-under carports at the street level and one or two stories of apartments above. The quality and condition of these buildings is variable, with some in excellent condition and others in need of maintenance and repair.

A number of distinct uses in Central and Eastern Albany’s neighborhoods stand out as visual landmarks. These include churches, such as Albany United Methodist on Marin Avenue and St. Albans on Washington at Curtis, and civic buildings such as the Community Center and Library on Marin Avenue and the Veterans Memorial Building in Memorial Park. Schools are also a prominent feature of the Albany landscape, particularly St. Mary’s College High School in the southeastern

corner of the City and Albany High School and Middle School in the north-central part of the City. City parks and open spaces complement the residential areas, particularly Jewel's Terrace Park in the Albany Terrace area and Memorial Park in northeast Albany. There are also a number of distinctive visual features, such as the elevated BART tracks along the Ohlone Greenway and the wide grassy median on Key Route Boulevard.

(6) San Pablo Avenue. San Pablo Avenue has historically been an auto-oriented thoroughfare. It was once part of the Lincoln Highway, the first transcontinental highway for automobiles, and it supported a streetcar during the early 20th Century. Although its function as an interstate highway ended more than 50 years ago, the legacy persists in the character and mix of uses along the Avenue. San Pablo Avenue is still a State Route (SR 123). Large signs and parking lots are prominent and many businesses are convenience-based or provide goods and services related to automobiles. Buildings range from one to four stories in height, and land uses include auto sales and parts, auto service and repair, shopping centers, freestanding retail uses, restaurants, offices, service businesses, and multi-family residential.

The corridor lacks a common design language or architectural aesthetic. Most blocks are characterized by a mix of building styles, signage types, setbacks, and off-street parking provisions. Sidewalk and median investments have improved the visual quality of the public space, and recent private development has created more cohesion.

During the last 20 years, the corridor has begun to transform into a more pedestrian-oriented district, with landscaping, streetscape amenities, and mixed-use development introduced. One of the distinguishing characteristics of the newer projects is that they contain retail storefronts opening to the sidewalk rather than parking lots along the street frontage. Parking on these properties is located beneath or behind the building, and residential uses are located on upper stories.

Since the late 1980s, Albany's policy has been to make the intersection of San Pablo and Solano Avenue a more visually distinctive node. Tightly clustered storefront buildings along this stretch of San Pablo help the area function as an extension of the Solano Avenue shopping district. One block south, the Buchanan/Marin/San Pablo intersection is another important node. City Hall and the Police and Fire stations create a focal point, but two service stations on the east side of the intersection suggest the node has not reached its full potential. The potential for a more positive visual impact also exists further south along the west side of San Pablo Avenue, where vacant parcels fronting the Avenue near University Village are planned for development with new housing and retail uses. The northern Albany gateway in the vicinity of Albany Bowl also has the potential to be more visually distinct.

Views from San Pablo Avenue are generally oriented to the Avenue itself, as the flat terrain tends to limit broad panoramas. Albany Hill is a dominant visual feature in the northern part of the corridor. The Berkeley and El Cerrito Hills are generally visible to the east, particularly at the intersecting streets and from parking lots. Utilities are underground, with cobra head light fixtures spaced at regular intervals along the Avenue. Mature street trees are regularly spaced on most blocks. A grove of mature evergreens and palms creates a visual landmark just south of City Hall.

(7) Solano Avenue. Solano Avenue is a pedestrian-oriented shopping district characterized by almost continuous ground floor commercial activity from Adams Street to the Berkeley border, 15 blocks to the east. The street is characterized by short blocks, a well-defined street wall, small storefronts with large transparent windows, eclectic architecture, active ground floor uses, and diagonal street parking. These factors combine to create a distinct "village" ambiance that invites strolling, browsing, and pedestrian interactions.

Pedestrian improvements such as curb bulb-outs, landscaping, benches, bus shelters, and small plazas, where implemented, have enhanced the character of this area, and provided gathering places and seating areas along the Avenue. Utilities are underground and antique lighting standards are in place. Many of the buildings feature awnings, creative signage, interesting window displays, and architectural elements that create visual interest.

Most blocks contain one- and two-story wood-frame commercial buildings built to the front setback, and articulated with small storefronts. Some are simple and lack architectural details, and some include embellishments such as turrets, tile mosaics, and parapet walls. The corner buildings often include special treatments which define the end of the block. Building styles include Mediterranean, Tudor, Mid-Century Modern, Art Deco, and California Contemporary, as well as numerous simple vernacular commercial structures from the 1920s and 30s. Exterior finishes include brick, ceramic tile, stucco, wood, and other surfaces, while rooflines and materials vary widely from red clay tiles to mansard-style. The overall effect is eclectic and memorable.

A few larger auto-oriented uses exist along the Avenue. These include the Safeway store, a CVS pharmacy, and a 7-Eleven store. Some blocks include a single two- or three-story apartment building, generally dating from the 1940s to the 1960s, with carports or garages at the street level. While there are no designated historical landmarks on the Avenue, a few buildings are notable for their size, age, and function. These include the Albany Theater, the Church on the Corner, the Post Office, Cornell School, and an AT&T facility near the Berkeley border.

Views from the Solano corridor are primarily short-range and focus on buildings, landscapes, and street trees. On most blocks there are longer-distance views to the Berkeley Hills to the east, the El Cerrito Hills to the north, and Albany Hill to the west. Filtered views of the Bay and distant landmarks in San Francisco and Marin County exist in a few locations.

d. Visual Characteristics. The following section describes Albany's visual characteristics.

(1) Gateways and Landmarks. Gateways are an important aspect of community design. They create a first impression and lasting image. A well-designed gateway can communicate an image of vitality and prosperity while a poorly managed or neglected gateway can communicate disinvestment and a lack of civic pride. The major gateways into Albany are generally considered to be Buchanan Street east of I-80: the locations where San Pablo Avenue enters the City on the north and south, and the locations where Marin and Solano Avenues enter the City on the east. Albany's Public Art Master Plan places a special focus on beautifying these locations.

The Buchanan Gateway currently includes the "Rose Wave" sculpture and the new Buchanan bike path. It is further defined by the large USDA building, the open space at Ocean View Park, the Gill

Tract farm, and the residential area ascending up Albany Hill on the north. City Hall is effectively the terminus of this gateway.

The north and south San Pablo Avenue gateways are only eight blocks apart. At the northern boundary, there is little awareness of either the Albany line or Cerrito Creek below. At the southern boundary, the UC property provides an opportunity for a more distinctive southern gateway. A large piece of public art was recently approved in association with new mixed-use development proposed for this area.

The eastern gateway along Solano Avenue is vaguely defined, in part because of a peculiarity in the City boundary. Albany's easternmost point is between Ventura and Tulare Avenues, but for four blocks from this point west, Albany occupies the southern side of the street while the northern side is in Berkeley. The first point where Albany occupies both sides of the street is between Curtis and Neilson Streets. At this point, an older sign made from black steel I-beams reads "Welcome to Albany."

(2) Landscaping and Street Trees. Trees, shrubs, and flowers enhance Albany's appearance and provide a contrast to the built environment. Trees also offer shade for pedestrians, provide privacy and a buffer from noise, relieve some of the effects of air pollution, and introduce nature and habitat into an urban environment. Trees can have positive effects on stormwater runoff and water quality, and can result in increased property values. Trees can also sequester carbon, and contribute to efforts to reduce greenhouse gas emissions.

Albany has developed an urban forestry program to promote street tree planting and tree maintenance best practices. Pruning of street trees is conducted on a three to four year cycle, with a priority on fast-growing trees or potential hazards. Albany also conducts tree planting and concrete removal for a fee when requested by homeowners. A landscape and lighting assessment district generates revenues for street tree planting, landscaping, public street lighting, sidewalks, and park and recreational improvements.

There are approximately 5,000 publicly-owned trees in Albany, located in City parks and along City streets. In 2010, an updated list of recommended street tree species was adopted based on the recommendations of a Tree Task Force that met for two years prior. Residents may pick a tree from the list and contact the City to arrange for planting. Trees are planted throughout the year, as demand and availability allow. Once planted, residents must agree to water trees according to the instructions provided by the City, and accept liability for tree-related hazards. The City conducts pruning and maintenance. For new construction projects, owners are generally required to purchase trees to be planted by the City in the street right-of-way adjacent to the project.

Over the years, a number of specific programs have been implemented to incentivize tree planting. These include the Block Urban Forest Focus (BUFF) process, in which neighbors mobilize their block to identify tree planting sites, remove concrete, plant trees and ground cover, and prune existing trees. In addition, a Tree Fund has been established to provide a repository for persons wishing to donate money to plant and sustain the City's urban forest. Such programs are intended to build a sense of community and stewardship, while also greening the City.

Homeowners are asked to support and complement City tree maintenance efforts by watering and mulching their street trees, and keeping weeds from interfering with tree development. The City occasionally re-stakes young trees. For mature trees, the City removes dead branches, addresses conflicts with overhead wires, and prunes branches that obscure signs or create sidewalk or road hazards. The City also assists with sidewalk damage that is caused by street trees, although the primary responsibility for sidewalk repair falls on the homeowner.

The City has adopted an official tree removal policy, which includes procedures for emergency and non-emergency removal of trees on public property. Causes for emergency removal include immediate, clear, and imminent danger to the public. The policy calls for a replacement tree to be planted in 60 days or less. For non-emergency removal, permission must be granted by the Director of Community Development, following a noticed public hearing before the Parks and Recreation Commission. Criteria have been established to justify removal, such as a finding that the tree is diseased, damaged, causing frequent sidewalk or utility damage, or poses a hazard. The City itself may apply for a tree removal permit, subject to these same criteria. The Parks and Recreation Commission may grant or deny a tree removal application permit. Their decision is appealable to the City Council.

(3) Public Art Program. Public art includes artwork in the public realm, such as sculptures, murals and mosaics. Public art creates a sense of space and improves the quality and design of buildings, streetscapes and public places, giving a stronger feeling of identity. Architecture and landscapes can be a form of public art, as they express a particular perspective and can provide a source of beauty and interest.

The City has adopted an Art in Public Places Ordinance as a way to fund public art in Albany. Certain types of public and private construction projects must either include a public art component, or pay an in-lieu fee which contributes to the development of public art elsewhere in the City. Any project with a construction cost greater than $300,000 must include a public art component equal to 1.75 percent of the total construction cost, or contribute 1.75 percent of the project cost to the Public Art Fund.

The City has adopted a Public Arts Master Plan to guide the siting of public art. Locations throughout the City have been evaluated for future art pieces, and several prominent and high visibility sites have been identified as candidates. Notable existing art installations include “Herons” at the Albany waterfront, the “Rose Wave” on Buchanan Street, “Long Song” in Memorial Park, and a tile mural in Terrace Park.

(4) Scenic Views and Scenic Highways. California's Scenic Highway Program was created by the State legislature in 1963. Its purpose is to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. Designated scenic highways are subject to various regulations and guidelines to avoid diminishing their aesthetic values. There are no officially designated State scenic highways in Albany.

e. Light and Glare. This section describes the existing conditions of light and glare in Albany. Light pollution refers to forms of unwanted light in the night sky, including glare, sky glow, excessive night lighting, and diminished night sky visibility. Existing sources of nighttime light in and around Albany include street lights, parking lot lighting, building lighting, illuminated signs, vehicle headlamps, and interior lighting visible through windows. Billboard illumination has been an issue in the City in the recent past, with concern about the potential effects on residences near I-80.

Existing sources of glare also include those common to urban areas, such as reflection of sunlight and artificial light off of windows, buildings and other surfaces in the day, and glare from inadequately shielded and improperly directed light sources at night. Light and glare levels in the City are fairly typical of an urban environment. Performance standards addressing light and glare, including the design of exterior lighting fixtures, have been incorporated into the Albany Municipal Code.

f. Regulatory Setting. This section describes applicable State and local regulations that pertain to visual resources.

(1) California Scenic Highway Program. The intent of the California Scenic Highway Program (Streets and Highway Code Section 260) is to protect and enhance California's natural beauty and to protect the social and economic values provided by the State's scenic resources. The California Department of Transportation (Caltrans) defines a scenic highway as any freeway, highway, road, or other public right-of-way that traverses an area of exceptional scenic quality. Suitability for designation as a State Scenic Highway is based on vividness, intactness, and unity. There are no officially designated highways within the City of Albany.

(2) City of Albany Municipal Code. Visual and aesthetic conditions are regulated in various sections of the Municipal Code. Specifically, the zoning regulations include standards for building height and placement which are intended to preserve views, maintain light and air, and protect the aesthetic quality of the City and its neighborhoods. Daylight plane regulations have been adopted which require taller buildings to decrease in height as they approach property lines in order to preserve privacy and sunlight in adjacent yards.

Various provisions of the Code address the screening of building components such as mechanical equipment, open storage, surface parking, and trash collection areas. For example, the PRC zoning overlay district includes specific provisions to shield residences on Adams Street from the potential aesthetic effects of commercial uses nearby. Similarly, Section 20.24.110 of the code includes requirements for screening of storage areas, outdoor merchandise displays, manufacturing, and rooftop appurtenances. Municipal Code standards also address lighting, parking lots, outdoor seating areas, the design of secondary units, and other property attributes where visual character might be affected. The Code also includes regulations for signs, which are primarily driven by aesthetic and safety considerations.

The Zoning Code includes special provisions for the RHD (Residential Hillside) zoning district, which was established to protect scenic beauty and preserve significant ridgeline or bay views from Albany Hill. RHD Development standards were drafted to minimize the potential visual impacts of development on surrounding properties, to preserve views, and to protect the visual integrity of the hill itself.

Special design provisions have also been adopted for the commercial "node" area around Solano and San Pablo Avenues. These call for tower elements to distinguish this area from the rest of the street. The Code also addresses the articulation and rhythm of storefronts and facades in this area.

The Municipal Code also regulates the siting of wireless communication facilities, noting that such facilities must be cited to avoid unreasonable interference with neighboring properties, and in locations where their visual impact is least detrimental to scenic vistas (20.20.100.E.2.c). The Code further stipulates that such facilities must be screened from view of surrounding properties and the public. A visual analysis is required when a facility is proposed, and findings relating to view impacts are required when projects are approved.

(3) Design Review. Albany has adopted a design review program to ensure that improvements to property are visually and functionally appropriate to their site conditions and harmonious with their surroundings, including natural landforms and vegetation. Design review is also intended to ensure the compatibility of signs, and to achieve complementary policy goals relating to parking, water conservation, and waste management. Design review is required for new construction and most residential alterations, with exceptions for small accessory structures, changes which do not affect the exterior of structures or which involve normal repair and replacement, re-roofing, skylights, and other minor changes. For additions over 400 square feet and any second story addition, a public hearing before the Planning and Zoning Commission is held as part of the review process.

Approval of design review applications takes into consideration general standards regarding architecture, landscape design, site planning, appropriate treatment of any constraints and natural features on the property, access, privacy, coordination of design details, conformance to applicable design guidelines, and similar criteria. Additional standards related to scale, massing, and architectural compatibility apply to single-family residential additions. Story poles may be required to visually display the outer limits of proposed additions. Special provisions have also been adopted for additions which exceed 28 feet in height in the single-family zoning district.

(4) San Pablo Avenue Design Guidelines. Design guidelines were adopted for parcels abutting San Pablo Avenue in 1993. The guidelines implement the recommendations of a 1989 Concept Plan intended to improve the overall appearance and commercial vitality of the street. The vision for the street is to create an attractive "retail boulevard" with a consistent commercial frontage, greater pedestrian activity, and special locations that create a stronger sense of place. The guidelines do not call for a particular architectural style and apply only to new development and renovations.

The guidelines call for distinctive building silhouettes, and greater attention to building massing to create a stronger street presence. A preference is given for buildings that are articulated into discrete building bays which correspond to smaller storefronts. The guidelines also recommend stronger vertical elements, more interesting facades, special treatments at corners, and the incorporation of lighting as an architectural feature. Buildings are addressed based on their various components—a base, a cap (roofs, cornice lines, parapets), windows and doors, and awnings. Provisions for signage are also included, focusing on the relationship of the sign to the architecture and proportion of the building. The guidelines also cover ground floor details, such as exterior surface materials and lighting. Exterior color is also addressed. Also covered is the location of parking, loading, and service areas. Special provisions in the guidelines were drafted for two key sites: the University Village/Gill Tract property and the Albany Bowl.

2. Impacts and Mitigation Measures

This section discusses potential impacts to visual resources that could result from implementation of the Draft General Plan. The section begins with the significance criteria, which establish the thresholds used to determine whether an impact is significant. The latter part of this section evaluates the Draft General Plan for visual resource impacts, and identifies mitigation measures, as necessary.

a. Criteria of Significance. The Draft General Plan would have a significant impact related to visual resources if it would:

- Have a substantial adverse effect on a scenic vista, which could be caused by blocking panoramic views or views of significant landscape features or landforms as seen from public viewing areas;
- Substantially damage to 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 study area and its surroundings; or
- Create of a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

b. Impacts Analysis. The following discussion describes impacts on visual resources associated with implementation of the Draft General Plan.

(1) Substantial Adverse Effect on Scenic Vistas. The scenic quality of Albany is characterized by views of the San Francisco Bay and Marin Hills (including Mount Tamalpais) to the west, Berkeley Hills to the east, and Albany Hill throughout the City. Views of the San Francisco Bay and Marin Hills are generally available from the waterfront including the Albany Bulb and Neck, and Albany Hill. Filtered views of the Bay and Marin hills are available throughout residential neighborhoods and in a few locations along Solano. Views to the east of the Berkeley Hills are available throughout Albany on residential streets as well as Solano Avenue.

Development associated with implementation of the Draft General Plan would be concentrated along San Pablo Avenue and Solano Avenue. As a result of increased development, building heights may increase along commercial corridors. New development would not substantially block existing views as the following Draft General Plan policies protect these important view sheds. Development would not occur in protected undeveloped areas, including the Bay Trail and Albany waterfront, that provide significant scenic views of the Bay in the City. Additionally, streets and existing open spaces would remain the same under the Draft General Plan and views from these publically-accessible viewpoints would remain unobstructed.

- **Policy LU-2.1: Context-Sensitive Design.** Ensure that infill development in residential areas is compatible in density, scale and character with the established neighborhood context.
- **Policy LU-2.2: Mixed Density Areas.** In areas designated for high and medium density residential uses, ensure that new development is designed to minimize sharp contrasts in height, prevent the loss of sunlight and privacy for adjacent homes, and provide buffering and screening from nearby lower density uses.

- **Policy LU-2.3: Design Guidelines.** Maintain residential design guidelines and design review procedures that promote the compatibility of residential alterations and additions with existing homes and that strive to reduce impacts on neighboring properties. The guidelines should be used to encourage high-quality, visually distinctive architecture, and the use of durable, attractive construction materials.
- **Policy LU-2.6: Second-Story Additions.** Ensure that second story additions to single story homes are designed to minimize increases in height and bulk, and to reduce their perceived mass from the street and surrounding yards.
- **Policy LU-2.8: Kains Avenue and Adams Street.** Maintain Kains Avenue and Adams Street as predominantly residential streets. Land use regulations should limit the encroachment of commercial uses onto parcels that are currently developed with housing. Residential uses along these streets and in adjacent areas should be protected from the potential adverse impacts of commercial uses through special setback requirements. The use of these two streets for primary access to non-residential uses shall be discouraged or prohibited as appropriate.
- **Policy LU-2.9: Non-Residential Uses.** Ensure that non-residential uses in residential areas, such as child care centers, houses of worship, and group homes, are designed and operated to minimize adverse effects on nearby homes and neighborhoods.
- **Policy LU-2.11: Front Yards.** Encourage the management and design of front yard space, including landscaping and fences, to complement residential architecture and enhance neighborhood aesthetics. Action LU-2.B: Multi-Family Design Guidelines. Expand the City's design guidelines for multi-family housing to more comprehensively address residential design issues in the City's medium and high density zoning districts.
- **Action LU-2.B: Multi-Family Design Guidelines.** Expand the City's design guidelines for multi-family housing to more comprehensively address residential design issues in the City's medium and high density zoning districts.
- **Policy LU-3.7: Commercial Design.** Encourage distinctive architecture in Albany's commercial districts, with massing, height, façade design, signage, exterior materials, and lighting used to establish a strong sense of place and orientation. New buildings should be sited to enhance the sidewalk space, with any on-site parking located to the side or rear of a structure rather than between the structure and the street.
- **Policy LU-3.8: Buffering.** Require buffering of residential uses, particularly along Kains Avenue, Adams Street, and the perpendicular side streets that intersect Solano Avenue, from the potentially adverse impacts created by nearby commercial activities. This should include special setback and daylight plane regulations to be applied where commercial zones abut lower density zones. It may also include special use, design, and noise standards.
- **Action LU-3.D: San Pablo Avenue Design Guidelines.** Update the San Pablo Avenue Design Guidelines. In addition to providing direction on building scale, commercial facades, landscaping, and public improvements, the guidelines should consider the segmentation of the corridor into "districts" which are different in their function and character. If such districts are identified, zoning code amendments should be considered to reinforce the desired character.
- **Policy LU-6.3: Views and Vistas.** Consider protection of vistas from public viewpoints when reviewing new development applications.

The Draft General Plan would promote open space in Albany, which would provide new public viewpoints. Therefore, development associated with implementation of the Draft General Plan would have a less-than-significant impact on scenic vistas.

(2) Substantial Damage to Scenic Resources. As previously described, there are no officially designated State Scenic Highways in Albany, and no portions of Albany encompass the viewshed of a State Scenic Highway. Therefore, the Draft General Plan would not damage scenic resources within a State Scenic Highway. Key scenic resources within Albany include views of the San Francisco Bay, Albany Hill, and Berkeley Hills. The policies in the Draft General Plan would ensure that future development would not affect scenic resources, including the waterfront.

- **Policy LU-2.1: Context-Sensitive Design.** Ensure that infill development in residential areas is compatible in density, scale and character with the established neighborhood context.
- **Policy LU-2.3: Design Guidelines.** Maintain residential design guidelines and design review procedures that promote the compatibility of residential alterations and additions with existing homes and that strive to reduce impacts on neighboring properties. The guidelines should be used to encourage high quality, visually distinctive architecture, and the use of durable, attractive construction materials.
- **Policy LU-5.1: Albany Hill.** Ensure that any future development on Albany Hill is designed and planned to respect natural topography, minimize grading, respond to soil and drainage conditions, minimize impacts on parking and narrow streets, and protect view corridors. The entire crest of Albany Hill shall remain a non-urbanized open space area.
- **Policy LU-5.2: Albany Shoreline.** Work collaboratively with federal, State and regional agencies, key interest groups and shoreline open space advocates, and Albany residents to enhance the recreational, ecological, and open space value of the Albany waterfront.
- **Action LU-5.A: Albany Hill Vacant Parcel.** Work with the owners of the vacant 11-acre parcel on the west side of Albany Hill to cluster the site's allowable development in a way that enables a majority of the property to be conserved as open space.
- **Policy LU-6.1: Historic Preservation.** Encourage expanded recognition, public education, and appreciation of Albany's large inventory of early 20th Century homes and commercial buildings. Such buildings help define Albany's sense of place and identity.
- **Policy CON-1.3: Conservation of Albany Hill.** Protect and restore natural features, native vegetation, and wildlife on Albany Hill.

Draft General Plan Policy LU-6.3 would ensure the protection and enhancement of views that define Albany's character. Additionally, Policies LU-5.1, LU-5.2, CON-1.3, CON-1.4 and Action LU-5.A would assist in protecting the views of open space and scenic resources of Albany Hill and Albany's waterfront. Historic Preservation policies under the Land Use Element of the Draft General Plan would encourage expanded recognition of Albany's inventory of early 20th Century buildings. New projects that could affect historic structures would be required to undergo environmental review, pursuant to CEQA. At the time of such environmental review, potential project-specific adverse impacts on historic structures would be identified and mitigation measures would be recommended. In addition, development that would occur as part of the Draft General Plan implementation would not substantially change the layouts of existing residential neighborhoods that contribute to the visual quality of developed portions of Albany. As previously described, Draft General Plan Policy LU-2.1 would ensure context-sensitive design within residential neighborhoods. Draft General Plan Policy LU-2.3 would maintain residential design guidelines and design review procedures to promote compatibility within residential neighborhoods. Therefore, implementation of the Draft General Plan would result in a less-than-significant impact on scenic resources within Albany.

(3) Substantial Degradation to the Existing Visual Character. The City encompasses a diversity of visual environments ranging from the waterfront, single-family residential neighborhoods, to the Solano Avenue commercial district. In general, most growth in Albany's would occur along Solano Avenue and San Pablo Avenue. Mixed-use projects are anticipated to occur along these commercial corridors, which could alter the existing visual character. Underutilized areas and property, as defined in the Housing Element of the Draft General Plan, have been identified as places that could benefit from improvements to the built environment and additional visual cohesion. New transit-oriented development would be concentrated along commercial corridors which are visually appropriate for increased development intensities. The Draft General Plan would generally not affect areas with a high degree of scenic value including the waterfront and single-family residential neighborhoods.

The visual character of commercial corridors could be altered with implementation of the Draft General Plan primarily through the intensifications of uses, including mixed-use development along transit corridors and infill development, where such development is visually compatible with the existing urban fabric. Intensification of uses in commercial corridors would not have an adverse effect on visual character. Development would occur primarily in already-developed areas and would not displace natural environments with a high level of visual quality. Infill development anticipated by the Draft General Plan would result in the redevelopment of underutilized areas and would add cohesion to the existing character of Albany.

The policies in the Draft General Plan previously listed under Section 2.b(1) Substantial Adverse Effect on Scenic Vistas and 2.b(2) Substantial Damage to Scenic Resources would ensure that the scale and design of new development is of high quality that would be site-sensitive and would not adversely affect the visual character of adjacent areas. In addition, the Draft General Plan would work in conjunction with a variety of other design plans and guidelines that have adopted to encourage appropriate designs for San Pablo Avenue and other neighborhood areas within Albany. These plans include: Complete Streets Conceptual Design for San Pablo Avenue and Buchanan Street; Residential Design Guidelines; San Pablo Avenue Urban Design Concept Plan; San Pablo Avenue Streetscape Master Plan; and San Pablo Avenue Design Guidelines. As a result, implementation of the Draft General Plan would result in less-than-significant impacts to the City's visual character.

(4) Substantial Light or Glare. The Draft General Plan does not include any individual projects that would create substantial amounts of glare. However, development anticipated under the Draft General Plan would result in increased amounts of lighting associated with new development (generally installed for security and safety reasons) and reflective building surfaces. New lighting and reflective building surfaces (including windows) would be similar to those that characterize existing urban development in Albany.

The Draft General Plan includes policies, listed below, to ensure that new buildings and associated lighting would not substantially adversely affect daytime or nighttime views. Draft General Plan Policy LU-6.6 would ensure exterior lighting would be reduced to prevent potential light and glare impacts. This policy would assist in reducing light and glare spillover into areas adjacent to new development. Additionally, Draft General Plan Policy LU-6.4 would encourage streetscape improvements including lighting and sidewalk extensions.

- **Policy LU-2.12: Residential Beautification.** Enhance the appearance of residential areas through street tree planting, street lighting and sidewalk improvements, landscaping, and other investments that beautify local streets.
- **Policy LU-6.4: Streetscape Improvements.** Improve the visual character and safety of heavily traveled Albany streets through streetscape improvements such as lighting, signage landscaping, sidewalk extensions, public art, and tree planting.
- **Policy LU-6.6: Lighting.** Manage exterior lighting to reduce potential light and glare impacts, improve public safety, enhance night time visibility, complement local architecture, and enhance the character of the City.
- **Policy CON-5.6: Light Pollution.** Reduce the intrusion of unwanted light and glare, particularly in settings where it may interfere with natural habitat.

The policies listed above and especially Policy CON-5.6 would assist in reducing light and glare spillover into areas adjacent to new development.

The majority of additional development associated with implementation of the Draft General Plan would occur as mixed-use infill projects along San Pablo Avenue and secondarily along Solano Avenue. Any development of vacant parcels adjacent to open space that could occur would be subject to these policies that would reduce potential light and glare impacts to a less-than-significant level. With the implementation of the Draft General Plan policies and enforcement of lighting regulations in the Albany Municipal Code, described above, the Draft General Plan would not create a new source of substantial light or glare which would adversely affect day or nighttime views within the area. As such, this impact would be less than significant.

c. Cumulative Impacts. Development associated with implementation of the Draft General Plan could result in changes to the visual environment that could combine with similar effects in nearby communities. However, changes to the visual environment associated with growth in Albany and adjacent surrounding areas including the City of Berkeley and the City of El Cerrito would generally be less than significant because they would occur in already urbanized areas. Development associated with these surrounding areas, in conjunction with development associated with implementation of the Draft General Plan would not significantly impact views of the waterfront, Albany Hill, or the Berkeley Hills. These urbanized areas are characterized by change over time, associated with new roadways, maturing vegetation, and infill development. Due to expected growth patterns in Albany and surrounding communities, changes to the visual environment would generally include mixed-use development along commercial corridors; streetscape improvements; and taller buildings along major transportation corridors (e.g., San Pablo Avenue). Views of the hills and Bay within Alameda and Contra Costa Counties would generally remain the same.

Development associated with past, present, and reasonably foreseeable future projects in communities outside Albany could increase light and glare. New development within Albany would not cumulatively contribute to locally increased levels of light and glare because development would occur in already-developed areas within the City.

In addition, Draft General Plan Policies listed above would protect visual resources within Albany. These policies are intended to enhance the overall appearance of Albany; encourage the implementation of sound principles of urban design; and promote infill development that is compatible with the existing neighborhood. In addition, the visual character of established residential neighborhoods would be protected. These policies are expected to enhance the quality of the visual environment in Albany over time; similar policies and design review procedures would be implemented in surrounding cities, with similar expected effects. Therefore, the cumulative impact on visual resources associated with the Draft General Plan and cumulative growth would be less than significant.

V. ALTERNATIVES

The CEQA Guidelines require the analysis of a range of reasonable alternatives to the project or to the location of the project that would feasibly attain most of the project's basic objectives and avoid or substantially lessen any of the significant effects of the project. The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice.[1] CEQA states that an EIR should not consider alternatives "whose effect cannot be ascertained and whose implementation is remote and speculative."

The Draft General Plan and its objectives are described in detail in Chapter III, Project Description. The potential environmental effects of implementing the Draft General Plan are analyzed in Chapter IV, Setting, Impacts, and Mitigation Measures, with an emphasis on significant impacts resulting from the project and mitigation measures recommended to avoid these impacts. The following discussion is intended to inform the public and decision-makers of the relative impacts of three feasible alternatives to the Draft General Plan. The environmentally superior alternative is also discussed.

The three alternatives proposed for the Draft General Plan are the following:

- The **No Project alternative**, which assumes that development would occur in the City of Albany, and specifically on available opportunity sites identified in the Housing Element, as allowed under the current General Plan and zoning designations. While approximately the same number of future residents (1,800) and employees (850) are anticipated to occur with implementation of this alternative as with the Draft General Plan, the No Project alternative does not include the new goals, policies, and actions of the Draft General Plan that would provide environmental and community benefits.
- The **Increased Density Near Transit alternative** assumes that the City would identify and implement policies and land use regulations to encourage more density, more infill development and more redevelopment of underutilized parcels along major transit corridors and near transit nodes. At least four stories of development would be allowed with a bonus of up to five stories or more, (under the State Density Bonus law), along San Pablo and Solano Avenues and on land within 0.5 miles of the El Cerrito BART Station. This alternative also would include the elimination of a minimum parking requirement for the San Pablo and Solano Avenue corridors and properties within 0.5 miles of the BART station. This alternative would result in an increase in the number of new residents and employees compared to the Draft General Plan.

[1] *CEQA Guidelines,* Section 15126.6.

- The **Reduced Density and Development alternative** assumes that the City would reduce the allowable floor area on residential and commercial parcels, maintain its current parking standards, and encourage development practices that retain the one- and two-story profile of the San Pablo Avenue commercial district.

The objectives developed for the proposed project are an important part of the context for evaluating alternatives. The proposed project is described in detail in Chapter III, Project Description. The following are the primary objectives of the Draft General Plan:

- Preserve and enhance the high quality of life enjoyed by Albany residents.
- Create new housing opportunities for persons of all incomes and physical abilities.
- Direct future growth to appropriate locations, including the San Pablo Avenue and Solano Avenue corridors and key opportunity sites.
- Ensure that infill development, including major residential alternations and additions, is sensitive to its surroundings and mitigates its impacts.
- Reduce vehicle miles traveled by enhancing opportunities for pedestrians, bicyclists, and transit users.
- Improve transportation safety and reduce the adverse effects of vehicle traffic on neighborhoods.
- Grow more sustainably, and in a manner that reduces non-renewable resource consumption and greenhouse gas emissions.
- Continue to provide high quality parks and recreational facilities.
- Reduce the potential for loss of life and property due to a natural or man-made disaster.
- Promote public health and safety.
- Create a positive environment for local business, and foster business retention and improvement.
- Improve access to the shoreline while protecting and restoring the waterfront environment.
- Provide outstanding public services.

Following is a discussion of each alternative, and an analysis of the anticipated environmental impacts. This analysis compares the anticipated impacts of each alternative to the impacts associated with the Draft General Plan, and includes a determination as to whether or not each alternative would reduce, eliminate, or create new significant impacts.

A. NO PROJECT ALTERNATIVE

1. Principal Characteristics

The No Project alternative assumes that development would occur in the City of Albany, and specifically on available opportunity sites identified in the Housing Element, as allowed under the current General Plan and zoning designations. Approximately the same number of future residents (1,800) and employees (850) are anticipated to occur with implementation of this alternative as with

the Draft General Plan. Table V-1 shows the land use acreage comparison between this alternative and the Draft General Plan.

Table V-1: Acreage Comparison Between No Project Alternative and Draft General Plan

Land Use Category	No Project Alternative Acreage	Draft General Plan Acreage	Difference
Low Density Residential [a]	466	467	+1
Medium Density Residential	37	37	0
High Density Residential (including "Tower") [b]	65	63	-2
Hillside Residential (formerly Planned Development 1 and 2) [c]	26	19	-7
San Pablo Avenue Mixed Use [d]	33	44	+5
Planned Residential-Commercial	6		
Solano Avenue Mixed Use [e]	29	30	+1
Commercial Recreation	137	137	0
Commercial Services and Production (formerly Commercial Service/ Light Industrial) [f]	35	30	-5
Public/Quasi-Public [g]	62	65	+3
Parks/Open Space [h]	132	150	+18
University Village (formerly three different categories)	75	80	+5
Undesignated (Freeway/Railroad ROW)	72	53	-19
TOTAL	**1,175**	**1,175**	**0**

[a] Increase due to the addition of several churches to this category
[b] Decrease partially due to removal of Albany Middle School from the High Density Residential category, offset by increase of 1.0 acre at Pierce Street parcel
[c] Decrease due to acquisition of parcels on the east side of Albany Hill as parkland
[d] Increase due to University Village mixed use development
[e] Increase due to designation of AT&T facility as Solano Mixed Use
[f] Decrease due to freeway realignment, Corporation Yard addition, removal of University Village ball field
[g] Increase due to Albany Middle School and Corporation Yard addition
[h] Increase due to Albany Hill, Pierce Street, University Village area addition

Notes:
– No Project alternative column includes General Plan Map Amendments made through 2004.
– Total excludes the Creek Conservation Overlay and the Major Activity Node overlay, to avoid double counting.

Source: Barry Miller, Planning Consultant to the City of Albany, 2015.

The No Project alternative does not include the new goals, policies, and actions of the Draft General Plan that would provide environmental and community benefits. Implementation of these policies are expected to: (1) encourage higher-density growth along San Pablo and Solano Avenues; (2) increase transit use and improve air quality, greenhouse gas emissions and noise; (3) improve access to the waterfront; (4) maintain the character of single-family neighborhoods; (5) develop additional local-serving office space; (6) improve open space; (7) increase environmental protections for biological and cultural resources; and (8) increase public safety through more public safety programs and measures to reduce risk related to seismic hazards and adverse effects from hazardous materials.

Although the No Project Alternative would meet many of the objectives of the proposed project, this alternative would not meet the following objectives as well as the Draft General Plan, due to the lack of policies, actions and programs described above:

- Direct future growth to appropriate locations, including the San Pablo Avenue and Solano Avenue corridors and key opportunity sites.
- Ensure that infill development, including major residential alternations and additions, is sensitive to its surroundings and mitigates its impacts.
- Reduce vehicle miles traveled by enhancing opportunities for pedestrians, bicyclists, and transit users.
- Improve transportation safety and reduce the adverse effects of vehicle traffic on neighborhoods.
- Grow more sustainably, and in a manner that reduces non-renewable resource consumption and greenhouse gas emissions.
- Reduce the potential for loss of life and property due to a natural or man-made disaster.
- Improve access to the shoreline while protecting and restoring the waterfront environment.

2. Analysis of the No Project Alternative

The potential impacts associated with the No Project alternative are described below.

a. Land Use, Planning Policy, and Agricultural Resources. The No Project alternative would include the same amount of developed land as would the Draft General Plan (see Table V-1). Similar to the Draft General Plan, this alternative would not divide an established community or conflict with any applicable land use plan or agency regulation adopted for the purpose of reducing an environmental effect. This alternative would not contain as many policies and measures to support the objectives of other Bay Area plans. Because the Draft General Plan builds upon the 1992 General Plan (essentially this alternative), the over-arching principles and objectives are the same as are the majority of land use designations. Thus, similar to the Draft General Plan, all land use impacts for this alternative would be less than significant.

b. Population and Housing. Development of the No Project alternative would result in the same number of residents, employees, and housing units as the Draft General Plan. Population would increase by approximately 1,800 residents; there is an expected increase of 850 jobs, and housing units would increase by approximately 815 units. This alternative would not focus on concentrating development – and thus new housing units, residents, and employees – along San Pablo and Solano Avenues, as would the Draft General Plan. New employment under this alternative would continue to encourage development of service sector jobs, while the Draft General Plan would encourage more local-serving office and retail development. All population, housing, and employment impacts from this alternative would be less than significant, similar to the Draft General Plan.

c. Transportation and Circulation. The No Project alternative would result in approximately the same number of daily trips as would the Draft General Plan since the total population and employees would be the same. Under future conditions, all study roadway segments would operate at the same level of service with this alternative as under the Draft General Plan. With this alternative, more of its

total daily trips would be by automobile compared to the Draft General Plan, which encourages growth along transit corridors (San Pablo and Solano Avenues) and improvements to the transit, bicycle, and pedestrian networks.

The No Project alternative would not contain the same measures to reduce impacts related to traffic calming strategies, pedestrians and bicycles, transit, and emergency access as would the Draft General Plan. Because mitigation measures would be available for development resulting from this alternative, on a program level, this alternative would result in less-than-significant effects on transportation impacts, similar to the Draft General Plan.

d. Air Quality. Air quality operational emissions associated with vehicle trips for this alternative would be equivalent to those from the Draft General Plan. Construction-related air quality impacts would be similar for this alternative and the Draft General Plan, since dust-control measures are a standard condition of approval in the City. Similar to the Draft General Plan, operation of this alternative could expose future resident of the City to toxic air contaminants. The No Project alternative would not contain the same measures to reduce air quality impacts as the Draft General Plan, but the City would ensure that future development is in compliance with Bay Area Air Quality Management District and State regulations regarding air quality. On a program level this alternative would result in less-than-significant effects on air quality impacts, similar to the Draft General Plan.

e. Greenhouse Gas Emissions. Since the No Project alternative would follow the City's Climate Action Plan (CAP) and would have the same amount of future growth as the Draft General Plan, greenhouse gas emissions for this alternative would be similar to those generated by development under the Draft General Plan. This alternative would not contain the same measures to reduce greenhouse gas emissions as the Draft General Plan, but with implementation of the CAP, this alternative would result in less-than-significant effects on greenhouse gas emissions, similar to the Draft General Plan.

f. Noise and Vibration. Similar to the Draft General Plan, the No Project alternative could result in the exposure of future residents in Albany to existing excessive noise levels related to existing traffic and railway use. Since this alternative and the Draft General Plan would not expose people to noise levels in excess of the City's Municipal Code and Noise Ordinance, this impact would be less than significant for this alternative as well as for the proposed project. Since this alternative would not contain the same measures to reduce noise and vibration impacts as the Draft General Plan, this alternative would have a greater potential to result in noise and vibration impacts.

g. Geology, Seismicity, and Mineral Resources. The No Project alternative would not contain the same measures to reduce impacts related to seismic hazards as would the Draft General Plan, but the City would ensure that buildings are constructed in a seismically safe manner by following the California Building Code. This alternative would result in the same number of residents and employees as would the Draft General Plan. Thus geotechnical and seismic hazards would be similar for both this alternative and the Draft General Plan. Geology and seismicity impacts from this alternative would be less than significant, the same as for the Draft General Plan.

h. Hydrology and Water Quality. The No Project alternative would not contain the same measures to reduce water quality impacts, depletion of groundwater, increased erosion or siltation, increased flooding, contribution of runoff water or polluted runoff, reduction of impacts related to

placing housing within a 100-year flood hazard area, and reduction of risk of inundation by tsunami as would the Draft General Plan. However, this alternative would comply with existing regulatory programs and the City's standard conditions of approval. On a program level, this alternative would result in less-than-significant effects on hydrology and water quality, similar to the Draft General Plan. Failure of a reservoir under this alternative would be the same as for the Draft General Plan. Potential impacts related to substantial risk of inundation by tsunami could be greater under this alternative as existing policies do not address sea level rise and tsunami risk.

i. Hazards and Hazardous Materials. The No Project alternative would not contain the same measures to: (1) reduce the routine use, transport, use, handling or disposal of hazardous materials; (2) reduce accidental releases of hazardous materials; (3) protect children from the handling or emissions of hazardous materials near or at schools; (4) consider hazardous material sites during demolition and construction; (5) prepare emergency response and evacuation plans; and (6) reduce the risk of wildland fires, as would the Draft General Plan. However, this alternative would comply with existing regulatory programs and the City's standard conditions of approval. On a program level, this alternative would result in less-than-significant effects on these hazards and hazardous material impacts, similar to the Draft General Plan.

j. Biological Resources. The No Project alternative has few policies regarding biological resources compared to the Draft General Plan, which has new policies to address preservation of the waterfront, conservation of creeks, and expansion of the City's tree canopy. Although development potential would be the same for this alternative and the Draft General Plan, there would be more potential for impacts on biological resources with this alternative than there would be with development under the Draft General Plan.

k. Cultural Resources. The No Project alternative has fewer policies regarding cultural resources than the Draft General Plan, which has new policies to address construction impacts on historic preservation, archaeological resources, and paleontological resources that could result from implementing the Draft General Plan. Although this alternative would comply with the City's standard conditions of approval regarding subsurface archaeological resources, it does not contain similar protections for other cultural resources. Thus this alternative would have more potential for cultural resource impacts than development under the Draft General Plan.

l. Public Services and Recreation. With the same number of dwelling units and the same number of new residents as with the Draft General Plan, the No Project alternative would have similar impacts related to public services. This alternative has fewer policies regarding public services than the Draft General Plan, which has new policies related to fire protection, police protection and facilities, schools, and parks and recreation. However, this alternative would comply with existing regulatory programs and the City's standard conditions of approval. On a program level, this alternative would result in less-than-significant effects on public services and recreation, as would the Draft General Plan.

m. Utilities and Infrastructure. With the same number of dwelling units and the same number of new residents as with the Draft General Plan, the No Project alternative would have similar impacts related to utilities and infrastructure. This alternative has fewer policies regarding utilities than the Draft General Plan, which has new policies related to water supply, stormwater treatment, wastewater treatment, solid waste, energy, and telecommunications. However, this alternative would comply with

existing regulatory programs and the City's standard conditions of approval. On a program level, this alternative would result in less-than-significant effects on utilities and infrastructure as would the Draft General Plan.

n. Visual Resources. The No Project alternative would accommodate future growth in the same areas as the Draft General Plan, thus resulting in comparable potential effects on visual resources. However, the No Project alternative has fewer policies regarding: (1) protection of scenic resources and visual character; and (2) reduction of light and glare impacts. This alternative would result in similar impacts related to visual resources, and development under this alternative would comply with the City's standard conditions of approval regarding light and glare. On a program level, this alternative would result in less-than-significant effects on visual resources, as would the Draft General Plan.

B. INCREASED DENSITY NEAR TRANSIT ALTERNATIVE

1. Principal Characteristics

The Increased Density Near Transit alternative (called the Increased Density alternative in this section) assumes that the City would identify and implement policies and land use regulations to encourage more density, more infill development and more redevelopment of underutilized parcels along major transit corridors and near transit nodes. At least four stories of development would be allowed with a bonus of up to five stories or more (under the State Density Bonus law), along San Pablo and Solano Avenues and on land within 0.5 miles of the El Cerrito BART Station. Under this alternative, zoning regulations for these areas would be amended to increase allowable densities, floor area ratios, and heights. It is expected that this alternative would result in an increase in the number of new residents and employees compared to the Draft General Plan. This alternative includes all of the new mitigating policies and implementing actions contained in the Draft General Plan.

This alternative also would include the elimination of a minimum parking requirement for the San Pablo and Solano Avenue corridors and properties within 0.5 miles of the BART station. The elimination of parking requirements would be expected to incentivize development in these areas, and increase the number of people walking, bicycling and taking transit rather than using single-occupancy vehicles.

This alternative would meet all of the primary objectives of the Draft General Plan.

2. Analysis of the Increased Density Near Transit Alternative

The potential impacts associated with the Increased Density alternative are described below.

a. Land Use, Planning Policy, and Agricultural Resources. The Increased Density alternative would include the same amount of developed land as would the Draft General Plan alternative. Similar to the Draft General Plan, this alternative would not divide an established community or conflict with any applicable land use plan or agency regulation adopted for the purpose of reducing an environmental effect. This alternative would contain new policies and measures to support the objectives of other Bay Area plans (e.g., reduce traffic and greenhouse gas emissions, improve air quality, increase affordable housing, etc…). Thus, similar to the Draft General Plan, all land use impacts for this alternative would be less than significant.

b. Population and Housing. Because taller buildings would be allowed along the transit-served avenues and within 0.5 miles of the BART station, the Increased Density alternative is expected to result in an increase in the number of housing units, residents, and employees compared to the Draft General Plan. Development of new employment uses (e.g., local-serving office and retail) under this alternative is expected to be similar to that under the Draft General Plan. This alternative would increase housing in the City with more of it anticipated to be affordable, compared to the Draft General Plan. Population, housing, and employment impacts associated with this alternative would be less than significant, similar to the Draft General Plan.

c. Transportation and Circulation. The Increased Density alternative could result in an increase in daily vehicular trips associated with increased population and employment compared to the Draft General Plan. However, because no parking would be required for new development along Solano and San Pablo Avenues or within 0.5 miles of the BART station, it is possible that there could be a decrease in vehicular trips as more residents would use transit and other modes travel. At the same time, there could be an increase in traffic congestion as an increased number of residents, workers, and shoppers search for parking in the transit-served areas. It is expected that intersection levels of service would be similar for this alternative as for the Draft General Plan. This alternative could result in greater use of transit services.

The Increased Density alternative would contain the same measures to reduce impacts related to traffic calming strategies, pedestrians and bicycles, transit, and emergency access as would the Draft General Plan. Thus on a program level, this alternative would result in less-than-significant effects on transportation impacts, similar to the Draft General Plan.

d. Air Quality. Air quality operational emissions associated with vehicle trips for this alternative are expected to be similar to those from the Draft General Plan. Construction-related air quality impacts also would be similar for this alternative and the Draft General Plan, since this alternative contains the same acreage of land to be developed and the same mitigation measures as the Draft General Plan. Similar to the Draft General Plan, operation of this alternative could expose future residents of the City to toxic air contaminates. On a program level, this alternative would result in less-than-significant effects on air quality impacts, similar to the Draft General Plan.

e. Greenhouse Gas Emissions. The Increased Density alternative could increase the number of residents in the City and greenhouse gas emissions could also increase. However, since an increase in the use of transit and alternative travel modes is also expected, greenhouse gas emissions and reduction measures are expected to be similar to those under the Draft General Plan. Impacts on greenhouse gas emissions for this alternative would likely be less than significant, the same as for the Draft General Plan.

f. Noise and Vibration. Similar to the Draft General Plan, the Increased Density alternative could result in the exposure of future residents in Albany to existing excessive noise levels related to existing traffic and railway use. Since this alternative would contain the same measures to reduce noise and vibration impacts as would the Draft General Plan, this alternative would have a similar potential to result in noise and vibration impacts. Noise and vibration impacts from this alternative would be less than significant, the same as for the Draft General Plan.

g. Geology, Seismicity, and Mineral Resources. The Increased Density alternative would contain the same measures to reduce impacts related to seismic hazards as would the Draft General Plan. This alternative would result in more residents compared to the Draft General. Thus although this alternative would expose more residents to geotechnical and seismic hazards than for the Draft General Plan, the severity of impacts would be similar for both this alternative and the Draft General Plan. Geology and seismicity impacts from this alternative would be less than significant, the same as for the Draft General Plan.

h. Hydrology and Water Quality. The Increased Density alternative would contain the same measures as the Draft General Plan for reduction of water quality impacts, depletion of groundwater, increased erosion or siltation, increased flooding, contribution of runoff water or polluted runoff, reduction of impacts related to placing housing within a 100-year flood hazard area, and reduction of risk of inundation by tsunami. On a program level, this alternative would result in less-than-significant effects on hydrology and water quality impacts, similar to the Draft General Plan. Failure of a reservoir under this alternative would be the same as for the Draft General Plan.

i. Hazards and Hazardous Materials. The Increased Density alternative would contain the same measures of the Draft General Plan to: (1) reduce the routine use, transport, use, handling or disposal of hazardous materials; (2) reduce accidental releases of hazardous materials; (3) protect children from the handling or emissions of hazardous materials near or at schools; (4) consider hazardous material sites during demolition and construction; (5) prepare emergency response and evacuation plans; and (6) reduce the risk of wildland fires. On a program level, this alternative would result in less-than-significant effects on these hazards and hazardous material impacts, similar to the Draft General Plan.

j. Biological Resources. The Increased Density alternative has the same policies regarding protection of biological resources as the Draft General Plan, which has new policies to address preservation of the waterfront, conservation of creeks, and expansion of the City's tree canopy. Although development potential would increase for this alternative compared to the Draft General Plan, the additional development would be infill development on the already urbanized transit-served avenues and within 0.5 miles of the BART station. This alternative would result in less-than-significant effects on biological resources similar to the Draft General Plan.

k. Cultural Resources. The Increased Density alternative has the same policies regarding protecting cultural resources as the Draft General Plan that address construction impacts on historic preservation, archaeological resources, and paleontological resources. Although development potential would increase for this alternative compared to the Draft General Plan, the additional development would primarily be on the fourth and fifth floors of buildings that could be built under the Draft General Plan. This alternative would have similar potential impacts to cultural resources as would the Draft General Plan.

l. Public Services and Recreation. With more dwelling units and new residents than for the Draft General Plan, the Increased Density alternative could have increased demand for public services. This alternative and the Draft General Plan would have new policies related to fire protection, police protection and facilities, schools, and parks and recreation. On a program level, this alternative would result in less-than-significant effects on public services and recreation, as would the Draft General Plan.

m. Utilities and Infrastructure. With more dwelling units and new residents than for the Draft General Plan, the Increased Density alternative could have increased demand for utilities and infrastructure. This alternative and the Draft General Plan have new policies related to water supply, stormwater treatment, wastewater treatment, solid waste, energy, and telecommunications. On a program level, this alternative would result in less-than-significant effects on utilities and infrastructure as would the Draft General Plan.

n. Visual Resources. The Increased Density alternative would accommodate more growth with taller buildings than would the Draft General Plan. The potential for impacts on aesthetics, shadows, and visual character would potentially be greater with more development and taller buildings. This alternative and the Draft General Plan would have policies regarding: (1) protection of scenic vistas, scenic resources, and visual character; and (2) reduction of light and glare impacts. Although buildout of this alternative could result in changes to views and the visual character of the City, with adherence to the new visual resource policies, this alternative would result in less-than-significant effects on visual resources, as would the Draft General Plan.

C. REDUCED DENSITY AND DEVELOPMENT ALTERNATIVE

1. Principal Characteristics

The Reduced Density and Development alternative (called the Reduced Density alternative in this section) assumes that the City would identify and implement policies and land use regulations to maintain slow growth in Albany over the next 20 years. These slow growth regulations would aim to result in housing and job growth that would continue at approximately the same pace that it has for the last decade, with far fewer households and jobs in 2035 than under the Draft General Plan. The Reduced Density alternative would include new policies to limit building size on residential and commercial properties, generally resulting in lower floor area ratio allowances on residential properties, and lower floor area ratio allowances on San Pablo and Solano Avenues. These policies would reduce the likelihood that small homes would be replaced with larger homes, and would also reduce the potential for large-scale residential additions. The character of the San Pablo and Solano Avenue corridors would remain similar to their current character, with mostly one- and two-story buildings.

This alternative includes all of the new mitigating policies and implementing actions contained in the Draft General Plan. However, this alternative also would not amend Measure D, and would retain the existing parking requirement of two spaces per residential unit. This alternative would meet all of the primary objectives of the Draft General Plan, although it would be less robust in its emphasis on directing growth to the San Pablo and Solano Avenue corridors that are well-served by transit.

a. Land Use, Planning Policy, and Agricultural Resources. The Reduced Density alternative would include the same amount of developed land as would the Draft General Plan alternative. Similar to the Draft General Plan, this alternative would not divide an established community or conflict with any applicable land use plan or agency regulation adopted for the purpose of reducing an environmental effect. This alternative would contain new policies and measures to support the objectives of other Bay Area plans (e.g., reduce traffic and greenhouse gas emissions, improve air quality, increase affordable housing, etc…). Thus, similar to the Draft General Plan, all land use impacts for this alternative would be less than significant.

b. Population and Housing. Because less building square footage would be allowed along the transit-served avenues and in residential zones and two parking spaces per unit would be required, the Reduced Density alternative is expected to result in a decrease in the number of potential housing units, residents, and employees compared to the Draft General Plan. Development of new employment uses (e.g., local-serving office and retail) under this alternative is expected to be lower than under the Draft General Plan. This alternative would produce less new affordable housing in the City compared to the Draft General Plan. Population, housing, and employment impacts associated with this alternative would be less than significant, similar to the Draft General Plan.

c. Transportation and Circulation. The Reduced Density alternative would result in fewer daily vehicular trips due to the decreased future population and employment compared to the Draft General Plan. However, because transit-oriented development would be less prevalent and more parking would be required for new development, it is possible that there could be an increase in vehicular trips as fewer residents would use transit and other modes of travel. It is expected that intersection levels of service would be similar for this alternative as for the Draft General Plan.

The Reduced Density alternative would contain the same measures to reduce impacts related to traffic calming strategies, pedestrians and bicycles, transit, and emergency access as would the Draft General Plan. Thus on a program level, this alternative would result in less-than-significant effects on transportation, similar to the Draft General Plan.

d. Air Quality. Air quality operational emissions associated with vehicle trips for this alternative are expected to be similar to those from the Draft General Plan. Construction-related air quality impacts also would be somewhat lower than for the Draft General Plan, since this alternative would result in less construction. Similar to the Draft General Plan, operation of this alternative could expose future residents of the City to toxic air contaminants. On a program level, this alternative would result in less-than-significant effects on air quality impacts, similar to the Draft General Plan.

e. Greenhouse Gas Emissions. The Reduced Density alternative would increase the number of residents in the City over existing conditions, and greenhouse gas emissions could also increase. However, since there would be only a small increase in population and employment, greenhouse gas emissions and reduction measures are expected to be similar to those under the Draft General Plan. Impacts on greenhouse gas emissions for this alternative would likely be less than significant, the same as for the Draft General Plan.

f. Noise and Vibration. Similar to the Draft General Plan, the Reduced Density alternative could result in the exposure of future residents in Albany to existing excessive noise levels related to existing traffic and railway use. Since this alternative would contain the same measures to reduce noise and vibration impacts as would the Draft General Plan, this alternative would have a similar potential to result in noise and vibration impacts. Noise and vibration impacts from this alternative would be less than significant, the same as for the Draft General Plan.

g. Geology, Seismicity, and Mineral Resources. The Reduced Density alternative would contain the same measures to reduce impacts related to seismic hazards as would the Draft General Plan. This alternative would result in fewer residents compared to the Draft General Plan, but the severity of impacts would be similar for both this alternative and the Draft General Plan since the location of

development would be the same. Geology and seismicity impacts from this alternative would be less than significant, the same as for the Draft General Plan.

h. Hydrology and Water Quality. The Reduced Density alternative would contain the same measures as the Draft General Plan for reduction of water quality impacts, depletion of groundwater, increased erosion or siltation, increased flooding, contribution of runoff water or polluted runoff, reduction of impacts related to placing housing within a 100-year flood hazard area, and reduction of risk of inundation by tsunami. On a program level, this alternative would result in less-than-significant effects on hydrology and water quality impacts, similar to the Draft General Plan. Failure of a reservoir under this alternative would be the same as for the Draft General Plan.

i. Hazards and Hazardous Materials. The Reduced Density alternative would contain the same measures of the Draft General Plan to: (1) reduce the routine use, transport, use, handling or disposal of hazardous materials; (2) reduce accidental releases of hazardous materials; (3) protect children from the handling or emissions of hazardous materials near or at schools; (4) consider hazardous material sites during demolition and construction; (5) prepare emergency response and evacuation plans; and (6) reduce the risk of wildland fires. On a program level, this alternative would result in less-than-significant effects on these hazards and hazardous material impacts, similar to the Draft General Plan.

j. Biological Resources. The Reduced Density alternative has the same policies regarding protection of biological resources as the Draft General Plan, which has new policies to address preservation of the waterfront, conservation of creeks, and expansion of the City's tree canopy. Development would be allowed on the same sites that are identified in the Draft General Plan, which are either urbanized or adjacent to urban uses. This alternative would result in less-than-significant effects on biological resources similar to the Draft General Plan.

k. Cultural Resources. The Reduced Density alternative has the same policies regarding protecting cultural resources as the Draft General Plan that address construction impacts on historic preservation, archaeological resources, and paleontological resources. Development would be allowed on the same sites that are identified in the Draft General Plan, which are either urbanized or adjacent to urban uses. This alternative would have similar potential impacts to cultural resources as would the Draft General Plan.

l. Public Services and Recreation. Although this alternative has fewer dwelling units and new residents than the Draft General Plan, the Reduced Density alternative would still result in increased demand for public services as development occurs. This alternative and the Draft General Plan would have new policies related to fire protection, police protection and facilities, schools, and parks and recreation. On a program level, this alternative would result in less-than-significant effects on public services and recreation, as would the Draft General Plan.

m. Utilities and Infrastructure. Although this alternative has fewer dwelling units and new residents than the Draft General Plan, the Reduced Density alternative would still result in increased demand for utilities and infrastructure as development took place. This alternative and the Draft General Plan have new policies related to water supply, stormwater treatment, wastewater treatment, solid waste, energy, and telecommunications. On a program level, this alternative would result in less-than-significant effects on utilities and infrastructure as would the Draft General Plan.

n. Visual Resources. The Reduced Density alternative would accommodate less growth, lower building heights, and less building mass than would the Draft General Plan. The potential for impacts on aesthetics, shadows, and visual character would be less than under the Draft General Plan. This alternative and the Draft General Plan would have policies regarding: (1) protection of scenic vistas, scenic resources, and visual character; and (2) reduction of light and glare impacts. With adherence to the new visual resource policies, this alternative would result in less-than-significant effects on visual resources, as would the Draft General Plan.

D. ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires the identification of the environmentally superior alternative in an EIR. Based on this analysis, the Draft General Plan would be considered the environmentally superior alternative. Although development would be similar for the Draft General Plan and the No Project Alternative, the No Project Alternative would not include all of the new mitigating policies and implementing actions contained in the Draft General Plan. Although the Increased Density Near Transit alternative would include the new beneficial policies of the Draft General Plan, it is possible that daily vehicular miles traveled and traffic effects could be greater than the Draft General Plan with the increase in allowed density and reduction in parking requirements. Visual and aesthetic impacts could also be greater, due to allowances for taller structures. Although the Reduced Density alternative would have fewer impacts on visual resources, the City would not meet its housing needs or improve the balance between jobs and housing in the City, as compared to the Draft General Plan. The City could also fall short of its air quality and greenhouse gas reduction measures, which emphasize denser development along corridors well-served by transit.

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VI. OTHER CEQA CONSIDERATIONS

As required by CEQA, this chapter discusses the following types of impacts that could result from implementation of the Draft General Plan: growth-inducing impacts; significant irreversible changes; effects found not to be significant; and significant unavoidable effects.

A. GROWTH INDUCEMENT

This section summarizes the project's growth-inducing impacts on the surrounding community. In accordance with CEQA, a project is considered growth-inducing if it would foster substantial economic or population growth. Examples of projects likely to have significant growth-inducing impacts include extensions of expansions of infrastructure systems beyond what is needed to serve project-specific demand, and development of new residential subdivisions or industrial parks in areas that are currently only sparsely developed or undeveloped. As this document is a first-tier (i.e., program-level) EIR for the proposed Draft General Plan, which will guide future development within the City of Albany, it is necessary to assess potential growth-inducing impacts.

Implementation of Albany's Draft General Plan would only induce additional population and employment growth if it designated land within the City for development that would be more intense than current designations allow. As noted in the Chapter III, Project Description, the designations in the Draft General Plan are essentially the same as the existing General Plan and no increased capacity has been identified or assumed.

Implementation of the Draft General Plan is forecast to result in 850 additional jobs and 815 additional housing units by 2035. Albany could have a total population of 20,385 residents and 8,660 housing units, which is roughly consistent with the most recent ABAG population and household projections of 21,800 residents and 8,510 housing units, respectively.[1] The total number of 5,920 jobs expected in 2035 under the Draft General Plan is approximately 9.4 percent higher than the ABAG jobs projection of 5,410 jobs. Although the anticipated number of jobs under the Draft General Plan exceeds ABAG's job projection for 2035, this discrepancy would not be considered as significant adverse growth because the anticipated job growth under the Draft General Plan would occur in already developed and urbanized areas that have transit access and existing commercial centers. Moreover, the discrepancy is due to the estimated number of existing jobs in 2015 rather than the increment of job growth forecast for 2015 to 2035.

The population and employment growth that would occur as a result of development associated with the Draft General Plan would occur entirely within Albany's City limits. Because much of the housing and commercial growth that would occur under the Draft General Plan is along commercial

[1] Association of Bay Area Governments, 2013. *Building Momentum: San Francisco Bay Area Population, Household, and Job Forecasts.*

and transit corridors, anticipated growth would have several beneficial effects. First, such growth would support regional transit systems by increasing ridership and access to transit systems and would benefit bicycle and pedestrian access. Strengthening the transit system and improving bicycle and pedestrian circulation could reduce traffic and associated environmental effects, such as air pollution and noise, within the Bay Area. Second, development associated with the Draft General Plan would increase construction of housing in Albany, allowing the City to address its fair-share housing allocation requirements. An increased overall housing supply would allow the City to better address affordable housing needs. Lastly, the population density within Albany would slightly increase. The development of dense residential and mixed-use districts within commercial and transit corridors represents an environmentally-sound method for accommodating a growing population and reducing sprawl, resulting in beneficial effects on both local and regional levels.

B. SIGNIFICANT IRREVERSIBLE CHANGES

An EIR must identify any significant irreversible environmental changes that could result from implementation of a proposed project. These may include current or future uses of non-renewable resources and secondary or growth-inducing impacts that commit future generations to similar uses. CEQA dictates that irretrievable commitments of resources should be evaluated to assure that such current consumption is justified. The CEQA Guidelines describe three distinct categories of significant irreversible changes: (1) changes in land use that would commit future generations; (2) irreversible changes from environmental actions; and (3) consumption of non-renewable resources.

1. Change in Land Use Which Commit Future Generations

Although virtually all of Albany is developed, implementation of the Draft General Plan would result in the introduction of residential and commercial uses in already urbanized areas. Major development projects could occur within the Solano Avenue Commercial District and San Pablo Avenue Commercial District. The intensification of development in these commercial areas would serve several purposes including: (1) provision of housing; (2) creation of transit-oriented neighborhoods; (3) utilization of underutilized land; (4) efficient use of existing roadways and infrastructure within Albany. Development would be limited to lands within the City limits. Although development associated with the Draft General Plan would commit future generations to more intensity in the commercial districts, these land uses would benefit the City and the region by providing needed housing and transit-oriented development within an existing urban area. Development associated with the Draft General Plan would not commit future generations to development pattern that is described as “urban sprawl.” The development of dense residential and mixed-use districts in proximity to transit represents an environmentally-sound method for accommodating a growing population and reducing sprawl.

2. Irreversible Damage from Environmental Accidents

No significant environmental damage, such as an accidental spill, explosion of a hazardous material, or major hazardous waste release is anticipated to occur in Albany due to the commercial and residential growth expected to occur with implementation of the Draft General Plan. On a program level, the policies and actions that increase public safety through new measures and programs as outlined in Chapter IV, Setting, Impacts, and Mitigation Measures of this Draft EIR would reduce all such irreversible or nearly irreversible effects to less–than-significant levels.

3. Consumption of Nonrenewable Resources

Consumption of nonrenewable resources includes conversion of agricultural lands, loss of access to mining reserves, and non-renewable energy use. As identified in Section IV.A, Land Use, Planning Policy, and Agricultural Resources, there are no large-scale commercial agricultural uses in the City and no farmland is mapped in the City by the State Department of Conservation. As identified in Section IV.G, Geology, Seismicity, and Mineral Resources, no minerals or aggregate resources of statewide importance are located within Albany, and there are no natural gas, oil, or geothermal resources identified as being located in or adjacent to Albany. In addition, Draft General Plan policies CON-6.1 through CON-6.7 would support sustainable energy consumption through efficiency, conservation and sustainable production through increased use of renewable energy sources. The development of dense residential and mixed-use districts in proximity to transit would de-emphasize private automobile use and encourage transit ridership, and would result in the conservation of fossil fuels. Therefore, the Draft General Plan would result in the efficient use of non-renewable energy sources.

C. EFFECTS FOUND NOT TO BE SIGNIFICANT

The environmental topics analyzed in Chapter IV, Setting, Impacts, and Mitigation Measures, represent those topics which generated the greatest potential controversy and expectation of adverse impacts. Each of the CEQA-defined environmental factors is considered within Chapter IV of this Draft EIR. No topics suggested for consideration in the CEQA Statue or Guidelines have been "focused out" of detailed analysis.

D. SIGNIFICANT UNAVOIDABLE IMPACTS

Implementation of the Draft General Plan would not result in any significant unavoidable impacts.

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VII. REPORT PREPARATION

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C. COMMUNICATIONS

Albany Fire Department, 2015. Personal communication with Barry Miller, Planning Consultant.

Albany Fire Department, 2015. Written communication from Lance Calkins, Chief, to Barry Miller, Planning Consultant. January 15.

APPENDIX A

NOTICE OF PREPARATION AND SCOPING LETTERS

Urban Village by the Bay

ALBANY CALIFORNIA

CITY OF ALBANY

COMMUNITY DEVELOPMENT
1000 SAN PABLO AVENUE
ALBANY, CA 94706
510 528-5760

www.AlbanyCA.org/cd

NOTICE OF PREPARATION (NOP) OF A DRAFT ENVIRONMENTAL IMPACT REPORT (EIR) FOR THE CITY OF ALBANY 2035 GENERAL PLAN **EXTENSION OF PUBLIC COMMENT PERIOD**

To: State Clearinghouse
Governor's Office of Planning and Research
Alameda County Clerk
Responsible Agencies
Interested Individuals and Organizations

From: Anne Hersch
City Planner
City of Albany
1000 San Pablo Avenue
Albany, California 94706

The City of Albany will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for the City of Albany 2035 General Plan (proposed project). The City is requesting comments from responsible agencies regarding the scope and content of the environmental document. The public is also invited to submit comments regarding the scope of the EIR and issues that should be addressed as the document is prepared. **Please note that the City has extended the public comment period to end on Friday May 23, 2014.**

Project Location: The City of Albany is located within northern Alameda County and encompasses approximately 1.7 square miles. To the north, the City is bounded by the cities of El Cerrito and Richmond, as well as unincorporated Contra Costa County. To the south and east, the City is bounded by the City of Berkeley. The San Francisco Bay borders the City to the west. Figure 1 shows the location of the City.

Project Description: The existing City of Albany General Plan was adopted in 1992, and does not address several issues of importance to City residents, such as climate change and sustainability. It is based on data that is more than 20 years old and does not reflect many recently adopted plans and programs. The City of Albany 2035 General Plan will include an updated vision, with goals, policies and actions that anticipate the 2035 build-out, and which also reflect the needs and preferences of the community while ensuring compliance with State law. Information related to the General Plan can be found at www.albany2035.org

Potential Environmental Effects: It has been determined that an EIR will be necessary to analyze potential environmental impacts associated with the project. Specific areas of analysis will include, but will not be limited to, the following topics: land use and agricultural resources; population and housing; transportation and circulation; air quality; global climate change; noise; geology, soils and mineral resources; hydrology and water quality; hazards and hazardous materials; biological resources; cultural resources; public services and recreation; utilities and service systems; and visual resources.

Responses must be received within the comment period and no later than **Friday May 23, 2014**. Public agencies should indicate a contact person in their response to this Notice of Preparation. Responses should be directed to: Anne Hersch, City Planner, City of Albany, 1000 San Pablo Avenue, Albany, California 94706; ahersch@albanyca.org

Signature: _____ Date: 4/21/2014

Anne Hersch, City Planner

LSA

FIGURE 1

City of Albany General Plan

Location Map

SOURCES: GOOGLE MAPS; LSA ASSOCIATES, INC., 2014.

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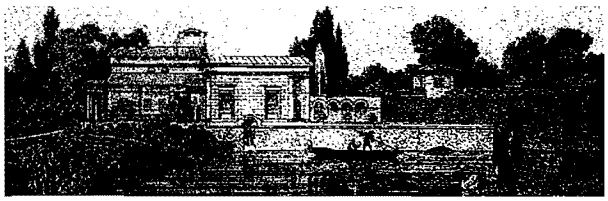

JERRI HOLAN & ASSOCIATES, AIA
Architects ✣ Engineers ✣ Planners

April 7, 2014

Anne L. Hersch, Planner, AICP
City of Albany
1000 San Pablo Avenue
Albany, CA 94706

RE: Scope for 2035 General Plan

Dear Ms. Hersch:

In response to your Notice of Preparation of a Draft EIR for Albany's 2035 General Plan, I am writing to request that the scope of the Plan address the historic preservation of older buildings in Albany.

Albany has many buildings which are over 50 years old and are potential historic resources according to the California Environmental Quality Act (CEQA). These buildings are important cultural resources and need to be addressed in the General Plan.

There is no Historic Element in the current Plan, nor does the City have any local ordinance that addresses how to define significant older buildings or how to prevent negative impacts to them.

The State Historical Resources Commission has designed the California Register program for use by state and local agencies, private groups and citizens to identify, evaluate, register, and protect California's historical resources. It is the authoritative guide to the state's historical resources and should be used as a resource in preparing Albany's 2035 General Plan.

Thank you for your attention to this scoping request and please call if you have any questions or need more information.

Truly,

Jerri Holan, FAIA

Tel: 510.528.1079 1393 Solano Avenue, Suite B, Albany, California 94706-1811 Fax: 510.528.2079
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DEPARTMENT OF TRANSPORTATION
111 GRAND AVENUE
P. O. BOX 23660
OAKLAND, CA 94623-0660
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Flex your power!
Be energy efficient!

April 8, 2014

ALAGEN259
SCH#2014032040

Ms. Anne Hersch
City of Albany
1000 San Pablo Avenue
Albany, CA 94706

Dear Ms. Hersch:

City of Albany 2035 General Plan – Notice of Preparation

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the City of Albany 2035 General Plan. The following comments are based on the Notice of Preparation.

Traffic Impact Study
The Draft Environmental Impact Report (DEIR) should include an analysis of the impacts of the proposed plan on State highway facilities within the City of Albany (City), specifically, State Route 123, Interstates 80 and 580. Please ensure that a Traffic Impact Study (TIS) is prepared providing the information detailed below:

1. Information on the plan's traffic impacts in terms of trip generation, distribution, and assignment. The assumptions and methodologies used in compiling this information should be addressed. The plan can potentially add significant number of vehicles onto already saturated Interstates 80 and 580.

2. Current Average Daily Traffic (ADT) and AM, PM, Saturday, Sunday and Game Day peak hour volumes on all significantly affected streets, highway segments and intersections.

3. Schematic illustration and level of service (LOS) analysis for the following scenarios: 1) existing, 2) near-term, and 3) cumulative for the roadways and intersections in the project area.

4. Calculation of cumulative traffic volumes should consider all traffic-generating developments, both existing and future, that would affect the State highway facilities being evaluated. Under this analysis, please include, AM, and PM peak hour for our review.

5. The procedures contained in the 2010 update of the Highway Capacity Manual should be used as a guide for the analysis. We also recommend using Caltrans' *Guide for the Preparation of Traffic Impact Studies;* it is available on the following web site:
http://www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf

6. Include transportation demand management strategies for future developments to reduce singular vehicular use. The DEIR should include citywide policies to encourage alternative modes of transportation. We recommend coordinating with AC Transit to provide greater service to the targeted areas, providing subsidized transit passes to workers and residents, restructuring parking structures by reducing the parking requirement such as unbundling parking, share parking, provide bicycle parking and necessary infrastructures, and other transportation demand management strategies. The City may refer to, "Reforming Parking Policies to Support Smart Growth," an MTC study funded by Caltrans for sample parking ratios and strategies that support compact growth and Transit Oriented Development. Doing so will encourage alternate forms of transportation, reduce regional vehicle miles traveled and lessen future traffic impacts on the state highways.

7. Mitigation measures should be identified where plan implementation is expected to have a significant impact. Mitigation measures proposed should be fully discussed, including financing, scheduling, implementation responsibilities, and lead agency monitoring.

8. We encourage the City to coordinate preparation of the study with our office, and when available, please provide Caltrans with the administrative draft of the transportation study for our review to ensure our comments are adequately addressed.

Improvements to State Facilities

An increase in the number of commercial, office square footage, and residential units will significantly impact adjacent state facilities that are already operating at poor levels of service. To ensure the safety of the traveling public, improvements to local and state facilities to accommodate the increase in vehicular traffic should be addressed in the DEIR. Please include how the City will finance improvements on State facilities from impacts generated by the proposed plan. Although facility expansion is limited within the city's boundaries, Caltrans currently has a number of unfunded projects that would improve highway and safety operations. We look forward to coordinating with the City to develop and fund these improvement projects.

We look forward to continuing to coordinate with the City. Should you have any questions regarding this letter, please call Yatman Kwan, AICP of my staff at (510) 622-1670.

Sincerely,

ERIK ALM, AICP
District Branch Chief
Local Development - Intergovernmental Review

c: State Clearinghouse

STATE OF CALIFORNIA EDMUND G. BROWN JR., *Governor*

PUBLIC UTILITIES COMMISSION
320 WEST 4TH STREET, SUITE 500
LOS ANGELES, CA 90013
(213) 576-7083

April 9, 2014

Anne Hersch
City of Albany
1000 San Pablo Avenue
Albany, California 94706

Dear Anne:

SUBJECT: SCH 2014032040 Albany 2035 General Plan - NOP

The California Public Utilities Commission (Commission) has jurisdiction over the safety of highway-rail crossings (crossings) in California. The California Public Utilities Code requires Commission approval for the construction or alteration of crossings and grants the Commission exclusive power on the design, alteration, and closure of crossings in California. The Commission Rail Crossings Engineering Section (RCES) is in receipt of the *Notice of Preparation (NOP)* for the proposed City of Albany (City) 2035 General Plan project.

The project area includes active railroad tracks. RCES recommends that the City add language to the General Plan so that any future development adjacent to or near the railroad right-of-way (ROW) is planned with the safety of the rail corridor in mind. New developments may increase traffic volumes not only on streets and at intersections, but also at at-grade crossings. This includes considering pedestrian circulation patterns or destinations with respect to railroad ROW and compliance with the Americans with Disabilities Act. Mitigation measures to consider include, but are not limited to, the planning for grade separations for major thoroughfares, improvements to existing at-grade crossings due to increase in traffic volumes, and continuous vandal resistant fencing or other appropriate barriers to limit the access of trespassers onto the railroad ROW.

If you have any questions in this matter, please contact me at (213) 576-7076, ykc@cpuc.ca.gov.

Sincerely,

Ken Chiang, P.E.
Utilities Engineer
Rail Crossings Engineering Section
Safety and Enforcement Division

C: State Clearinghouse

To Planning & Zoning

I am hoping to start a movement called "Treehouse of Reflection snad Song", with Albany hosting the signature "Treehouse" on the corner of Marin and San Pablo Avenue. In one sense, this will be a continuation of Ladybird Johnson's "Beautification of America" campaign. In essence the movement will be a combination of the secular and the non-denominational religious, The buildings housing this movement will have stained glass windows of trees. The interiors will have a small stage, a pulpit, and wooden pews. It will have a chapel-like part and an adjoining large communityroom which could be adapted to a small childrens area or for community potlucks.

Each community's Treehouse will be a collaboration of their planning commissions, the public, and their art commissions. Albany would also collaborate with U.C. Berkeley's architecture students. There could be a competition to see which community's Treehouse is most beautiful.

In function, it will have a weekly Sunday morning meeting with philosophers, poets, rabbis, preachers, priests, emus, etc. giving a talk, and with songs. Lots of songs.

WHY ALBANY NEEDS THIS

Albany really does not have a beautiful building for weddings and memorial services. It needs such a place.

Many people in Albany, I think, are not associated with a church or religion, and yet have a fairly deep spirituality. To hear various religious leaders in a neutral setting would be welcome.

Additionally, the lack of people joining together in song has been a sad by-product of U.S. society in the last few decades--unlike in our parents and grandparents time. The performance aspect of singing has quite overshadowed the joy of everybody--tone deaf and talented--joining together in song. People like Pete Seeger have attempted to address this issue, but lacked a sense of accompanying "place." The Treehouse would have a songbook and visiting choirs and choral groups to lead the songs.

WHY THE UNIVERSITY WOULD WANT TO DONATE THE LAND FOR THIS PROJECT

Located on the corner of Marin and San Pablo would be a symbolic bridge between the University Village and the city of Albany. Village residents could join together with Albany residents to hear various community religious and philosophic leaders in a non-proselytizing atmosphere. If they are secular, it would be a beautiful place to have their children's weddings and to hold memorial services for loved ones. Song-wise, they would be able to get a non-media sense of American society.

As a longtime Albany resident, the removal of those large trees on the corner of Marin and San Pablo was quite a jolt. It was as if something precious and identifying had been rather callously removed. Putting a beautiful Treehouse building in that spot would be significant.

As a PR move for the university, which has not fared too well lately in the "Town vs Gown" debate, this could bring considerable accolades.

As Albany is preparing its 30 year plan, I hope you will consider the "Treehouse of Reflection and Song" to be a viable and necessary part of the Albany community. I have not approached the university with this plan, but I'm hopeful they will see the wisdom in such an idea.

Sincerely,

Lynn McBride
1026 Ventura Avenue
Albany
(510) 527-4169

EAST BAY
MUNICIPAL UTILITY DISTRICT

May 19, 2014

Anne Hersch, City Planner
City of Albany
1000 San Pablo Avenue
Albany, CA 94706

Re: Notice of Preparation of a Draft Environmental Impact Report for the City of Albany 2035 General Plan

Dear Ms. Hersch:

East Bay Municipal Utility District (EBMUD) appreciates the opportunity to comment on the Notice of Preparation of a Draft Environmental Impact Report (EIR) for the City of Albany 2035 General Plan. EBMUD has the following comments.

WATER SERVICE

EBMUD's Central Pressure Zone with a service elevation between 0 and 100 feet, Aqueduct Pressure Zone with a service elevation between 100 feet and 200 feet, and Berryman Pressure Zone with a service elevation between 200 and 400 feet will serve the General Plan area. Any development project associated with the City's General Plan will be subject to the following general requirements.

Main extensions that may be required to serve any specific development projects to provide adequate domestic water supply, fire flows, and system redundancy will be at the project sponsor's expense. Pipeline and fire hydrant relocations and replacements due to modifications of existing streets, and off-site pipeline improvements, also at the project sponsor's expense, may be required depending on EBMUD metering requirements and fire flow requirements set by the local fire department. When the development plans are finalized, all project sponsors should contact EBMUD's New Business Office and request a water service estimate to determine costs and conditions of providing water service to the development. Engineering and installation of new and relocated pipeline and services requires substantial lead-time, which should be provided for in the project sponsor's development schedule.

Project sponsors should be aware that EBMUD will not inspect, install or maintain pipeline in contaminated soil or groundwater (if groundwater is present at any time during the year at the depth piping is to be installed) that must be handled as a hazardous waste or that may pose a health and safety risk to construction or maintenance personnel wearing Level D personal protective equipment. Nor will EBMUD install piping in areas where groundwater contaminant concentrations exceed specified limits for discharge to sanitary sewer systems or sewage treatment plants. Project sponsors for EBMUD services requiring excavation in contaminated areas must

submit copies of existing information regarding soil and groundwater quality within or adjacent to the project boundary.

In addition, the project sponsors must provide a legally sufficient, complete and specific written remedial plan establishing the methodology, planning and design of all necessary systems for the removal, treatment, and disposal of all identified contaminated soil and/or groundwater. EBMUD will not design the installation of pipelines until such time as soil and groundwater quality data and remediation plans are received and reviewed and will not install pipelines until remediation has been carried out and documentation of the effectiveness of the remediation has been received and reviewed. If no soil or groundwater quality data exists or the information supplied by the project sponsor is insufficient, EBMUD may require the project sponsor to perform sampling and analysis to characterize the soil being excavated and groundwater that may be encountered during excavation or perform such sampling and analysis itself at the project sponsor's expense.

WASTEWATER

EBMUD's Main Wastewater Treatment Plant (MWWTP) and interceptor system are anticipated to have adequate dry weather capacity to treat the proposed wastewater flows from this project, provided that the project and the wastewater generated by the project meet the requirements of the current EBMUD Wastewater Control Ordinance. However, wet weather flows are a concern. EBMUD has historically operated three Wet Weather Facilities to provide treatment for high wet weather flows that exceed the treatment capacity of the MWWTP. On January 14, 2009, due to Environmental Protection Agency's (EPA) and the State Water Resources Control Board's (SWRCB) reinterpretation of applicable law, the Regional Water Quality Control Board (RWQCB) issued an order prohibiting further discharges from EBMUD's Wet Weather Facilities. In addition, on July 22, 2009, a Stipulated Order for Preliminary Relief issued by EPA, SWRCB, and RWQCB became effective. This order requires EBMUD to perform work that will identify problem infiltration/inflow areas, begin to reduce infiltration/inflow through private sewer lateral improvements, and lay the groundwork for future efforts to eliminate discharges from the Wet Weather Facilities.

Currently, there is insufficient information to forecast how these changes will impact allowable wet weather flows in the individual collection system subbasins contributing to the EBMUD wastewater system, including the subbasin in which the proposed project is located. It is reasonable to assume that a new regional wet weather flow reduction program may be implemented in the East Bay, but the schedule for implementation of such a program has not yet been determined. In the meantime, it would be prudent for the lead agency to require the project applicant to incorporate the following measures into the proposed project: (1) replace or rehabilitate any existing sanitary sewer collection systems, including sewer lateral lines, to reduce infiltration/inflow and (2) ensure any new wastewater collection systems, including sewer lateral lines, for the project are constructed to prevent infiltration/inflow to the maximum extent feasible. Please include such provisions in the environmental documentation and other appropriate approvals for this project.

RECYCLED WATER

EBMUD's Policy 9.05 requires that customers use non-potable water, including recycled water, for non-domestic purposes when it is of adequate quality and quantity, available at reasonable cost, not detrimental to public health and not injurious to plant, fish and wildlife to offset demand on EBMUD's limited potable water supply.

Some portions of the City's boundaries fall within and around the service area of East Bayshore Recycled Water Project transmission and distribution pipeline infrastructure. Any projects within the boundary of EBMUD's East Bayshore Recycled Water Project present opportunities for recycled water uses ranging from landscape irrigation, toilet flushing and other non-potable commercial and industrial application that can be served by existing or expanded recycled water pipelines in the future. EBMUD recommends that the City and their developers maintain continued coordination and consultation with EBMUD as they plan and implement the various projects within the 2035 General Plan regarding the feasibility of providing recycled water for appropriate non-potable uses.

WATER CONSERVATION

Individual projects within the General Plan area may present opportunities to incorporate water conservation measures. EBMUD requests that the City include in its conditions of approval a requirement that the project sponsors comply with the Landscape Water Conservation Guidelines adopted by the Alameda County Board of Supervisors. Project sponsors should be aware that Section 31 of EBMUD's Water Service Regulations requires that water service shall not be furnished for new or expanded service unless all the applicable water-efficiency measures described in the regulation are installed at the project sponsor's expense.

If you have any questions regarding this response, please contact David J. Rehnstrom, Senior Civil Engineer, Water Service Planning at (510) 287-1365.

Sincerely,

William R. Kirkpatrick
Manager of Water Distribution Planning

WRK:TRM:sb
sb14_110.docx

Making San Francisco Bay Better

May 21, 2014

Anne Hersch
City of Albany
1000 San Pablo Avenue
Albany, CA 94706

SUBJECT: BCDC Inquiry File No. AL.AY.7905.1, Notice of Preparation (NOP) for the City of Albany 2035 General Plan draft Environmental Impact Report (EIR) SCH# 2014032040.

Dear Ms. Hersch:

Thank you for the opportunity to comment on the Notice of Preparation (NOP) for the 2035 General Plan draft Environmental Impact Report (EIR). The NOP is dated March 14, 2014 and was received in our office on March 18, 2014. The Commission has not reviewed the NOP, so the following staff comments are based on the San Francisco Bay Plan (Bay Plan) and the McAteer-Petris Act and staff review of the NOP.

Jurisdiction and Land Use. As a permitting authority along the San Francisco Bay shoreline, BCDC is responsible for granting or denying permits for any proposed fill (earth or any other substance or material, including pilings or structures placed on pilings, and floating structures moored for extended periods); extraction of materials; or change in use of any water, land or structure within the Commission's jurisdiction. Generally, BCDC's jurisdiction over San Francisco Bay extends over Bay tidal areas up to the mean high tide level, including all sloughs, and in marshlands up to five feet above mean sea level; a shoreline band consisting of territory located between the shoreline of the Bay and 100 feet landward and parallel to the shoreline; salt ponds; managed wetlands; and certain waterways tributary to the Bay. If a project is proposed within the Commission's jurisdiction, it must be authorized by the Commission pursuant to a BCDC permit, and the Commission will use the policies of the McAteer-Petris Act and the *San Francisco Bay Plan* (Bay Plan) to evaluate the project.

The map provided with the NOP shows the city limits of Albany as located at the Bay shoreline. The city limits extend into the Bay in areas such as the Albany Mudflats and the State Marine Ecological Reserve and include areas such as the Albany Bulb and Bay waters south of the Bulb. If the General Plan will include land use changes in Bay shoreline areas or within the Bay, these should be discussed in the environmental document, including any environmental effects that may occur as a result, including any in sensitive habitat areas. The entire shoreline of the City of Albany is within the Commission's shoreline band jurisdiction. The Albany shoreline is designated for waterfront park priority use in the Bay Plan on Map No. 4. In addition, the Albany Mudflat Ecological Reserve lands are designated for wildlife priority use. These priority use designations should be discussed in the environmental document (EIR) and whether any City proposed land uses would be consistent with these designations.
The Commission uses its Bay Plan Tidal Marshes and Tidal Flats, and Fish, Wildlife and Other

Aquatic Organisms policies to determine consistency of proposals for wildlife priority use areas, and its Bay Plan recreation policies for assessing consistency of proposals with its waterfront park priority use designations.

Also, Plan Map 4, Map Policy 42 states Regional Restoration Goal for Central Bay states, - Protect and restore tidal marsh, seasonal wetlands, beaches, dunes and islands. Natural salt ponds should be restored on the East Bay shoreline. Shallow subtidal areas (including eelgrass beds) should be conserved and enhanced. Wherever possible tidal marsh habitats should be restored, particularly at the mouths of streams where they enter the Bay and at the upper reach of dead-end sloughs. Encourage tidal marsh restoration in urban areas. See the Baylands Ecosystem Habitat Goals report for more information." The EIR should discuss the consistency of any general plan land use proposals with this policy.

Bay Fill. Section 66605 of the McAteer-Petris Act states that fill in San Francisco Bay should only be authorized when: (1) the public benefits from the fill clearly exceed the public detriment from the loss of water area and should be limited to water-oriented uses (such as ports, water-related industry, airports, bridges, wildlife refuges, water-oriented recreation and public assembly)... or minor fill for improving shoreline appearance or public access to the Bay; (2) no upland alternative location is available for the project purpose; (3) the fill is the minimum amount necessary to achieve the purpose of the fill; (4) the nature, location and extent of any fill will minimize harmful effects to the Bay; and (5) that the fill should be constructed in accordance with sound safety standards. If the proposed project would involve fill in the Bay, the project proponent will need to show that fill associated with the project meets all of the above listed criteria. While the NOP does not specify plans to place fill in the Bay, we ask that the draft EIR evaluate any proposed fill in light of the Commission's law.

Climate Change. Any development in the portions of the project area that are within BCDC's jurisdiction would be subject to the Climate Change policies of the Bay Plan. These policies state, in part, that: *"When planning shoreline areas or designing larger shoreline project, a risk assessment should be prepared by a qualified engineer and should be based on the estimated 100-year flood elevation that takes into account the best estimates of future sea level rise and current flood protection and planned flood protection that will be funded and constructed when needed to provide protection for the proposed project or shoreline area... To protect public safety and ecosystem services, within areas that a risk assessment determines are vulnerable to future shoreline flooding that threatens public safety, all projects – other than repairs of existing facilities, small projects that do not increase risks to public safety, interim projects and infill projects within existing urbanized areas – should be designed to be resilient to a mid-century sea level rise projection... undeveloped areas that are both vulnerable to future flooding and currently sustain significant habitats or species... should be given special consideration for preservation and habitat enhancement and should be encouraged to be used for those purposes."*

It appears that some areas within the plan area and along the adjacent shoreline may be vulnerable to projected sea level rise. The general plan process is an opportunity for the City of Albany to evaluate the communities' future in light of more recent scientific data on sea level rise and to update plans to address community resilience, given projected sea level rise. As a planning tool, the preparers of the EIR may wish to refer to the Sea Level Rise and Coastal Flooding Impacts Viewer developed by NOAA Coastal Services Center in collaboration with a number of other agencies and organizations. The viewer is available at: http://www.csc.noaa.gov/digitalcoast/tools/slrviewer/. The draft EIR should discuss the potential for inundation and its impacts on land use, transportation, hydrology, water quality, hazards, infrastructure, utilities, and public services, and whether any improvements would be consistent with the Bay Plan Climate Change policies.

The draft EIR should include an analysis of how an increase in sea level under multiple sea level rise scenarios could impact low-lying shoreline areas. This should include information on (1) current shoreline elevations and vertical land motion (e.g., subsidence or uplift); (2) current rates of sedimentation, if known; (3) projected changes in wetland communities given sea level rise (this should also include information on surrounding areas); (4) projected hydraulic changes that would result in a change in tidal heights, duration of ponding, drainage, erosion, or sedimentation; and (5) the condition of existing shoreline protection.

Public Access. Section 66602 of the McAteer-Petris Act states, in part, that *"existing public access to the shoreline and waters of the San Francisco Bay is inadequate and that maximum feasible public access, consistent with a proposed project, should be provided."* Furthermore, the McAteer-Petris Act authorizes the placement of fill in the Bay only for water-oriented uses or minor fill for improving shoreline appearance or public access.

If any projects identified in the NOP are within BCDC's jurisdiction, then the draft EIR should consider BCDC's public access requirements which state, *"in addition to the public access to the Bay provided by waterfront parks, beaches, marinas, and fishing piers, maximum feasible access to and along the waterfront and on any permitted fills should be provided in and through every new development in the Bay or on the shoreline... Whenever public access to the Bay is provided as a condition of development, on fill or on the shoreline, the access should be permanently guaranteed... Public access improvements provided as a condition of any approval should be consistent with the project and the physical environment, including protection of natural resources, and provide for the public's safety and convenience. The improvements should be designed and built to encourage diverse Bay-related activities and movement to and along the shoreline, should permit barrier-free access for the physically handicapped to the maximum feasible extent, should include an ongoing maintenance program, and should be identified with appropriate signs... Access to the waterfront should be provided by walkways, trails, or other appropriate means and connect to the nearest public thoroughfare where convenient parking or public transportation may be available..."*

All efforts to increase or include public access must be compatible with the wildlife and habitats of the area. As such, the policies further state that, *"public access to some natural areas should be provided to permit study and enjoyment of these areas. However, some wildlife are sensitive to human intrusion ... public access should be sited, designed and managed to prevent significant adverse effects on wildlife..."* The draft EIR should include an analysis of the impacts on public access and evaluate maximum feasible public access that could be provided as part of the project to be consistent with the Commission's policies on public access. Additionally, the draft EIR should evaluate the potential impacts of any proposed public access on sensitive wildlife species and habitats.

Recreation. The Bay Plan policies on recreation state, in part, that *"Diverse and accessible water-oriented recreational facilities, such as marinas, launch ramps, beaches, and fishing piers, should be provided to meet the needs of a growing and diversifying population, and should be well distributed around the Bay and improved to accommodate a broad range of water-oriented recreational activities for people of all races, cultures, ages and income levels... and Waterfront land needed for parks and beaches to meet future needs should be reserved now."*

The Bay Plan includes priority land use designations for Bay shoreline in Albany to ensure that sufficient lands are reserved for important water-oriented uses, such as wildlife refuges, waterfront parks or beaches. The general plan and EIR should discuss whether the proposed uses or projects within the Commission's jurisdiction are consistent with the applicable Bay Plan and MPA polices.

Bay Trail and Transportation. The Bay Plan policies on transportation state, in part, that *"Transportation projects... should include pedestrian and bicycle paths that will either be a part of the Bay Trail or connect the Bay Trail with other regional and community trails."* The City of Albany contains sections of existing Bay Trail and sections of proposed Bay Trail. The draft EIR should discuss how this network of existing trails could be connected and integrated with the further development of trails, parks and open space within the proposed project area.

Water Quality. The Bay Plan policies on water quality state that, *"new projects should be sited, designed, constructed and maintained to prevent, or if prevention is infeasible, to minimize the discharge of pollutants to the Bay ....* " Additionally, in order to protect the Bay from the water quality impacts of nonpoint source pollution, *"new development should be sited and designed consistent with standards in municipal storm water permits and state and regional storm water management guidelines .... To offset the impacts from increased impervious areas and land disturbances, vegetated swales, permeable pavement materials, preservation of existing trees and vegetation, planting native vegetation and other appropriate measures should be evaluated and implemented where appropriate...."* The draft EIR should evaluate the potential impacts of the proposed projects to be included in the General Plan update on the water quality of the Bay and should propose best management practices and mitigation measures to minimize adverse impacts to water quality.

Appearance, Design, and Scenic Views. The Bay Plan policies on appearance, design, and scenic views state, in part, that *"all bayfront development should be designed to enhance the pleasure of the user or viewer of the Bay. Maximum efforts should be made to provide, enhance or preserve views of the Bay and shoreline, especially from public areas... Shoreline developments should be built in clusters, leaving open area around them to permit more frequent views of the Bay... Views of the Bay from... roads should be maintained by appropriate arrangements and heights of all developments and landscaping between the view areas and the water."* The EIR should discuss the effect, if any, that the project would have on public views of the Bay.

We appreciate the opportunity to comment on the NOP for the EIR for the City Of Albany 2035 General Plan update. If you have any questions or concerns regarding this matter, please do not hesitate to contact me at (415) 352-3641 or by email at codya@bcdc.ca.gov.

Sincerely,

CODY AICHELE
Coastal Planner

CA/go

cc: State Clearinghouse

EDWARD C. MOORE
ATTORNEY AT LAW[1]

2436 Ninth Street
Berkeley, California 94710

Tele: **(510) 531-7272**
E-mail: ecmoorelaw@gmail.com

May 22, 2014

City Planner Anne Hersch *and* the ahersch@albanyca.org
Albany Planning and Zoning Commission
City of Albany
1000 San Pablo Avenue
Albany, California 94706

Mr. Barry J. Miller, AICP
urban + environmental planning
1629 Telegraph Avenue, Suite 200
Oakland, California 94612

Ms. Amy C. Paulsen, AICP
LSA Associates, Inc.
2215 Fifth Street
Berkeley, California 94710

RE: **Scope and Content of EIR Pertaining to Revised General Plan.**

Dear Anne Hersch et al.:

Thank you for the notification and opportunity to address the scope and content of the environmental impact report (EIR) pertaining to revision of Albany's General Plan (General Plan). I regret missing the land-use study session on April 23, 2014. I relied on a promise of notification which was not forthcoming.

My concerns have not changed since my letters to your offices dated September 1 and September 20, 2013. My concerns are linked to the impacts your General Plan will have on the future physical development of the waterfront districts within Albany *and* Berkeley (collectively the Waterfront). Those impacts are as potentially highly positive as they are potentially truly negative in terms of long-term effects on gained and/or lost public benefits.

Rumor has it you are planning to punt rather than wrestle over what the General Plan should specify regarding waterfront-district land use pending

[1]Voluntarily inactive as of March 1, 2010

2035. That seems to me a strategy implying an abdication of local governance. Land-use regulation is a governmental function entrusted to municipal officials on behalf of the public. Why you would allow an international real-estate developer headquartered in Canada and doing business locally through a *private* Delaware limited liability company, to determine how its 133 contiguous acres of Waterfront real estate will be developed and used is beyond me.[2]

If you wait until the landowner comes forward again with another proposal for a private park containing 4.5-million-square-feet of new housing and an industrial-research complex, you may get your park but you will never have the time to get beyond *reactionary* responses formed as half-baked numerical 'tradeoffs' between high rises, open space, tax revenue and congestion. Why not try a more contextual and incisive approach to planning the use and development of this heritage site? Much of it is going to be a park with a public shoreline *in any event.* The relevant questions are what development themes should be fostered and uses prohibited to protect and enhance while further developing this critically significant historic site on behalf of long-term interests in public health, morality and general welfare?

Current Status of Cultural Landscape Survey and Report. Since January 1st I have been working full time on drafting a report of my survey querying whether the Waterfront is eligible as a cultural landscape for listing on the National Register of Historic Places as an historic 'site' or inchoate 'historic district.' In my September 1, 2013, letter to you (see pp. 6-7), I promised my report by late July 2014. Unfortunately I am unable to meet that deadline for two reasons: a studio I am building is more consuming of my time and energy than I anticipated and the results of my survey are more

[2] For decades subsidiary corporations in the Santa Fe Southern Pacific Corporation's Real Estate Group headquartered in San Francisco owned legal title to all the private Waterfront real estate within Albany and eventually all of it in Berkeley too (approximating 275 upland acres). The corporate owners were Santa Fe Pacific Realty and Santa Fe Land Improvement Company. Since the state's acquisition of large parts of the Waterfront for a state park in about 1999, the legal title to Waterfront real estate remaining in private ownership (all of which is leased to Pacific Racing Association dba Golden Gate Fields) has changed hands several times. Since 2010 legal title rests in a Delaware limited liability company, Golden Gate Land Holdings LLC, which in turn is *reputedly* owned and controlled by The Stronach Group out of Ontario, Canada. Who owns and controls Golden Gate Land Holdings and its business purpose is not public information under Delaware law.

difficult to briefly explain than I had hoped for. I need to back off awhile to regain a less personal perspective on the Waterfront. I will however in July share an *incomplete draft* with your planning director and General Plan consultant. It should give a pretty good idea about the history of the Waterfront and what my survey finds relevant with regard to significances pertinent to the National and California Registers. How it all might translate into a land-use plan for an 'historic district' not yet clearly foreseen.

There is little if any doubt the Waterfront qualifies for listing on historical registers under federal *and* state historical preservation law (HPL). The Waterfront meets either or both of two specified criteria among others,[3] namely, that it is "associated with events that have made significant contributions to the broad patterns of our history" and/or it "possesses high artistic values." The *integrity* required for eligibility is intact because the significances of both Waterfront historicity *and* its artistic values are substantially *unimpaired* by the presence of the racetrack, the deteriorated Berkeley pier and/or the absence of a former powder works or whatever else since 1850 bay frontage real estate is no longer used for. *Location, location, location is at the heart of the Waterfront's historic and artistic significances given our various cultural heritages and the Waterfront's architectural (axial) ties to the Pacific and the University of California via a Golden Gate!*

By my reckoning the symbolic significances of the Waterfront's location in space and time, coupled with the spectrum of configured public works and private enterprise brought to a focus and displayed there, have the capacity to bring to mind astonishment and (turning on personal predilection) a deeply unified wonder about how one specific phase or another of the actuality displayed has in fact come to be as it so evidently is. The answers can fascinate and bottom out on faith, knowledge and foresight rather than happenstance, coincidence and inadvertency. Grasped by mindfulness of this sort, a new depth in one's bearings is realized and becomes available consciously. This resonance strikes me as worth celebrating given our perpetual needs for ever-fresh reorientation vis-à-vis knowledge and learning's vertical axis. The depths and heights in this regard entrusted to our local state university are well symbolized by the navigational aids docked

[3] Federal evaluation criteria are set forth in 36 Code of Federal Regulation, Part 60 – National Register of Historic Places, Section 60.4. Virtually identical state criteria of significance are in title 14 of the California Code of Regulations, Section 4852.

and displaced at this particular Golden Gate harbor.

Recommended Course of Action. Assuming my forthcoming Waterfront survey and report is substantially correct, that is, the Waterfront within Albany and Berkeley is in fact eligible for the National Register, the public is *entitle*d *by federal and state laws* to see the protections provided by HPL extended to the Waterfront when assessing the positive as well as negative potentialities and impacts of various land uses when planning for the future physical development of the Waterfront. I have several specific suggestions:

1. I suggest again Albany officials temporarily scope the waterfront district *out* of their revision of the General Plan and the EIR pending an orderly evaluation of *the whole* Waterfront as an historic site and inchoate 'historic district.' Assuming city officials and the stakeholders will concur in finding Waterfront eligibility after specific questions and objections have been aired and answered, a very different approach to long-term Waterfront land-use planning will become apparent in ways not yet widely understood locally.

2. If instead you go ahead with revising General Plan provisions pertaining to Albany's waterfront district, certain questions arise: (a) what criteria of significance are going to be used to evaluate the environmental impacts; (b) what baseline for the Waterfront environment will be used; (c) how will the CEQA "project" be described regarding General Plan revisions pertaining to the waterfront district; and (d) what level of CEQA review is appropriate (e.g., a program-level EIR or something less definitive)? *These complex questions arise even if revisions relevant to the Waterfront are limited to the Conservation, Recreation and Open Space element of the General Plan.* Much of this is addressed in my letter dated September 20, 2013.

Thank you for the opportunity to contribute and your attention.

Very truly yours,

/S/

_____

EDWARD C. MOORE

Cc: Berkeley Mayor & Planning Director; EBRPD; Citizens for East Shore Parks; Golden Gate Land Holdings, LLC.

From: **Norman La Force** <n.laforce@comcast.net>
Date: Sun, Apr 6, 2014 at 4:08 PM
Subject: Sierra Club Comments on the General Plan Update Process
To: Penelope Leach <pleach@albanyca.org>, Joane Wile <jwile46@gmail.com>, Marge Atkinson <margeaktinson1045@gmail.com>, Michael Barnes <Michael7Barnes@gmail.com>, Peggy Thomsen <peggy.thomsen@gmail.com>, Peter Maas <pcmaass@pacbell.net>

Dear Mayor and Council Members and City Administrator:

The Sierra Club makes the following comments on one aspect of the general plan update process that the city will begin. These comments only concern the Waterfront lands in the general plan. The Sierra Club's East Bay Public Lands Committee has jurisdiction over the waterfront lands. The Northern Alameda Group may have comments on other elements of the general plan. As Chair of the East Bay Public Lands Committee I am only commenting here in regard to the Waterfront.

The Sierra Club has a long standing policy going back since the passage of Measure C that the general plan designations and zoning for the Albany Waterfront should not be changed in any way without a plan that guarantees the Sierra Club's vision for the waterfront, i.e., the owner/developer agreeing to the plan that the Sierra Club, Citizens for East Shore Parks, Citizens for the Albany Shoreline, and Golden Gate Audubon Society developed. Therefore, the Sierra Club opposes the city making any changes to the general plan or zoning of the waterfront as part of the general plan update.

The key legal fact is that under the current general plan and zoning the owner of the race track is **STUCK** running a race track which is a money losing business. The track will have to close at some point. Albany remains one of the last race tracks in the state; it cannot survive for much longer. Under Measure C any change to the general plan or zoning of the waterfront must be go to the voters for approval. Hence, as I have stated in the past very graphically, the people of Albany have an IRON GRIP on the neck of the race horse, i.e., owner of the race track. The people of Albany control what will happen with that property. But only if the general plan and zoning remain as it is. Any change that gives the owner more rights loosens that grip. Few residents of a California city enjoy such control over their own city's future. It should not be discarded lightly.

Despite what the owner may say, we know from the past 40 years that each owner of the track is desperate to do something else with that property because the track is losing money. Hence, so long as the general plan and zoning remain unchanged, the people of Albany control the fate of that land. Any change, however, means less control and leverage that the people have over the race track lands. Therefore, it is imperative that the city do **NOTHING** to change the general plan or zoning of the waterfront to ensure that the people of Albany retain their full control over the future of that land and can thereby control the fate of their community.

Moreover, any change to the general plan and zoning will require CEQA compliance, **which the city will have to pay for,** not the developer or owner. An EIR for a change in the zoning of the waterfront will cost around $500,000.00 to $1 Million depending on what is proposed. These are taxpayer dollars. I am sure that the track owner is just waiting for the City to do this because it will reduce his cost for any future change to the zoning if the city has already paid for the bulk of an EIR. Hence, it makes no fiscal sense for the city to spend taxpayer dollars for a review that the developer would have to pay for.

The Voices to Vision document can remain as it is: The guiding concept for the waterfront. But if the city tries to incorporate that document into the general plan and zoning for the waterfront, it will trigger a Measure C vote without guaranteeing the completion of the McLaughlin East Shore State Park and will require the city to pay for the EIR for those changes. As I recall, when Voices to Vision took place, then cost of an EIR for it was minimally $500,000 to $750,000. The Sierra Club does not believe that the taxpayers should pay those costs unless we get the completion of the McLaughlin East Shore Park as called for in the Sierra Club/CESP/CAS/GGAS plan.

Yours,

Norman La Force,

Chair, Sierra Club East Bay Public Lands Committee

APPENDIX B

AIR QUALITY AND GREENHOUSE GAS EMISSIONS DATA

CALEEMOD OUTPUT SHEETS

Albany General Plan

Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	815.00	Dwelling Unit	50.94	815,000.00	2331

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	5			**Operational Year**	2035
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Per PG&E April 2013 GHG emissions factors

Land Use - Condo/Townhome Land Use Subtype

Energy Use - Used historical data

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Water Mitigation - 50% outdoor potable water usage measure in CAP

Waste Mitigation - 75% waste reduction proposed in CAP

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	250.00

tblArchitecturalCoating	EF_Residential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	250.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblProjectCharacteristics	OperationalYear	2014	2035

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.7537	7.6455	6.1401	8.0600e-003	0.9770	0.3802	1.3572	0.4335	0.3515	0.7851		727.2820	727.2820	0.1731	0.0000	730.9168
2017	0.7905	4.8240	7.5420	0.0144	0.7650	0.2517	1.0167	0.2050	0.2360	0.4410		1,156.0409	1,156.0409	0.1101	0.0000	1,158.3528
2018	0.6944	4.2984	7.0002	0.0145	0.7679	0.2139	0.9819	0.2058	0.2008	0.4066		1,130.2081	1,130.2081	0.1066	0.0000	1,132.4473
2019	0.6236	3.8882	6.5783	0.0145	0.7679	0.1856	0.9535	0.2058	0.1742	0.3799		1,101.6753	1,101.6753	0.1033	0.0000	1,103.8440
2020	0.5705	3.5075	6.2627	0.0145	0.7709	0.1623	0.9332	0.2066	0.1523	0.3589		1,073.2472	1,073.2472	0.1010	0.0000	1,075.3679
2021	12.8656	0.8479	1.3428	2.8600e-003	0.1185	0.0422	0.1607	0.0317	0.0394	0.0710		218.8506	218.8506	0.0354	0.0000	219.5945
Total	**16.2982**	**25.0116**	**34.8661**	**0.0687**	**4.1672**	**1.2359**	**5.4031**	**1.2884**	**1.1542**	**2.4425**		**5,407.3041**	**5,407.3041**	**0.6295**	**0.0000**	**5,420.5233**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Year	tons/yr										MT/yr					
2016	0.7537	7.6455	6.1401	8.0600e-003	0.5159	0.3802	0.8961	0.2155	0.3515	0.5670		727.2814	727.2814	0.1731	0.0000	730.9161
2017	0.7905	4.8240	7.5420	0.0144	0.7650	0.2517	1.0167	0.2050	0.2360	0.4410		1,156.0405	1,156.0405	0.1101	0.0000	1,158.3525
2018	0.6944	4.2984	7.0002	0.0145	0.7679	0.2139	0.9819	0.2058	0.2008	0.4066		1,130.2077	1,130.2077	0.1066	0.0000	1,132.4469
2019	0.6236	3.8882	6.5783	0.0145	0.7679	0.1856	0.9535	0.2058	0.1742	0.3799		1,101.6750	1,101.6750	0.1033	0.0000	1,103.8436
2020	0.5705	3.5075	6.2627	0.0145	0.7709	0.1623	0.9332	0.2066	0.1523	0.3589		1,073.2469	1,073.2469	0.1010	0.0000	1,075.3676
2021	12.8656	0.8479	1.3428	2.8600e-003	0.1185	0.0422	0.1607	0.0317	0.0394	0.0710		218.8504	218.8504	0.0354	0.0000	219.5944
Total	**16.2982**	**25.0116**	**34.8661**	**0.0687**	**3.7061**	**1.2359**	**4.9420**	**1.0704**	**1.1542**	**2.2245**		**5,407.3018**	**5,407.3018**	**0.6295**	**0.0000**	**5,420.5210**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**11.06**	**0.00**	**8.53**	**16.92**	**0.00**	**8.93**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.6478	0.0920	7.6501	3.4300e-003		0.2819	0.2819		0.2819	0.2819		31.4348	60.4037	0.1072	1.1100e-003	63.0006
Energy	0.1067	0.9122	0.3882	5.8200e-003		0.0738	0.0738		0.0738	0.0738		1,513.3639	1,513.3639	0.0660	0.0288	1,523.6835
Mobile	1.7498	3.3997	17.5725	0.0651	4.4687	0.0836	4.5523	1.1994	0.0771	1.2765		4,175.7332	4,175.7332	0.1093	0.0000	4,178.0276
Waste						0.0000	0.0000		0.0000	0.0000		0.0000	76.1013	4.4975	0.0000	170.5479
Water						0.0000	0.0000		0.0000	0.0000		53.2079	70.0543	1.7356	0.0420	119.5085

Total	**6.5044**	**4.4038**	**25.6108**	**0.0743**	**4.4687**	**0.4392**	**4.9079**	**1.1994**	**0.4328**	**1.6321**		**5,773.7398**	**5,895.6563**	**6.5155**	**0.0719**	**6,054.7681**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.6478	0.0920	7.6501	3.4300e-003		0.2819	0.2819		0.2819	0.2819		31.4348	60.4037	0.1072	1.1100e-003	63.0006
Energy	0.1067	0.9122	0.3882	5.8200e-003		0.0738	0.0738		0.0738	0.0738		1,513.3639	1,513.3639	0.0660	0.0288	1,523.6835
Mobile	1.7498	3.3997	17.5725	0.0651	4.4687	0.0836	4.5523	1.1994	0.0771	1.2765		4,175.7332	4,175.7332	0.1093	0.0000	4,178.0276
Waste						0.0000	0.0000		0.0000	0.0000		0.0000	19.0253	1.1244	0.0000	42.6370
Water						0.0000	0.0000		0.0000	0.0000		42.3450	59.1913	1.7345	0.0417	108.5530
Total	**6.5044**	**4.4038**	**25.6108**	**0.0743**	**4.4687**	**0.4392**	**4.9079**	**1.1994**	**0.4328**	**1.6321**		**5,762.8768**	**5,827.7174**	**3.1413**	**0.0717**	**5,915.9017**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.19**	**1.15**	**51.79**	**0.32**	**2.29**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	4/7/2016	5	70	
2	Site Preparation	Site Preparation	4/8/2016	6/2/2016	5	40	
3	Grading	Grading	6/3/2016	11/3/2016	5	110	
4	Building Construction	Building Construction	11/4/2016	2/4/2021	5	1110	
5	Paving	Paving	2/5/2021	5/20/2021	5	75	
6	Architectural Coating	Architectural Coating	5/21/2021	9/2/2021	5	75	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 275

Acres of Paving: 0

Residential Indoor: 1,650,375; Residential Outdoor: 550,125; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	162	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	2	8.00	162	0.38
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	130	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	587.00	87.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	117.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1501	1.5980	1.2261	1.4000e-003		0.0802	0.0802		0.0748	0.0748		129.8408	129.8408	0.0353	0.0000	130.5823
Total	**0.1501**	**1.5980**	**1.2261**	**1.4000e-003**		**0.0802**	**0.0802**		**0.0748**	**0.0748**		**129.8408**	**129.8408**	**0.0353**	**0.0000**	**130.5823**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9900e-003	2.8800e-003	0.0279	6.0000e-005	4.7600e-003	4.0000e-005	4.8000e-003	1.2700e-003	4.0000e-005	1.3000e-003		4.3218	4.3218	2.4000e-004	0.0000	4.3268
Total	**1.9900e-003**	**2.8800e-003**	**0.0279**	**6.0000e-005**	**4.7600e-003**	**4.0000e-005**	**4.8000e-003**	**1.2700e-003**	**4.0000e-005**	**1.3000e-003**		**4.3218**	**4.3218**	**2.4000e-004**	**0.0000**	**4.3268**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1501	1.5980	1.2261	1.4000e-003		0.0802	0.0802		0.0748	0.0748		129.8406	129.8406	0.0353	0.0000	130.5821
Total	**0.1501**	**1.5980**	**1.2261**	**1.4000e-003**		**0.0802**	**0.0802**		**0.0748**	**0.0748**		**129.8406**	**129.8406**	**0.0353**	**0.0000**	**130.5821**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9900e-003	2.8800e-003	0.0279	6.0000e-005	4.7600e-003	4.0000e-005	4.8000e-003	1.2700e-003	4.0000e-005	1.3000e-003		4.3218	4.3218	2.4000e-004	0.0000	4.3268
Total	**1.9900e-003**	**2.8800e-003**	**0.0279**	**6.0000e-005**	**4.7600e-003**	**4.0000e-005**	**4.8000e-003**	**1.2700e-003**	**4.0000e-005**	**1.3000e-003**		**4.3218**	**4.3218**	**2.4000e-004**	**0.0000**	**4.3268**

3.3 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3613	0.0000	0.3613	0.1986	0.0000	0.1986		0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1015	1.0927	0.8221	7.8000e-004		0.0588	0.0588		0.0541	0.0541		73.7542	73.7542	0.0223	0.0000	74.2214
Total	**0.1015**	**1.0927**	**0.8221**	**7.8000e-004**	**0.3613**	**0.0588**	**0.4201**	**0.1986**	**0.0541**	**0.2527**		**73.7542**	**73.7542**	**0.0223**	**0.0000**	**74.2214**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3700e-003	1.9800e-003	0.0192	4.0000e-005	3.2700e-003	3.0000e-005	3.2900e-003	8.7000e-004	3.0000e-005	8.9000e-004		2.9635	2.9635	1.6000e-004	0.0000	2.9669
Total	**1.3700e-003**	**1.9800e-003**	**0.0192**	**4.0000e-005**	**3.2700e-003**	**3.0000e-005**	**3.2900e-003**	**8.7000e-004**	**3.0000e-005**	**8.9000e-004**		**2.9635**	**2.9635**	**1.6000e-004**	**0.0000**	**2.9669**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1626	0.0000	0.1626	0.0894	0.0000	0.0894		0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1015	1.0927	0.8221	7.8000e-004		0.0588	0.0588		0.0541	0.0541		73.7541	73.7541	0.0223	0.0000	74.2213
Total	**0.1015**	**1.0927**	**0.8221**	**7.8000e-004**	**0.1626**	**0.0588**	**0.2214**	**0.0894**	**0.0541**	**0.1435**		**73.7541**	**73.7541**	**0.0223**	**0.0000**	**74.2213**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3700e-003	1.9800e-003	0.0192	4.0000e-005	3.2700e-003	3.0000e-005	3.2900e-003	8.7000e-004	3.0000e-005	8.9000e-004		2.9635	2.9635	1.6000e-004	0.0000	2.9669
Total	**1.3700e-003**	**1.9800e-003**	**0.0192**	**4.0000e-005**	**3.2700e-003**	**3.0000e-005**	**3.2900e-003**	**8.7000e-004**	**3.0000e-005**	**8.9000e-004**		**2.9635**	**2.9635**	**1.6000e-004**	**0.0000**	**2.9669**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4770	0.0000	0.4770	0.1978	0.0000	0.1978		0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3564	4.1148	2.7026	3.3900e-003		0.1971	0.1971		0.1814	0.1814		320.0765	320.0765	0.0966	0.0000	322.1040
Total	**0.3564**	**4.1148**	**2.7026**	**3.3900e-003**	**0.4770**	**0.1971**	**0.6742**	**0.1978**	**0.1814**	**0.3792**		**320.0765**	**320.0765**	**0.0966**	**0.0000**	**322.1040**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1700e-003	6.0400e-003	0.0586	1.2000e-004	9.9800e-003	8.0000e-005	0.0101	2.6500e-003	8.0000e-005	2.7300e-003		9.0551	9.0551	5.0000e-004	0.0000	9.0656
Total	**4.1700e-003**	**6.0400e-003**	**0.0586**	**1.2000e-004**	**9.9800e-003**	**8.0000e-005**	**0.0101**	**2.6500e-003**	**8.0000e-005**	**2.7300e-003**		**9.0551**	**9.0551**	**5.0000e-004**	**0.0000**	**9.0656**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Fugitive Dust					0.2147	0.0000	0.2147	0.0890	0.0000	0.0890		0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3564	4.1148	2.7026	3.3900e-003		0.1971	0.1971		0.1814	0.1814		320.0761	320.0761	0.0966	0.0000	322.1036
Total	**0.3564**	**4.1148**	**2.7026**	**3.3900e-003**	**0.2147**	**0.1971**	**0.4118**	**0.0890**	**0.1814**	**0.2704**		**320.0761**	**320.0761**	**0.0966**	**0.0000**	**322.1036**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1700e-003	6.0400e-003	0.0586	1.2000e-004	9.9800e-003	8.0000e-005	0.0101	2.6500e-003	8.0000e-005	2.7300e-003		9.0551	9.0551	5.0000e-004	0.0000	9.0656
Total	**4.1700e-003**	**6.0400e-003**	**0.0586**	**1.2000e-004**	**9.9800e-003**	**8.0000e-005**	**0.0101**	**2.6500e-003**	**8.0000e-005**	**2.7300e-003**		**9.0551**	**9.0551**	**5.0000e-004**	**0.0000**	**9.0656**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0698	0.5844	0.3794	5.5000e-004		0.0403	0.0403		0.0379	0.0379		49.6415	49.6415	0.0123	0.0000	49.9000
Total	**0.0698**	**0.5844**	**0.3794**	**5.5000e-004**		**0.0403**	**0.0403**		**0.0379**	**0.0379**		**49.6415**	**49.6415**	**0.0123**	**0.0000**	**49.9000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0227	0.1788	0.2638	4.3000e-004	0.0115	2.6700e-003	0.0142	3.2900e-003	2.4500e-003	5.7400e-003		38.5698	38.5698	3.1000e-004	0.0000	38.5763
Worker	0.0456	0.0661	0.6405	1.3000e-003	0.1092	9.1000e-004	0.1101	0.0290	8.4000e-004	0.0299		99.0589	99.0589	5.4600e-003	0.0000	99.1735
Total	**0.0683**	**0.2449**	**0.9043**	**1.7300e-003**	**0.1206**	**3.5800e-003**	**0.1242**	**0.0323**	**3.2900e-003**	**0.0356**		**137.6287**	**137.6287**	**5.7700e-003**	**0.0000**	**137.7498**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0698	0.5844	0.3794	5.5000e-004		0.0403	0.0403		0.0379	0.0379		49.6414	49.6414	0.0123	0.0000	49.9000
Total	**0.0698**	**0.5844**	**0.3794**	**5.5000e-004**		**0.0403**	**0.0403**		**0.0379**	**0.0379**		**49.6414**	**49.6414**	**0.0123**	**0.0000**	**49.9000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0227	0.1788	0.2638	4.3000e-004	0.0115	2.6700e-003	0.0142	3.2900e-003	2.4500e-003	5.7400e-003		38.5698	38.5698	3.1000e-004	0.0000	38.5763
Worker	0.0456	0.0661	0.6405	1.3000e-003	0.1092	9.1000e-004	0.1101	0.0290	8.4000e-004	0.0299		99.0589	99.0589	5.4600e-003	0.0000	99.1735
Total	**0.0683**	**0.2449**	**0.9043**	**1.7300e-003**	**0.1206**	**3.5800e-003**	**0.1242**	**0.0323**	**3.2900e-003**	**0.0356**		**137.6287**	**137.6287**	**5.7700e-003**	**0.0000**	**137.7498**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4033	3.4327	2.3568	3.4900e-003		0.2316	0.2316		0.2175	0.2175		311.3228	311.3228	0.0766	0.0000	312.9319
Total	**0.4033**	**3.4327**	**2.3568**	**3.4900e-003**		**0.2316**	**0.2316**		**0.2175**	**0.2175**		**311.3228**	**311.3228**	**0.0766**	**0.0000**	**312.9319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1305	1.0158	1.5725	2.6900e-003	0.0728	0.0146	0.0874	0.0209	0.0135	0.0343		240.4613	240.4613	1.8600e-003	0.0000	240.5005
Worker	0.2567	0.3754	3.6127	8.2400e-003	0.6922	5.5100e-003	0.6977	0.1841	5.0800e-003	0.1892		604.2567	604.2567	0.0316	0.0000	604.9205
Total	**0.3872**	**1.3912**	**5.1852**	**0.0109**	**0.7650**	**0.0201**	**0.7852**	**0.2050**	**0.0185**	**0.2235**		**844.7180**	**844.7180**	**0.0335**	**0.0000**	**845.4209**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4033	3.4327	2.3568	3.4900e-003		0.2316	0.2316		0.2175	0.2175		311.3225	311.3225	0.0766	0.0000	312.9315
Total	**0.4033**	**3.4327**	**2.3568**	**3.4900e-003**		**0.2316**	**0.2316**		**0.2175**	**0.2175**		**311.3225**	**311.3225**	**0.0766**	**0.0000**	**312.9315**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1305	1.0158	1.5725	2.6900e-003	0.0728	0.0146	0.0874	0.0209	0.0135	0.0343		240.4613	240.4613	1.8600e-003	0.0000	240.5005
Worker	0.2567	0.3754	3.6127	8.2400e-003	0.6922	5.5100e-003	0.6977	0.1841	5.0800e-003	0.1892		604.2567	604.2567	0.0316	0.0000	604.9205

Total	**0.3872**	**1.3912**	**5.1852**	**0.0109**	**0.7650**	**0.0201**	**0.7852**	**0.2050**	**0.0185**	**0.2235**		**844.7180**	**844.7180**	**0.0335**	**0.0000**	**845.4209**

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3483	3.0355	2.2880	3.5000e-003		0.1950	0.1950		0.1833	0.1833		308.9844	308.9844	0.0756	0.0000	310.5723
Total	**0.3483**	**3.0355**	**2.2880**	**3.5000e-003**		**0.1950**	**0.1950**		**0.1833**	**0.1833**		**308.9844**	**308.9844**	**0.0756**	**0.0000**	**310.5723**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1163	0.9237	1.4692	2.6900e-003	0.0731	0.0136	0.0867	0.0210	0.0125	0.0335		237.1446	237.1446	1.8400e-003	0.0000	237.1832
Worker	0.2299	0.3392	3.2430	8.2600e-003	0.6949	5.3500e-003	0.7002	0.1848	4.9400e-003	0.1898		584.0791	584.0791	0.0292	0.0000	584.6918
Total	**0.3461**	**1.2629**	**4.7122**	**0.0110**	**0.7679**	**0.0189**	**0.7869**	**0.2058**	**0.0174**	**0.2232**		**821.2236**	**821.2236**	**0.0310**	**0.0000**	**821.8750**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3483	3.0355	2.2880	3.5000e-003		0.1950	0.1950		0.1833	0.1833		308.9841	308.9841	0.0756	0.0000	310.5720
Total	**0.3483**	**3.0355**	**2.2880**	**3.5000e-003**		**0.1950**	**0.1950**		**0.1833**	**0.1833**		**308.9841**	**308.9841**	**0.0756**	**0.0000**	**310.5720**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1163	0.9237	1.4692	2.6900e-003	0.0731	0.0136	0.0867	0.0210	0.0125	0.0335		237.1446	237.1446	1.8400e-003	0.0000	237.1832
Worker	0.2299	0.3392	3.2430	8.2600e-003	0.6949	5.3500e-003	0.7002	0.1848	4.9400e-003	0.1898		584.0791	584.0791	0.0292	0.0000	584.6918
Total	**0.3461**	**1.2629**	**4.7122**	**0.0110**	**0.7679**	**0.0189**	**0.7869**	**0.2058**	**0.0174**	**0.2232**		**821.2236**	**821.2236**	**0.0310**	**0.0000**	**821.8750**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Off-Road	0.3069	2.7359	2.2342	3.5000e-003		0.1677	0.1677		0.1577	0.1577		305.5302	305.5302	0.0743	0.0000	307.0913
Total	**0.3069**	**2.7359**	**2.2342**	**3.5000e-003**		**0.1677**	**0.1677**		**0.1577**	**0.1577**		**305.5302**	**305.5302**	**0.0743**	**0.0000**	**307.0913**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1074	0.8433	1.4003	2.6900e-003	0.0731	0.0126	0.0857	0.0210	0.0116	0.0326		233.0650	233.0650	1.8000e-003	0.0000	233.1027
Worker	0.2093	0.3090	2.9438	8.2600e-003	0.6949	5.2300e-003	0.7001	0.1848	4.8500e-003	0.1897		563.0801	563.0801	0.0271	0.0000	563.6500
Total	**0.3167**	**1.1523**	**4.3441**	**0.0110**	**0.7679**	**0.0179**	**0.7858**	**0.2058**	**0.0165**	**0.2223**		**796.1451**	**796.1451**	**0.0289**	**0.0000**	**796.7527**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3069	2.7359	2.2342	3.5000e-003		0.1677	0.1677		0.1577	0.1577		305.5299	305.5299	0.0743	0.0000	307.0909
Total	**0.3069**	**2.7359**	**2.2342**	**3.5000e-003**		**0.1677**	**0.1677**		**0.1577**	**0.1577**		**305.5299**	**305.5299**	**0.0743**	**0.0000**	**307.0909**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1074	0.8433	1.4003	2.6900e-003	0.0731	0.0126	0.0857	0.0210	0.0116	0.0326		233.0650	233.0650	1.8000e-003	0.0000	233.1027
Worker	0.2093	0.3090	2.9438	8.2600e-003	0.6949	5.2300e-003	0.7001	0.1848	4.8500e-003	0.1897		563.0801	563.0801	0.0271	0.0000	563.6500
Total	**0.3167**	**1.1523**	**4.3441**	**0.0110**	**0.7679**	**0.0179**	**0.7858**	**0.2058**	**0.0165**	**0.2223**		**796.1451**	**796.1451**	**0.0289**	**0.0000**	**796.7527**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2766	2.5000	2.2019	3.5100e-003		0.1458	0.1458		0.1371	0.1371		302.1514	302.1514	0.0736	0.0000	303.6973
Total	**0.2766**	**2.5000**	**2.2019**	**3.5100e-003**		**0.1458**	**0.1458**		**0.1371**	**0.1371**		**302.1514**	**302.1514**	**0.0736**	**0.0000**	**303.6973**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0986	0.7219	1.3388	2.7000e-003	0.0733	0.0113	0.0847	0.0210	0.0104	0.0315		228.5775	228.5775	1.7500e-003	0.0000	228.6142
Worker	0.1953	0.2856	2.7220	8.2900e-003	0.6975	5.1900e-003	0.7027	0.1856	4.8100e-003	0.1904		542.5184	542.5184	0.0256	0.0000	543.0564
Total	**0.2939**	**1.0075**	**4.0608**	**0.0110**	**0.7709**	**0.0165**	**0.7874**	**0.2066**	**0.0152**	**0.2218**		**771.0959**	**771.0959**	**0.0274**	**0.0000**	**771.6707**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2766	2.5000	2.2019	3.5100e-003		0.1458	0.1458		0.1371	0.1371		302.1510	302.1510	0.0736	0.0000	303.6969
Total	**0.2766**	**2.5000**	**2.2019**	**3.5100e-003**		**0.1458**	**0.1458**		**0.1371**	**0.1371**		**302.1510**	**302.1510**	**0.0736**	**0.0000**	**303.6969**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Vendor	0.0986	0.7219	1.3388	2.7000e-003	0.0733	0.0113	0.0847	0.0210	0.0104	0.0315		228.5775	228.5775	1.7500e-003	0.0000	228.6142
Worker	0.1953	0.2856	2.7220	8.2900e-003	0.6975	5.1900e-003	0.7027	0.1856	4.8100e-003	0.1904		542.5184	542.5184	0.0256	0.0000	543.0564
Total	**0.2939**	**1.0075**	**4.0608**	**0.0110**	**0.7709**	**0.0165**	**0.7874**	**0.2066**	**0.0152**	**0.2218**		**771.0959**	**771.0959**	**0.0274**	**0.0000**	**771.6707**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0237	0.2168	0.2067	3.4000e-004		0.0119	0.0119		0.0112	0.0112		28.8347	28.8347	6.9500e-003	0.0000	28.9805
Total	**0.0237**	**0.2168**	**0.2067**	**3.4000e-004**		**0.0119**	**0.0119**		**0.0112**	**0.0112**		**28.8347**	**28.8347**	**6.9500e-003**	**0.0000**	**28.9805**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.9500e-003	0.0566	0.1235	2.6000e-004	7.0000e-003	9.7000e-004	7.9700e-003	2.0100e-003	9.0000e-004	2.9000e-003		21.7844	21.7844	1.7000e-004	0.0000	21.7879
Worker	0.0176	0.0254	0.2426	7.9000e-004	0.0666	4.9000e-004	0.0671	0.0177	4.6000e-004	0.0182		50.8572	50.8572	2.3200e-003	0.0000	50.9059
Total	**0.0265**	**0.0820**	**0.3661**	**1.0500e-003**	**0.0736**	**1.4600e-003**	**0.0750**	**0.0197**	**1.3600e-003**	**0.0211**		**72.6415**	**72.6415**	**2.4900e-003**	**0.0000**	**72.6938**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0237	0.2168	0.2067	3.4000e-004		0.0119	0.0119		0.0112	0.0112		28.8346	28.8346	6.9500e-003	0.0000	28.9805
Total	**0.0237**	**0.2168**	**0.2067**	**3.4000e-004**		**0.0119**	**0.0119**		**0.0112**	**0.0112**		**28.8346**	**28.8346**	**6.9500e-003**	**0.0000**	**28.9805**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.9500e-003	0.0566	0.1235	2.6000e-004	7.0000e-003	9.7000e-004	7.9700e-003	2.0100e-003	9.0000e-004	2.9000e-003		21.7844	21.7844	1.7000e-004	0.0000	21.7879
Worker	0.0176	0.0254	0.2426	7.9000e-004	0.0666	4.9000e-004	0.0671	0.0177	4.6000e-004	0.0182		50.8572	50.8572	2.3200e-003	0.0000	50.9059
Total	**0.0265**	**0.0820**	**0.3661**	**1.0500e-003**	**0.0736**	**1.4600e-003**	**0.0750**	**0.0197**	**1.3600e-003**	**0.0211**		**72.6415**	**72.6415**	**2.4900e-003**	**0.0000**	**72.6938**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0462	0.4748	0.5382	8.4000e-004		0.0249	0.0249		0.0230	0.0230		73.4906	73.4906	0.0238	0.0000	73.9897
Paving	0.0000					0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0462**	**0.4748**	**0.5382**	**8.4000e-004**		**0.0249**	**0.0249**		**0.0230**	**0.0230**		**73.4906**	**73.4906**	**0.0238**	**0.0000**	**73.9897**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3500e-003	1.9500e-003	0.0186	6.0000e-005	5.1000e-003	4.0000e-005	5.1400e-003	1.3600e-003	4.0000e-005	1.3900e-003		3.8988	3.8988	1.8000e-004	0.0000	3.9025
Total	**1.3500e-003**	**1.9500e-003**	**0.0186**	**6.0000e-005**	**5.1000e-003**	**4.0000e-005**	**5.1400e-003**	**1.3600e-003**	**4.0000e-005**	**1.3900e-003**		**3.8988**	**3.8988**	**1.8000e-004**	**0.0000**	**3.9025**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0462	0.4748	0.5382	8.4000e-004		0.0249	0.0249		0.0230	0.0230		73.4905	73.4905	0.0238	0.0000	73.9896

Paving	0.0000					0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0462**	**0.4748**	**0.5382**	**8.4000e-004**		**0.0249**	**0.0249**		**0.0230**	**0.0230**		**73.4905**	**73.4905**	**0.0238**	**0.0000**	**73.9896**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3500e-003	1.9500e-003	0.0186	6.0000e-005	5.1000e-003	4.0000e-005	5.1400e-003	1.3600e-003	4.0000e-005	1.3900e-003		3.8988	3.8988	1.8000e-004	0.0000	3.9025
Total	**1.3500e-003**	**1.9500e-003**	**0.0186**	**6.0000e-005**	**5.1000e-003**	**4.0000e-005**	**5.1400e-003**	**1.3600e-003**	**4.0000e-005**	**1.3900e-003**		**3.8988**	**3.8988**	**1.8000e-004**	**0.0000**	**3.9025**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	12.7492					0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.2100e-003	0.0573	0.0682	1.1000e-004		3.5300e-003	3.5300e-003		3.5300e-003	3.5300e-003		9.5747	9.5747	6.6000e-004	0.0000	9.5885
Total	**12.7574**	**0.0573**	**0.0682**	**1.1000e-004**		**3.5300e-003**	**3.5300e-003**		**3.5300e-003**	**3.5300e-003**		**9.5747**	**9.5747**	**6.6000e-004**	**0.0000**	**9.5885**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0105	0.0152	0.1451	4.7000e-004	0.0398	2.9000e-004	0.0401	0.0106	2.7000e-004	0.0109		30.4103	30.4103	1.3900e-003	0.0000	30.4395
Total	**0.0105**	**0.0152**	**0.1451**	**4.7000e-004**	**0.0398**	**2.9000e-004**	**0.0401**	**0.0106**	**2.7000e-004**	**0.0109**		**30.4103**	**30.4103**	**1.3900e-003**	**0.0000**	**30.4395**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	12.7492					0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.2100e-003	0.0573	0.0682	1.1000e-004		3.5300e-003	3.5300e-003		3.5300e-003	3.5300e-003		9.5747	9.5747	6.6000e-004	0.0000	9.5885
Total	**12.7574**	**0.0573**	**0.0682**	**1.1000e-004**		**3.5300e-003**	**3.5300e-003**		**3.5300e-003**	**3.5300e-003**		**9.5747**	**9.5747**	**6.6000e-004**	**0.0000**	**9.5885**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0105	0.0152	0.1451	4.7000e-004	0.0398	2.9000e-004	0.0401	0.0106	2.7000e-004	0.0109		30.4103	30.4103	1.3900e-003	0.0000	30.4395
Total	**0.0105**	**0.0152**	**0.1451**	**4.7000e-004**	**0.0398**	**2.9000e-004**	**0.0401**	**0.0106**	**2.7000e-004**	**0.0109**		**30.4103**	**30.4103**	**1.3900e-003**	**0.0000**	**30.4395**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.7498	3.3997	17.5725	0.0651	4.4687	0.0836	4.5523	1.1994	0.0771	1.2765		4,175.7332	4,175.7332	0.1093	0.0000	4,178.0276
Unmitigated	1.7498	3.3997	17.5725	0.0651	4.4687	0.0836	4.5523	1.1994	0.0771	1.2765		4,175.7332	4,175.7332	0.1093	0.0000	4,178.0276

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	5,370.85	5,835.40	4947.05	12,002,699	12,002,699
Total	5,370.85	5,835.40	4,947.05	12,002,699	12,002,699

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

Condo/Townhouse	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.544287	0.062956	0.171756	0.119283	0.033776	0.004850	0.017325	0.031479	0.002293	0.003006	0.006870	0.000528	0.001591

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000		456.9883	456.9883	0.0457	9.4500e-003	460.8790
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000		456.9883	456.9883	0.0457	9.4500e-003	460.8790
NaturalGas Mitigated	0.1067	0.9122	0.3882	5.8200e-003		0.0738	0.0738		0.0738	0.0738		1,056.3756	1,056.3756	0.0203	0.0194	1,062.8045
NaturalGas Unmitigated	0.1067	0.9122	0.3882	5.8200e-003		0.0738	0.0738		0.0738	0.0738		1,056.3756	1,056.3756	0.0203	0.0194	1,062.8045

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	1.97957e+007	0.1067	0.9122	0.3882	5.8200e-003		0.0738	0.0738		0.0738	0.0738		1,056.3756	1,056.3756	0.0203	0.0194	1,062.8045
Total		**0.1067**	**0.9122**	**0.3882**	**5.8200e-003**		**0.0738**	**0.0738**		**0.0738**	**0.0738**		**1,056.3756**	**1,056.3756**	**0.0203**	**0.0194**	**1,062.8045**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	1.97957e+007	0.1067	0.9122	0.3882	5.8200e-003		0.0738	0.0738		0.0738	0.0738		1,056.3756	1,056.3756	0.0203	0.0194	1,062.8045
Total		**0.1067**	**0.9122**	**0.3882**	**5.8200e-003**		**0.0738**	**0.0738**		**0.0738**	**0.0738**		**1,056.3756**	**1,056.3756**	**0.0203**	**0.0194**	**1,062.8045**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	3.47409e+006	456.9883	0.0457	9.4500e-003	460.8790
Total		**456.9883**	**0.0457**	**9.4500e-003**	**460.8790**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	3.47409e+006	456.9883	0.0457	9.4500e-003	460.8790
Total		**456.9883**	**0.0457**	**9.4500e-003**	**460.8790**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.6478	0.0920	7.6501	3.4300e-003		0.2819	0.2819		0.2819	0.2819		31.4348	60.4037	0.1072	1.1100e-003	63.0006
Unmitigated	4.6478	0.0920	7.6501	3.4300e-003		0.2819	0.2819		0.2819	0.2819		31.4348	60.4037	0.1072	1.1100e-003	63.0006

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.5737					0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.1830					0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.7108	0.0224	1.6199	3.1100e-003		0.2483	0.2483		0.2483	0.2483		21.5498	50.5187	0.0978	1.1100e-003	52.9181
Landscaping	0.1803	0.0696	6.0302	3.2000e-004		0.0336	0.0336		0.0336	0.0336		9.8850	9.8850	9.4100e-003	0.0000	10.0826
Total	**4.6478**	**0.0920**	**7.6501**	**3.4300e-003**		**0.2819**	**0.2819**		**0.2819**	**0.2819**		**31.4348**	**60.4037**	**0.1072**	**1.1100e-003**	**63.0006**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.5737					0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.1830					0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.7108	0.0224	1.6199	3.1100e-003		0.2483	0.2483		0.2483	0.2483		21.5498	50.5187	0.0978	1.1100e-003	52.9181
Landscaping	0.1803	0.0696	6.0302	3.2000e-004		0.0336	0.0336		0.0336	0.0336		9.8850	9.8850	9.4100e-003	0.0000	10.0826
Total	**4.6478**	**0.0920**	**7.6501**	**3.4300e-003**		**0.2819**	**0.2819**		**0.2819**	**0.2819**		**31.4348**	**60.4037**	**0.1072**	**1.1100e-003**	**63.0006**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	59.1913	1.7345	0.0417	108.5530
Unmitigated	70.0543	1.7356	0.0420	119.5085

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	53.1005 / 33.4764	70.0543	1.7356	0.0420	119.5085
Total		**70.0543**	**1.7356**	**0.0420**	**119.5085**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	53.1005 / 16.7382	59.1913	1.7345	0.0417	108.5530
Total		**59.1913**	**1.7345**	**0.0417**	**108.5530**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	19.0253	1.1244	0.0000	42.6370
Unmitigated	76.1013	4.4975	0.0000	170.5479

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	374.9	76.1013	4.4975	0.0000	170.5479
Total		**76.1013**	**4.4975**	**0.0000**	**170.5479**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	93.725	19.0253	1.1244	0.0000	42.6370
Total		**19.0253**	**1.1244**	**0.0000**	**42.6370**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Albany General Plan

Bay Area AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	815.00	Dwelling Unit	50.94	815,000.00	2331

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	5			**Operational Year**	2035
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Per PG&E April 2013 GHG emissions factors

Land Use - Condo/Townhome Land Use Subtype

Energy Use - Used historical data

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Water Mitigation - 50% outdoor potable water usage measure in CAP

Waste Mitigation - 75% waste reduction proposed in CAP

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	250.00

tblArchitecturalCoating	EF_Residential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	250.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblProjectCharacteristics	OperationalYear	2014	2035

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day											lb/day				
2016	6.7713	74.9109	61.8845	0.1157	18.2360	3.5858	21.1760	9.9757	3.2989	12.6805		10,471.5416	10,471.5416	1.9450	0.0000	10,512.3862
2017	6.1235	36.5159	57.2299	0.1156	6.1140	1.9357	8.0496	1.6333	1.8150	3.4484		10,189.6732	10,189.6732	0.9334	0.0000	10,209.2735
2018	5.3786	32.4064	52.7847	0.1156	6.1139	1.6390	7.7529	1.6333	1.5381	3.1713		9,920.1674	9,920.1674	0.9005	0.0000	9,939.0781
2019	4.8411	29.3122	49.5119	0.1155	6.1139	1.4215	7.5354	1.6333	1.3341	2.9674		9,666.2775	9,666.2775	0.8721	0.0000	9,684.5921
2020	4.4210	26.3471	46.8570	0.1155	6.1138	1.2387	7.3525	1.6333	1.1625	2.7958		9,377.5515	9,377.5515	0.8496	0.0000	9,395.3923
2021	340.5023	23.5227	44.8544	0.1154	6.1140	1.0720	7.1859	1.6333	1.0058	2.6391		9,289.6417	9,289.6417	0.8318	0.0000	9,307.1093
Total	**368.0379**	**223.0152**	**313.1224**	**0.6933**	**48.8055**	**10.8925**	**59.0523**	**18.1422**	**10.1544**	**27.7025**		**58,914.8530**	**58,914.8530**	**6.3323**	**0.0000**	**59,047.8314**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Year	lb/day										lb/day					
2016	6.7713	74.9109	61.8845	0.1157	8.2996	3.5858	11.2396	4.5138	3.2989	7.2187		10,471.5416	10,471.5416	1.9450	0.0000	10,512.3862
2017	6.1235	36.5159	57.2299	0.1156	6.1140	1.9357	8.0496	1.6333	1.8150	3.4484		10,189.6732	10,189.6732	0.9334	0.0000	10,209.2735
2018	5.3786	32.4064	52.7847	0.1156	6.1139	1.6390	7.7529	1.6333	1.5381	3.1713		9,920.1674	9,920.1674	0.9005	0.0000	9,939.0781
2019	4.8411	29.3122	49.5119	0.1155	6.1139	1.4215	7.5354	1.6333	1.3341	2.9674		9,666.2775	9,666.2775	0.8721	0.0000	9,684.5921
2020	4.4210	26.3471	46.8570	0.1155	6.1138	1.2387	7.3525	1.6333	1.1625	2.7958		9,377.5515	9,377.5515	0.8496	0.0000	9,395.3923
2021	340.5023	23.5227	44.8544	0.1154	6.1140	1.0720	7.1859	1.6333	1.0058	2.6391		9,289.6417	9,289.6417	0.8318	0.0000	9,307.1093
Total	**368.0379**	**223.0152**	**313.1224**	**0.6933**	**38.8691**	**10.8925**	**49.1159**	**12.6803**	**10.1544**	**22.2406**		**58,914.8530**	**58,914.8530**	**6.3323**	**0.0000**	**59,047.8314**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**20.36**	**0.00**	**16.83**	**30.11**	**0.00**	**19.72**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Area	386.1124	15.9858	1,114.1448	2.4071		163.7691	163.7691		163.7617	163.7617		11,195.4819	33,111.7855	83.2513	0.5717	35,037.2787
Energy	0.5849	4.9981	2.1269	0.0319		0.4041	0.4041		0.4041	0.4041		6,380.5739	6,380.5739	0.1223	0.1170	6,419.4050
Mobile	10.7212	19.1300	98.4788	0.4104	27.6853	0.4980	28.1833	7.4066	0.4597	7.8663		28,900.5934	28,900.5934	0.7182		28,915.6762
Total	**397.4185**	**40.1139**	**1,214.7504**	**2.8495**	**27.6853**	**164.6712**	**192.3565**	**7.4066**	**164.6255**	**172.0322**		**46,476.6492**	**68,392.9528**	**84.0919**	**0.6886**	**70,372.3599**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	386.1124	15.9858	1,114.1448	2.4071		163.7691	163.7691		163.7617	163.7617		11,195.4819	33,111.7855	83.2513	0.5717	35,037.2787
Energy	0.5849	4.9981	2.1269	0.0319		0.4041	0.4041		0.4041	0.4041		6,380.5739	6,380.5739	0.1223	0.1170	6,419.4050
Mobile	10.7212	19.1300	98.4788	0.4104	27.6853	0.4980	28.1833	7.4066	0.4597	7.8663		28,900.5934	28,900.5934	0.7182		28,915.6762
Total	**397.4185**	**40.1139**	**1,214.7504**	**2.8495**	**27.6853**	**164.6712**	**192.3565**	**7.4066**	**164.6255**	**172.0322**		**46,476.6492**	**68,392.9528**	**84.0919**	**0.6886**	**70,372.3599**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	4/7/2016	5	70	
2	Site Preparation	Site Preparation	4/8/2016	6/2/2016	5	40	
3	Grading	Grading	6/3/2016	11/3/2016	5	110	
4	Building Construction	Building Construction	11/4/2016	2/4/2021	5	1110	
5	Paving	Paving	2/5/2021	5/20/2021	5	75	
6	Architectural Coating	Architectural Coating	5/21/2021	9/2/2021	5	75	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 275

Acres of Paving: 0

Residential Indoor: 1,650,375; Residential Outdoor: 550,125; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Grading	8	20.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	587.00	87.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	117.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.2876	45.6559	35.0303	0.0399		2.2921	2.2921		2.1365	2.1365		4,089.2841	4,089.2841	1.1121		4,112.6374
Total	**4.2876**	**45.6559**	**35.0303**	**0.0399**		**2.2921**	**2.2921**		**2.1365**	**2.1365**		**4,089.2841**	**4,089.2841**	**1.1121**		**4,112.6374**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0609	0.0729	0.8514	1.7400e-003	0.1415	1.1400e-003	0.1426	0.0375	1.0400e-003	0.0386		146.2084	146.2084	7.5000e-003		146.3659
Total	**0.0609**	**0.0729**	**0.8514**	**1.7400e-003**	**0.1415**	**1.1400e-003**	**0.1426**	**0.0375**	**1.0400e-003**	**0.0386**		**146.2084**	**146.2084**	**7.5000e-003**		**146.3659**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.2876	45.6559	35.0303	0.0399		2.2921	2.2921		2.1365	2.1365		4,089.2841	4,089.2841	1.1121		4,112.6374
Total	**4.2876**	**45.6559**	**35.0303**	**0.0399**		**2.2921**	**2.2921**		**2.1365**	**2.1365**		**4,089.2841**	**4,089.2841**	**1.1121**		**4,112.6374**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0609	0.0729	0.8514	1.7400e-003	0.1415	1.1400e-003	0.1426	0.0375	1.0400e-003	0.0386		146.2084	146.2084	7.5000e-003		146.3659
Total	**0.0609**	**0.0729**	**0.8514**	**1.7400e-003**	**0.1415**	**1.1400e-003**	**0.1426**	**0.0375**	**1.0400e-003**	**0.0386**		**146.2084**	**146.2084**	**7.5000e-003**		**146.3659**

3.3 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036		4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**18.0663**	**2.9387**	**21.0049**	**9.9307**	**2.7036**	**12.6343**		**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0730	0.0874	1.0217	2.0900e-003	0.1698	1.3600e-003	0.1711	0.0450	1.2500e-003	0.0463		175.4501	175.4501	9.0000e-003		175.6391
Total	**0.0730**	**0.0874**	**1.0217**	**2.0900e-003**	**0.1698**	**1.3600e-003**	**0.1711**	**0.0450**	**1.2500e-003**	**0.0463**		**175.4501**	**175.4501**	**9.0000e-003**		**175.6391**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036		4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**8.1298**	**2.9387**	**11.0685**	**4.4688**	**2.7036**	**7.1724**		**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0730	0.0874	1.0217	2.0900e-003	0.1698	1.3600e-003	0.1711	0.0450	1.2500e-003	0.0463		175.4501	175.4501	9.0000e-003		175.6391
Total	**0.0730**	**0.0874**	**1.0217**	**2.0900e-003**	**0.1698**	**1.3600e-003**	**0.1711**	**0.0450**	**1.2500e-003**	**0.0463**		**175.4501**	**175.4501**	**9.0000e-003**		**175.6391**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000

Off-Road	6.4795	74.8137	49.1374	0.0617		3.5842	3.5842		3.2975	3.2975		6,414.9807	6,414.9807	1.9350		6,455.6154
Total	**6.4795**	**74.8137**	**49.1374**	**0.0617**	**8.6733**	**3.5842**	**12.2576**	**3.5965**	**3.2975**	**6.8940**		**6,414.9807**	**6,414.9807**	**1.9350**		**6,455.6154**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0811	0.0971	1.1352	2.3200e-003	0.1886	1.5200e-003	0.1901	0.0500	1.3900e-003	0.0514		194.9446	194.9446	0.0100		195.1545
Total	**0.0811**	**0.0971**	**1.1352**	**2.3200e-003**	**0.1886**	**1.5200e-003**	**0.1901**	**0.0500**	**1.3900e-003**	**0.0514**		**194.9446**	**194.9446**	**0.0100**		**195.1545**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.9030	0.0000	3.9030	1.6184	0.0000	1.6184			0.0000			0.0000
Off-Road	6.4795	74.8137	49.1374	0.0617		3.5842	3.5842		3.2975	3.2975		6,414.9807	6,414.9807	1.9350		6,455.6154
Total	**6.4795**	**74.8137**	**49.1374**	**0.0617**	**3.9030**	**3.5842**	**7.4872**	**1.6184**	**3.2975**	**4.9159**		**6,414.9807**	**6,414.9807**	**1.9350**		**6,455.6154**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0811	0.0971	1.1352	2.3200e-003	0.1886	1.5200e-003	0.1901	0.0500	1.3900e-003	0.0514		194.9446	194.9446	0.0100		195.1545
Total	**0.0811**	**0.0971**	**1.1352**	**2.3200e-003**	**0.1886**	**1.5200e-003**	**0.1901**	**0.0500**	**1.3900e-003**	**0.0514**		**194.9446**	**194.9446**	**0.0100**		**195.1545**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**		**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9836	8.4312	10.0597	0.0208	0.5784	0.1295	0.7078	0.1651	0.1190	0.2841		2,080.6317	2,080.6317	0.0165		2,080.9779
Worker	2.3815	2.8511	33.3182	0.0681	5.5356	0.0445	5.5801	1.4682	0.0408	1.5090		5,721.6235	5,721.6235	0.2934		5,727.7854
Total	**3.3651**	**11.2823**	**43.3779**	**0.0889**	**6.1140**	**0.1740**	**6.2879**	**1.6333**	**0.1598**	**1.7931**		**7,802.2552**	**7,802.2552**	**0.3099**		**7,808.7634**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**		**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9836	8.4312	10.0597	0.0208	0.5784	0.1295	0.7078	0.1651	0.1190	0.2841		2,080.6317	2,080.6317	0.0165		2,080.9779
Worker	2.3815	2.8511	33.3182	0.0681	5.5356	0.0445	5.5801	1.4682	0.0408	1.5090		5,721.6235	5,721.6235	0.2934		5,727.7854
Total	**3.3651**	**11.2823**	**43.3779**	**0.0889**	**6.1140**	**0.1740**	**6.2879**	**1.6333**	**0.1598**	**1.7931**		**7,802.2552**	**7,802.2552**	**0.3099**		**7,808.7634**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**		**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8944	7.5577	9.3177	0.0207	0.5784	0.1120	0.6904	0.1652	0.1030	0.2681		2,045.5385	2,045.5385	0.0156		2,045.8668
Worker	2.1267	2.5525	29.7831	0.0681	5.5356	0.0424	5.5780	1.4682	0.0391	1.5072		5,504.3294	5,504.3294	0.2680		5,509.9577
Total	**3.0211**	**10.1102**	**39.1008**	**0.0888**	**6.1140**	**0.1544**	**6.2684**	**1.6333**	**0.1420**	**1.7754**		**7,549.8679**	**7,549.8679**	**0.2836**		**7,555.8245**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**		**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8944	7.5577	9.3177	0.0207	0.5784	0.1120	0.6904	0.1652	0.1030	0.2681		2,045.5385	2,045.5385	0.0156		2,045.8668
Worker	2.1267	2.5525	29.7831	0.0681	5.5356	0.0424	5.5780	1.4682	0.0391	1.5072		5,504.3294	5,504.3294	0.2680		5,509.9577
Total	**3.0211**	**10.1102**	**39.1008**	**0.0888**	**6.1140**	**0.1544**	**6.2684**	**1.6333**	**0.1420**	**1.7754**		**7,549.8679**	**7,549.8679**	**0.2836**		**7,555.8245**

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day				
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**		**2,609.9390**	**2,609.9390**	**0.6387**		**2,623.3517**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8005	6.8475	8.4812	0.0207	0.5783	0.1037	0.6820	0.1651	0.0954	0.2605		2,009.6133	2,009.6133	0.0154		2,009.9356
Worker	1.9095	2.2981	26.7708	0.0681	5.5356	0.0410	5.5766	1.4682	0.0379	1.5061		5,300.6152	5,300.6152	0.2465		5,305.7908
Total	**2.7100**	**9.1456**	**35.2521**	**0.0888**	**6.1139**	**0.1447**	**6.2586**	**1.6333**	**0.1333**	**1.7666**		**7,310.2285**	**7,310.2285**	**0.2618**		**7,315.7264**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9389	2,609.9389	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**		**2,609.9389**	**2,609.9389**	**0.6387**		**2,623.3517**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8005	6.8475	8.4812	0.0207	0.5783	0.1037	0.6820	0.1651	0.0954	0.2605		2,009.6133	2,009.6133	0.0154		2,009.9356
Worker	1.9095	2.2981	26.7708	0.0681	5.5356	0.0410	5.5766	1.4682	0.0379	1.5061		5,300.6152	5,300.6152	0.2465		5,305.7908
Total	**2.7100**	**9.1456**	**35.2521**	**0.0888**	**6.1139**	**0.1447**	**6.2586**	**1.6333**	**0.1333**	**1.7666**		**7,310.2285**	**7,310.2285**	**0.2618**		**7,315.7264**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**		**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7429	6.2537	7.9860	0.0206	0.5783	0.0964	0.6747	0.1651	0.0887	0.2538		1,975.0560	1,975.0560	0.0150		1,975.3707
Worker	1.7467	2.0935	24.4056	0.0681	5.5356	0.0401	5.5757	1.4682	0.0372	1.5053		5,110.4598	5,110.4598	0.2292		5,115.2735
Total	**2.4895**	**8.3472**	**32.3916**	**0.0887**	**6.1139**	**0.1365**	**6.2503**	**1.6333**	**0.1258**	**1.7591**		**7,085.5158**	**7,085.5158**	**0.2442**		**7,090.6442**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**		**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7429	6.2537	7.9860	0.0206	0.5783	0.0964	0.6747	0.1651	0.0887	0.2538		1,975.0560	1,975.0560	0.0150		1,975.3707
Worker	1.7467	2.0935	24.4056	0.0681	5.5356	0.0401	5.5757	1.4682	0.0372	1.5053		5,110.4598	5,110.4598	0.2292		5,115.2735
Total	**2.4895**	**8.3472**	**32.3916**	**0.0887**	**6.1139**	**0.1365**	**6.2503**	**1.6333**	**0.1258**	**1.7591**		**7,085.5158**	**7,085.5158**	**0.2442**		**7,090.6442**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465		2,542.4799	2,542.4799	0.6194		2,555.4880
Total	**2.1113**	**19.0839**	**16.8084**	**0.0268**		**1.1128**	**1.1128**		**1.0465**	**1.0465**		**2,542.4799**	**2,542.4799**	**0.6194**		**2,555.4880**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6834	5.3345	7.5034	0.0206	0.5782	0.0862	0.6644	0.1651	0.0793	0.2444		1,929.6553	1,929.6553	0.0145		1,929.9603
Worker	1.6264	1.9288	22.5452	0.0681	5.5356	0.0396	5.5752	1.4682	0.0367	1.5049		4,905.4163	4,905.4163	0.2156		4,909.9440
Total	**2.3098**	**7.2632**	**30.0486**	**0.0887**	**6.1138**	**0.1258**	**6.2396**	**1.6333**	**0.1160**	**1.7493**		**6,835.0716**	**6,835.0716**	**0.2301**		**6,839.9043**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465		2,542.4799	2,542.4799	0.6194		2,555.4880
Total	**2.1113**	**19.0839**	**16.8084**	**0.0268**		**1.1128**	**1.1128**		**1.0465**	**1.0465**		**2,542.4799**	**2,542.4799**	**0.6194**		**2,555.4880**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6834	5.3345	7.5034	0.0206	0.5782	0.0862	0.6644	0.1651	0.0793	0.2444		1,929.6553	1,929.6553	0.0145		1,929.9603
Worker	1.6264	1.9288	22.5452	0.0681	5.5356	0.0396	5.5752	1.4682	0.0367	1.5049		4,905.4163	4,905.4163	0.2156		4,909.9440
Total	**2.3098**	**7.2632**	**30.0486**	**0.0887**	**6.1138**	**0.1258**	**6.2396**	**1.6333**	**0.1160**	**1.7493**		**6,835.0716**	**6,835.0716**	**0.2301**		**6,839.9043**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979		2,542.7817	2,542.7817	0.6126		2,555.6462
Total	**1.8931**	**17.3403**	**16.5376**	**0.0268**		**0.9549**	**0.9549**		**0.8979**	**0.8979**		**2,542.7817**	**2,542.7817**	**0.6126**		**2,555.6462**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6527	4.3856	7.2159	0.0206	0.5784	0.0776	0.6560	0.1651	0.0714	0.2365		1,927.3241	1,927.3241	0.0145		1,927.6285
Worker	1.5359	1.7969	21.1009	0.0681	5.5356	0.0395	5.5750	1.4682	0.0366	1.5048		4,819.5359	4,819.5359	0.2047		4,823.8346
Total	**2.1886**	**6.1824**	**28.3168**	**0.0886**	**6.1140**	**0.1171**	**6.2310**	**1.6333**	**0.1080**	**1.7413**		**6,746.8600**	**6,746.8600**	**0.2192**		**6,751.4631**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979		2,542.7817	2,542.7817	0.6126		2,555.6462
Total	**1.8931**	**17.3403**	**16.5376**	**0.0268**		**0.9549**	**0.9549**		**0.8979**	**0.8979**		**2,542.7817**	**2,542.7817**	**0.6126**		**2,555.6462**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6527	4.3856	7.2159	0.0206	0.5784	0.0776	0.6560	0.1651	0.0714	0.2365		1,927.3241	1,927.3241	0.0145		1,927.6285
Worker	1.5359	1.7969	21.1009	0.0681	5.5356	0.0395	5.5750	1.4682	0.0366	1.5048		4,819.5359	4,819.5359	0.2047		4,823.8346
Total	**2.1886**	**6.1824**	**28.3168**	**0.0886**	**6.1140**	**0.1171**	**6.2310**	**1.6333**	**0.1080**	**1.7413**		**6,746.8600**	**6,746.8600**	**0.2192**		**6,751.4631**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2308	12.6607	14.3528	0.0223		0.6652	0.6652		0.6120	0.6120		2,160.2530	2,160.2530	0.6987		2,174.9250
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2308**	**12.6607**	**14.3528**	**0.0223**		**0.6652**	**0.6652**		**0.6120**	**0.6120**		**2,160.2530**	**2,160.2530**	**0.6987**		**2,174.9250**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0393	0.0459	0.5392	1.7400e-003	0.1415	1.0100e-003	0.1425	0.0375	9.3000e-004	0.0385		123.1568	123.1568	5.2300e-003		123.2666
Total	**0.0393**	**0.0459**	**0.5392**	**1.7400e-003**	**0.1415**	**1.0100e-003**	**0.1425**	**0.0375**	**9.3000e-004**	**0.0385**		**123.1568**	**123.1568**	**5.2300e-003**		**123.2666**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2308	12.6607	14.3528	0.0223		0.6652	0.6652		0.6120	0.6120		2,160.2530	2,160.2530	0.6987		2,174.9250
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2308**	**12.6607**	**14.3528**	**0.0223**		**0.6652**	**0.6652**		**0.6120**	**0.6120**		**2,160.2530**	**2,160.2530**	**0.6987**		**2,174.9250**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0393	0.0459	0.5392	1.7400e-003	0.1415	1.0100e-003	0.1425	0.0375	9.3000e-004	0.0385		123.1568	123.1568	5.2300e-003		123.2666
Total	**0.0393**	**0.0459**	**0.5392**	**1.7400e-003**	**0.1415**	**1.0100e-003**	**0.1425**	**0.0375**	**9.3000e-004**	**0.0385**		**123.1568**	**123.1568**	**5.2300e-003**		**123.2666**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	339.9773					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.8537
Total	**340.1962**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.8537**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3061	0.3582	4.2058	0.0136	1.1034	7.8600e-003	1.1112	0.2926	7.2900e-003	0.2999		960.6230	960.6230	0.0408		961.4798
Total	**0.3061**	**0.3582**	**4.2058**	**0.0136**	**1.1034**	**7.8600e-003**	**1.1112**	**0.2926**	**7.2900e-003**	**0.2999**		**960.6230**	**960.6230**	**0.0408**		**961.4798**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	339.9773					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.8537
Total	**340.1962**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.8537**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3061	0.3582	4.2058	0.0136	1.1034	7.8600e-003	1.1112	0.2926	7.2900e-003	0.2999		960.6230	960.6230	0.0408		961.4798
Total	**0.3061**	**0.3582**	**4.2058**	**0.0136**	**1.1034**	**7.8600e-003**	**1.1112**	**0.2926**	**7.2900e-003**	**0.2999**		**960.6230**	**960.6230**	**0.0408**		**961.4798**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10.7212	19.1300	98.4788	0.4104	27.6853	0.4980	28.1833	7.4066	0.4597	7.8663		28,900.5934	28,900.5934	0.7182		28,915.6762
Unmitigated	10.7212	19.1300	98.4788	0.4104	27.6853	0.4980	28.1833	7.4066	0.4597	7.8663		28,900.5934	28,900.5934	0.7182		28,915.6762

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	5,370.85	5,835.40	4947.05	12,002,699	12,002,699
Total	5,370.85	5,835.40	4,947.05	12,002,699	12,002,699

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.544287	0.062956	0.171756	0.119283	0.033776	0.004850	0.017325	0.031479	0.002293	0.003006	0.006870	0.000528	0.001591

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.5849	4.9981	2.1269	0.0319		0.4041	0.4041		0.4041	0.4041		6,380.5739	6,380.5739	0.1223	0.1170	6,419.4050
NaturalGas Unmitigated	0.5849	4.9981	2.1269	0.0319		0.4041	0.4041		0.4041	0.4041		6,380.5739	6,380.5739	0.1223	0.1170	6,419.4050

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	54234.9	0.5849	4.9981	2.1269	0.0319		0.4041	0.4041		0.4041	0.4041		6,380.5739	6,380.5739	0.1223	0.1170	6,419.4050
Total		**0.5849**	**4.9981**	**2.1269**	**0.0319**		**0.4041**	**0.4041**		**0.4041**	**0.4041**		**6,380.5739**	**6,380.5739**	**0.1223**	**0.1170**	**6,419.4050**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	54.2349	0.5849	4.9981	2.1269	0.0319		0.4041	0.4041		0.4041	0.4041		6,380.5739	6,380.5739	0.1223	0.1170	6,419.4050
Total		**0.5849**	**4.9981**	**2.1269**	**0.0319**		**0.4041**	**0.4041**		**0.4041**	**0.4041**		**6,380.5739**	**6,380.5739**	**0.1223**	**0.1170**	**6,419.4050**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	386.1124	15.9858	1,114.1448	2.4071		163.7691	163.7691		163.7617	163.7617		11,195.4819	33,111.7855	83.2513	0.5717	35,037.2787
Unmitigated	386.1124	15.9858	1,114.1448	2.4071		163.7691	163.7691		163.7617	163.7617		11,195.4819	33,111.7855	83.2513	0.5717	35,037.2787

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.1436					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Consumer Products	17.4410					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	363.5244	15.2128	1,047.1426	2.4036		163.3963	163.3963		163.3889	163.3889		11,074.4118	32,990.7154	83.1361	0.5717	34,913.7883
Landscaping	2.0033	0.7730	67.0022	3.5500e-003		0.3729	0.3729		0.3729	0.3729		121.0701	121.0701	0.1153		123.4904
Total	**386.1124**	**15.9858**	**1,114.1448**	**2.4071**		**163.7691**	**163.7691**		**163.7617**	**163.7617**		**11,195.4819**	**33,111.7855**	**83.2513**	**0.5717**	**35,037.2787**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.1436					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	17.4410					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	363.5244	15.2128	1,047.1426	2.4036		163.3963	163.3963		163.3889	163.3889		11,074.4118	32,990.7154	83.1361	0.5717	34,913.7883
Landscaping	2.0033	0.7730	67.0022	3.5500e-003		0.3729	0.3729		0.3729	0.3729		121.0701	121.0701	0.1153		123.4904
Total	**386.1124**	**15.9858**	**1,114.1448**	**2.4071**		**163.7691**	**163.7691**		**163.7617**	**163.7617**		**11,195.4819**	**33,111.7855**	**83.2513**	**0.5717**	**35,037.2787**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Albany General Plan

Bay Area AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	815.00	Dwelling Unit	50.94	815,000.00	2331

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	5			**Operational Year**	2035
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Per PG&E April 2013 GHG emissions factors

Land Use - Condo/Townhome Land Use Subtype

Energy Use - Used historical data

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Water Mitigation - 50% outdoor potable water usage measure in CAP

Waste Mitigation - 75% waste reduction proposed in CAP

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	250.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	250.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblProjectCharacteristics	OperationalYear	2014	2035

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	7.0485	74.9339	66.6822	0.1104	18.2360	3.5858	21.1760	9.9757	3.2989	12.6805		10,013.2504	10,013.2504	1.9450	0.0000	10,054.0951
2017	6.3477	37.4745	61.7672	0.1103	6.1140	1.9368	8.0508	1.6333	1.8161	3.4494		9,747.7757	9,747.7757	0.9338	0.0000	9,767.3846
2018	5.5455	33.2694	57.1472	0.1102	6.1139	1.6400	7.7539	1.6333	1.5390	3.1723		9,493.7686	9,493.7686	0.9009	0.0000	9,512.6882
2019	4.9771	30.0966	53.7177	0.1101	6.1139	1.4225	7.5363	1.6333	1.3350	2.9682		9,254.4114	9,254.4114	0.8726	0.0000	9,272.7350
2020	4.5313	27.0469	50.9812	0.1101	6.1138	1.2395	7.3533	1.6333	1.1632	2.7965		8,981.5088	8,981.5088	0.8500	0.0000	8,999.3589
2021	340.4953	24.1492	48.8802	0.1100	6.1140	1.0726	7.1866	1.6333	1.0065	2.6398		8,899.9067	8,899.9067	0.8323	0.0000	8,917.3840
Total	**368.9454**	**226.9706**	**339.1757**	**0.6610**	**48.8055**	**10.8971**	**59.0569**	**18.1422**	**10.1586**	**27.7067**		**56,390.6216**	**56,390.6216**	**6.3345**	**0.0000**	**56,523.6457**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					

2016	7.0485	74.9339	66.6822	0.1104	8.2996	3.5858	11.2396	4.5138	3.2989	7.2187		10,013.2504	10,013.2504	1.9450	0.0000	10,054.0951
2017	6.3477	37.4745	61.7672	0.1103	6.1140	1.9368	8.0508	1.6333	1.8161	3.4494		9,747.7757	9,747.7757	0.9338	0.0000	9,767.3846
2018	5.5455	33.2694	57.1472	0.1102	6.1139	1.6400	7.7539	1.6333	1.5390	3.1723		9,493.7686	9,493.7686	0.9009	0.0000	9,512.6882
2019	4.9771	30.0966	53.7177	0.1101	6.1139	1.4225	7.5363	1.6333	1.3350	2.9682		9,254.4114	9,254.4114	0.8726	0.0000	9,272.7350
2020	4.5313	27.0469	50.9812	0.1101	6.1138	1.2395	7.3533	1.6333	1.1632	2.7965		8,981.5088	8,981.5088	0.8500	0.0000	8,999.3589
2021	340.4953	24.1492	48.8802	0.1100	6.1140	1.0726	7.1866	1.6333	1.0065	2.6398		8,899.9067	8,899.9067	0.8323	0.0000	8,917.3840
Total	**368.9454**	**226.9706**	**339.1757**	**0.6610**	**38.8691**	**10.8971**	**49.1205**	**12.6803**	**10.1586**	**22.2448**		**56,390.6216**	**56,390.6216**	**6.3345**	**0.0000**	**56,523.6457**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**20.36**	**0.00**	**16.83**	**30.11**	**0.00**	**19.71**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	386.1124	15.9858	1,114.1448	2.4071		163.7691	163.7691		163.7617	163.7617		11,195.4819	33,111.7855	83.2513	0.5717	35,037.2787
Energy	0.5849	4.9981	2.1269	0.0319		0.4041	0.4041		0.4041	0.4041		6,380.5739	6,380.5739	0.1223	0.1170	6,419.4050
Mobile	11.1699	21.0495	117.0220	0.3857	27.6853	0.5001	28.1854	7.4066	0.4616	7.8683		27,282.9319	27,282.9319	0.7202		27,298.0557
Total	**397.8672**	**42.0334**	**1,233.2936**	**2.8247**	**27.6853**	**164.6733**	**192.3586**	**7.4066**	**164.6275**	**172.0341**		**44,858.9877**	**66,775.2913**	**84.0938**	**0.6886**	**68,754.7394**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	386.1124	15.9858	1,114.1448	2.4071		163.7691	163.7691		163.7617	163.7617		11,195.4819	33,111.7855	83.2513	0.5717	35,037.2787
Energy	0.5849	4.9981	2.1269	0.0319		0.4041	0.4041		0.4041	0.4041		6,380.5739	6,380.5739	0.1223	0.1170	6,419.4050
Mobile	11.1699	21.0495	117.0220	0.3857	27.6853	0.5001	28.1854	7.4066	0.4616	7.8683		27,282.9319	27,282.9319	0.7202		27,298.0557
Total	**397.8672**	**42.0334**	**1,233.2936**	**2.8247**	**27.6853**	**164.6733**	**192.3586**	**7.4066**	**164.6275**	**172.0341**		**44,858.9877**	**66,775.2913**	**84.0938**	**0.6886**	**68,754.7394**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	4/7/2016	5	70	
2	Site Preparation	Site Preparation	4/8/2016	6/2/2016	5	40	
3	Grading	Grading	6/3/2016	11/3/2016	5	110	
4	Building Construction	Building Construction	11/4/2016	2/4/2021	5	1110	
5	Paving	Paving	2/5/2021	5/20/2021	5	75	
6	Architectural Coating	Architectural Coating	5/21/2021	9/2/2021	5	75	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 275

Acres of Paving: 0

Residential Indoor: 1,650,375; Residential Outdoor: 550,125; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	587.00	87.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	117.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.2876	45.6559	35.0303	0.0399		2.2921	2.2921		2.1365	2.1365		4,089.2841	4,089.2841	1.1121		4,112.6374
Total	**4.2876**	**45.6559**	**35.0303**	**0.0399**		**2.2921**	**2.2921**		**2.1365**	**2.1365**		**4,089.2841**	**4,089.2841**	**1.1121**		**4,112.6374**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Worker	0.0612	0.0901	0.8320	1.6100e-003	0.1415	1.1400e-003	0.1426	0.0375	1.0400e-003	0.0386		134.9040	134.9040	7.5000e-003		135.0615
Total	**0.0612**	**0.0901**	**0.8320**	**1.6100e-003**	**0.1415**	**1.1400e-003**	**0.1426**	**0.0375**	**1.0400e-003**	**0.0386**		**134.9040**	**134.9040**	**7.5000e-003**		**135.0615**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.2876	45.6559	35.0303	0.0399		2.2921	2.2921		2.1365	2.1365		4,089.2841	4,089.2841	1.1121		4,112.6374
Total	**4.2876**	**45.6559**	**35.0303**	**0.0399**		**2.2921**	**2.2921**		**2.1365**	**2.1365**		**4,089.2841**	**4,089.2841**	**1.1121**		**4,112.6374**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0612	0.0901	0.8320	1.6100e-003	0.1415	1.1400e-003	0.1426	0.0375	1.0400e-003	0.0386		134.9040	134.9040	7.5000e-003		135.0615
Total	**0.0612**	**0.0901**	**0.8320**	**1.6100e-003**	**0.1415**	**1.1400e-003**	**0.1426**	**0.0375**	**1.0400e-003**	**0.0386**		**134.9040**	**134.9040**	**7.5000e-003**		**135.0615**

3.3 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036		4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**18.0663**	**2.9387**	**21.0049**	**9.9307**	**2.7036**	**12.6343**		**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0734	0.1082	0.9984	1.9300e-003	0.1698	1.3600e-003	0.1711	0.0450	1.2500e-003	0.0463		161.8848	161.8848	9.0000e-003		162.0737
Total	**0.0734**	**0.1082**	**0.9984**	**1.9300e-003**	**0.1698**	**1.3600e-003**	**0.1711**	**0.0450**	**1.2500e-003**	**0.0463**		**161.8848**	**161.8848**	**9.0000e-003**		**162.0737**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036		4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**8.1298**	**2.9387**	**11.0685**	**4.4688**	**2.7036**	**7.1724**		**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0734	0.1082	0.9984	1.9300e-003	0.1698	1.3600e-003	0.1711	0.0450	1.2500e-003	0.0463		161.8848	161.8848	9.0000e-003		162.0737
Total	**0.0734**	**0.1082**	**0.9984**	**1.9300e-003**	**0.1698**	**1.3600e-003**	**0.1711**	**0.0450**	**1.2500e-003**	**0.0463**		**161.8848**	**161.8848**	**9.0000e-003**		**162.0737**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.4795	74.8137	49.1374	0.0617		3.5842	3.5842		3.2975	3.2975		6,414.9807	6,414.9807	1.9350		6,455.6154
Total	**6.4795**	**74.8137**	**49.1374**	**0.0617**	**8.6733**	**3.5842**	**12.2576**	**3.5965**	**3.2975**	**6.8940**		**6,414.9807**	**6,414.9807**	**1.9350**		**6,455.6154**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0816	0.1202	1.1094	2.1400e-003	0.1886	1.5200e-003	0.1901	0.0500	1.3900e-003	0.0514		179.8720	179.8720	0.0100		180.0819
Total	**0.0816**	**0.1202**	**1.1094**	**2.1400e-003**	**0.1886**	**1.5200e-003**	**0.1901**	**0.0500**	**1.3900e-003**	**0.0514**		**179.8720**	**179.8720**	**0.0100**		**180.0819**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.9030	0.0000	3.9030	1.6184	0.0000	1.6184			0.0000			0.0000
Off-Road	6.4795	74.8137	49.1374	0.0617		3.5842	3.5842		3.2975	3.2975		6,414.9807	6,414.9807	1.9350		6,455.6154
Total	**6.4795**	**74.8137**	**49.1374**	**0.0617**	**3.9030**	**3.5842**	**7.4872**	**1.6184**	**3.2975**	**4.9159**		**6,414.9807**	**6,414.9807**	**1.9350**		**6,455.6154**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0816	0.1202	1.1094	2.1400e-003	0.1886	1.5200e-003	0.1901	0.0500	1.3900e-003	0.0514		179.8720	179.8720	0.0100		180.0819
Total	**0.0816**	**0.1202**	**1.1094**	**2.1400e-003**	**0.1886**	**1.5200e-003**	**0.1901**	**0.0500**	**1.3900e-003**	**0.0514**		**179.8720**	**179.8720**	**0.0100**		**180.0819**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**		**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.2482	8.8280	15.6153	0.0207	0.5784	0.1308	0.7092	0.1651	0.1203	0.2854		2,064.7215	2,064.7215	0.0169		2,065.0762
Worker	2.3941	3.5273	32.5603	0.0629	5.5356	0.0445	5.5801	1.4682	0.0408	1.5090		5,279.2426	5,279.2426	0.2934		5,285.4046
Total	**3.6423**	**12.3553**	**48.1756**	**0.0836**	**6.1140**	**0.1753**	**6.2893**	**1.6333**	**0.1611**	**1.7944**		**7,343.9641**	**7,343.9641**	**0.3103**		**7,350.4808**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**		**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.2482	8.8280	15.6153	0.0207	0.5784	0.1308	0.7092	0.1651	0.1203	0.2854		2,064.7215	2,064.7215	0.0169		2,065.0762
Worker	2.3941	3.5273	32.5603	0.0629	5.5356	0.0445	5.5801	1.4682	0.0408	1.5090		5,279.2426	5,279.2426	0.2934		5,285.4046
Total	**3.6423**	**12.3553**	**48.1756**	**0.0836**	**6.1140**	**0.1753**	**6.2893**	**1.6333**	**0.1611**	**1.7944**		**7,343.9641**	**7,343.9641**	**0.3103**		**7,350.4808**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**		**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1263	7.9100	14.7845	0.0207	0.5784	0.1132	0.6916	0.1652	0.1040	0.2692		2,029.8467	2,029.8467	0.0160		2,030.1837
Worker	2.1190	3.1589	28.8535	0.0628	5.5356	0.0424	5.5780	1.4682	0.0391	1.5072		5,078.1237	5,078.1237	0.2680		5,083.7520
Total	**3.2453**	**11.0689**	**43.6381**	**0.0835**	**6.1140**	**0.1556**	**6.2696**	**1.6333**	**0.1431**	**1.7764**		**7,107.9704**	**7,107.9704**	**0.2841**		**7,113.9356**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**		**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1263	7.9100	14.7845	0.0207	0.5784	0.1132	0.6916	0.1652	0.1040	0.2692		2,029.8467	2,029.8467	0.0160		2,030.1837
Worker	2.1190	3.1589	28.8535	0.0628	5.5356	0.0424	5.5780	1.4682	0.0391	1.5072		5,078.1237	5,078.1237	0.2680		5,083.7520
Total	**3.2453**	**11.0689**	**43.6381**	**0.0835**	**6.1140**	**0.1556**	**6.2696**	**1.6333**	**0.1431**	**1.7764**		**7,107.9704**	**7,107.9704**	**0.2841**		**7,113.9356**

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**		**2,609.9390**	**2,609.9390**	**0.6387**		**2,623.3517**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9912	7.1635	13.9096	0.0206	0.5783	0.1048	0.6831	0.1651	0.0964	0.2615		1,994.1531	1,994.1531	0.0158		1,994.4843
Worker	1.8856	2.8451	25.7050	0.0628	5.5356	0.0410	5.5766	1.4682	0.0379	1.5061		4,889.6766	4,889.6766	0.2465		4,894.8522
Total	**2.8768**	**10.0086**	**39.6146**	**0.0834**	**6.1139**	**0.1457**	**6.2596**	**1.6333**	**0.1342**	**1.7675**		**6,883.8297**	**6,883.8297**	**0.2622**		**6,889.3365**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9389	2,609.9389	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**		**2,609.9389**	**2,609.9389**	**0.6387**		**2,623.3517**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9912	7.1635	13.9096	0.0206	0.5783	0.1048	0.6831	0.1651	0.0964	0.2615		1,994.1531	1,994.1531	0.0158		1,994.4843
Worker	1.8856	2.8451	25.7050	0.0628	5.5356	0.0410	5.5766	1.4682	0.0379	1.5061		4,889.6766	4,889.6766	0.2465		4,894.8522
Total	**2.8768**	**10.0086**	**39.6146**	**0.0834**	**6.1139**	**0.1457**	**6.2596**	**1.6333**	**0.1342**	**1.7675**		**6,883.8297**	**6,883.8297**	**0.2622**		**6,889.3365**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**		**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9109	6.5394	13.3335	0.0206	0.5783	0.0973	0.6756	0.1651	0.0895	0.2546		1,959.8282	1,959.8282	0.0154		1,960.1519
Worker	1.7146	2.5922	23.2638	0.0628	5.5356	0.0401	5.5757	1.4682	0.0372	1.5053		4,713.8215	4,713.8215	0.2292		4,718.6352

Total	**2.6255**	**9.1316**	**36.5973**	**0.0833**	**6.1139**	**0.1374**	**6.2513**	**1.6333**	**0.1267**	**1.7600**		**6,673.6496**	**6,673.6496**	**0.2446**		**6,678.7871**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**		**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9109	6.5394	13.3335	0.0206	0.5783	0.0973	0.6756	0.1651	0.0895	0.2546		1,959.8282	1,959.8282	0.0154		1,960.1519
Worker	1.7146	2.5922	23.2638	0.0628	5.5356	0.0401	5.5757	1.4682	0.0372	1.5053		4,713.8215	4,713.8215	0.2292		4,718.6352
Total	**2.6255**	**9.1316**	**36.5973**	**0.0833**	**6.1139**	**0.1374**	**6.2513**	**1.6333**	**0.1267**	**1.7600**		**6,673.6496**	**6,673.6496**	**0.2446**		**6,678.7871**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465		2,542.4799	2,542.4799	0.6194		2,555.4880
Total	**2.1113**	**19.0839**	**16.8084**	**0.0268**		**1.1128**	**1.1128**		**1.0465**	**1.0465**		**2,542.4799**	**2,542.4799**	**0.6194**		**2,555.4880**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8285	5.5765	12.7812	0.0205	0.5782	0.0870	0.6652	0.1651	0.0800	0.2451		1,914.7288	1,914.7288	0.0150		1,915.0430
Worker	1.5915	2.3865	21.3916	0.0628	5.5356	0.0396	5.5752	1.4682	0.0367	1.5049		4,524.3001	4,524.3001	0.2156		4,528.8278
Total	**2.4200**	**7.9630**	**34.1728**	**0.0833**	**6.1138**	**0.1266**	**6.2404**	**1.6333**	**0.1168**	**1.7500**		**6,439.0289**	**6,439.0289**	**0.2306**		**6,443.8708**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465		2,542.4799	2,542.4799	0.6194		2,555.4880
Total	**2.1113**	**19.0839**	**16.8084**	**0.0268**		**1.1128**	**1.1128**		**1.0465**	**1.0465**		**2,542.4799**	**2,542.4799**	**0.6194**		**2,555.4880**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8285	5.5765	12.7812	0.0205	0.5782	0.0870	0.6652	0.1651	0.0800	0.2451		1,914.7288	1,914.7288	0.0150		1,915.0430
Worker	1.5915	2.3865	21.3916	0.0628	5.5356	0.0396	5.5752	1.4682	0.0367	1.5049		4,524.3001	4,524.3001	0.2156		4,528.8278
Total	**2.4200**	**7.9630**	**34.1728**	**0.0833**	**6.1138**	**0.1266**	**6.2404**	**1.6333**	**0.1168**	**1.7500**		**6,439.0289**	**6,439.0289**	**0.2306**		**6,443.8708**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979		2,542.7817	2,542.7817	0.6126		2,555.6462
Total	**1.8931**	**17.3403**	**16.5376**	**0.0268**		**0.9549**	**0.9549**		**0.8979**	**0.8979**		**2,542.7817**	**2,542.7817**	**0.6126**		**2,555.6462**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7847	4.5869	12.3865	0.0205	0.5784	0.0783	0.6567	0.1651	0.0720	0.2372		1,912.3959	1,912.3959	0.0150		1,912.7101
Worker	1.5010	2.2220	19.9561	0.0627	5.5356	0.0395	5.5750	1.4682	0.0366	1.5048		4,444.7291	4,444.7291	0.2047		4,449.0276
Total	**2.2857**	**6.8089**	**32.3426**	**0.0832**	**6.1140**	**0.1177**	**6.2317**	**1.6333**	**0.1086**	**1.7419**		**6,357.1250**	**6,357.1250**	**0.2197**		**6,361.7378**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979		2,542.7817	2,542.7817	0.6126		2,555.6462
Total	**1.8931**	**17.3403**	**16.5376**	**0.0268**		**0.9549**	**0.9549**		**0.8979**	**0.8979**		**2,542.7817**	**2,542.7817**	**0.6126**		**2,555.6462**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7847	4.5869	12.3865	0.0205	0.5784	0.0783	0.6567	0.1651	0.0720	0.2372		1,912.3959	1,912.3959	0.0150		1,912.7101
Worker	1.5010	2.2220	19.9561	0.0627	5.5356	0.0395	5.5750	1.4682	0.0366	1.5048		4,444.7291	4,444.7291	0.2047		4,449.0278
Total	**2.2857**	**6.8089**	**32.3426**	**0.0832**	**6.1140**	**0.1177**	**6.2317**	**1.6333**	**0.1086**	**1.7419**		**6,357.1250**	**6,357.1250**	**0.2197**		**6,361.7378**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2308	12.6607	14.3528	0.0223		0.6652	0.6652		0.6120	0.6120		2,160.2530	2,160.2530	0.6987		2,174.9250
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2308**	**12.6607**	**14.3528**	**0.0223**		**0.6652**	**0.6652**		**0.6120**	**0.6120**		**2,160.2530**	**2,160.2530**	**0.6987**		**2,174.9250**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0384	0.0568	0.5100	1.6000e-003	0.1415	1.0100e-003	0.1425	0.0375	9.3000e-004	0.0385		113.5791	113.5791	5.2300e-003		113.6890
Total	**0.0384**	**0.0568**	**0.5100**	**1.6000e-003**	**0.1415**	**1.0100e-003**	**0.1425**	**0.0375**	**9.3000e-004**	**0.0385**		**113.5791**	**113.5791**	**5.2300e-003**		**113.6890**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2308	12.6607	14.3528	0.0223		0.6652	0.6652		0.6120	0.6120		2,160.2530	2,160.2530	0.6987		2,174.9250
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2308**	**12.6607**	**14.3528**	**0.0223**		**0.6652**	**0.6652**		**0.6120**	**0.6120**		**2,160.2530**	**2,160.2530**	**0.6987**		**2,174.9250**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0384	0.0568	0.5100	1.6000e-003	0.1415	1.0100e-003	0.1425	0.0375	9.3000e-004	0.0385		113.5791	113.5791	5.2300e-003		113.6890
Total	**0.0384**	**0.0568**	**0.5100**	**1.6000e-003**	**0.1415**	**1.0100e-003**	**0.1425**	**0.0375**	**9.3000e-004**	**0.0385**		**113.5791**	**113.5791**	**5.2300e-003**		**113.6890**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	339.9773					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.8537
Total	**340.1962**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.8537**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2992	0.4429	3.9776	0.0125	1.1034	7.8600e-003	1.1112	0.2926	7.2900e-003	0.2999		885.9170	885.9170	0.0408		886.7738
Total	**0.2992**	**0.4429**	**3.9776**	**0.0125**	**1.1034**	**7.8600e-003**	**1.1112**	**0.2926**	**7.2900e-003**	**0.2999**		**885.9170**	**885.9170**	**0.0408**		**886.7738**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Archit. Coating	339.9773					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.8537
Total	**340.1962**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.8537**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2992	0.4429	3.9776	0.0125	1.1034	7.8600e-003	1.1112	0.2926	7.2900e-003	0.2999		885.9170	885.9170	0.0408		886.7738
Total	**0.2992**	**0.4429**	**3.9776**	**0.0125**	**1.1034**	**7.8600e-003**	**1.1112**	**0.2926**	**7.2900e-003**	**0.2999**		**885.9170**	**885.9170**	**0.0408**		**886.7738**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	11.1699	21.0495	117.0220	0.3857	27.6853	0.5001	28.1854	7.4066	0.4616	7.8683		27,282.9319	27,282.9319	0.7202		27,298.0557
Unmitigated	11.1699	21.0495	117.0220	0.3857	27.6853	0.5001	28.1854	7.4066	0.4616	7.8683		27,282.9319	27,282.9319	0.7202		27,298.0557

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	5,370.85	5,835.40	4947.05	12,002,699	12,002,699
Total	5,370.85	5,835.40	4,947.05	12,002,699	12,002,699

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.544287	0.062956	0.171756	0.119283	0.033776	0.004850	0.017325	0.031479	0.002293	0.003006	0.006870	0.000528	0.001591

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.5849	4.9981	2.1269	0.0319		0.4041	0.4041		0.4041	0.4041		6,380.5739	6,380.5739	0.1223	0.1170	6,419.4050
NaturalGas Unmitigated	0.5849	4.9981	2.1269	0.0319		0.4041	0.4041		0.4041	0.4041		6,380.5739	6,380.5739	0.1223	0.1170	6,419.4050

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	54234.9	0.5849	4.9981	2.1269	0.0319		0.4041	0.4041		0.4041	0.4041		6,380.5739	6,380.5739	0.1223	0.1170	6,419.4050
Total		**0.5849**	**4.9981**	**2.1269**	**0.0319**		**0.4041**	**0.4041**		**0.4041**	**0.4041**		**6,380.5739**	**6,380.5739**	**0.1223**	**0.1170**	**6,419.4050**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	54.2349	0.5849	4.9981	2.1269	0.0319		0.4041	0.4041		0.4041	0.4041		6,380.5739	6,380.5739	0.1223	0.1170	6,419.4050
Total		**0.5849**	**4.9981**	**2.1269**	**0.0319**		**0.4041**	**0.4041**		**0.4041**	**0.4041**		**6,380.5739**	**6,380.5739**	**0.1223**	**0.1170**	**6,419.4050**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	386.1124	15.9858	1,114.1448	2.4071		163.7691	163.7691		163.7617	163.7617		11,195.4819	33,111.7855	83.2513	0.5717	35,037.2787
Unmitigated	386.1124	15.9858	1,114.1448	2.4071		163.7691	163.7691		163.7617	163.7617		11,195.4819	33,111.7855	83.2513	0.5717	35,037.2787

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.1436					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	17.4410					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	363.5244	15.2128	1,047.1426	2.4036		163.3963	163.3963		163.3889	163.3889		11,074.4118	32,990.7154	83.1361	0.5717	34,913.7883
Landscaping	2.0033	0.7730	67.0022	3.5500e-003		0.3729	0.3729		0.3729	0.3729		121.0701	121.0701	0.1153		123.4904
Total	**386.1124**	**15.9858**	**1,114.1448**	**2.4071**		**163.7691**	**163.7691**		**163.7617**	**163.7617**		**11,195.4819**	**33,111.7855**	**83.2513**	**0.5717**	**35,037.2787**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.1436					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Consumer Products	17.4410					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	363.5244	15.2128	1,047.1426	2.4036		163.3963	163.3963		163.3889	163.3889		11,074.4118	32,990.7154	83.1361	0.5717	34,913.7883
Landscaping	2.0033	0.7730	67.0022	3.5500e-003		0.3729	0.3729		0.3729	0.3729		121.0701	121.0701	0.1153		123.4904
Total	**386.1124**	**15.9858**	**1,114.1448**	**2.4071**		**163.7691**	**163.7691**		**163.7617**	**163.7617**		**11,195.4819**	**33,111.7855**	**83.2513**	**0.5717**	**35,037.2787**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

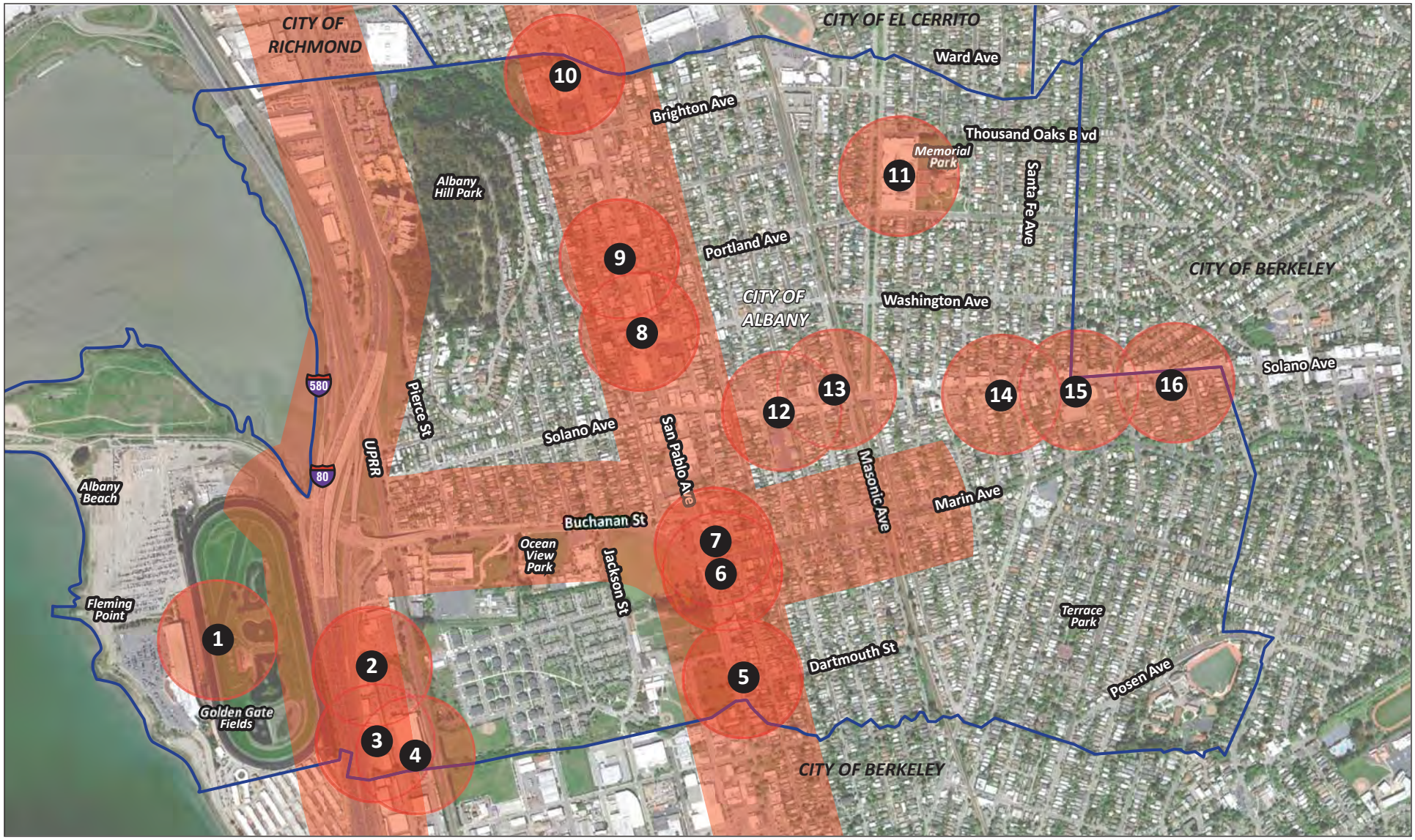
Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

STATIONARY SOURCE CONTOURS AND LISTING



LSA

FIGURE IV.D-3

N

0 600 1200
FEET

2 Stationary Sources

City Limits

500-foot Radius (approximate)

City of Albany General Plan EIR

500-Foot Buffer Zone

SOURCES: GOOGLE EARTH; CITY OF ALBANY, 2014.

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Table 1: Stationary Source Listing

No.	Source (Name & Address)	FID	Plant No.	Risk Level	$PM_{2.5}$ ($\mu g/m^3$)	Hazard
1	Pacific Racing Association 1100 East Shore Hwy (generator)	88	14995	12.95	0.005	0.026
2	Target Corporation 1507 Eastshore Hwy (generator)	59	15923	0.02	0.00	0.001
3	Pacific Racing Association/GGF 1100 Eastshore Hwy	87	G10609	NA	NA	NA
4	Verizon Wireless 1100 Eastshore Hwy (generator)	89	18024	10.94	0.004	0.003
5	Continental Auto Body 1011 San Pablo Ave	35	15174	0.00	0.00	0.00
6	Arco Facility #02035 1001 San Pablo Ave	25	G8887	31.98	0.048	NA
7	Albany Shell SS #135037 999 San Pablo Ave	2188	G11733	15.990	0.024	NA
8	Albany Hill Mini Mart 800 San Pablo Ave	2053	G81	8.635	0.013	NA
9	Albany Body Shop 702 San Pablo Ave	1943	3218	0.00	0.004	0.00
10	Norge Cleaners & Laundry	1308	1390	7.49	0.020	0.00
11	Albany High School 603 Key Route Blvd	1784	16811	4.03	0.041	0.527
12	One Hour Albany Cleaners 1187 Solano Ave	132	2138	60.90	0.162	0.00
13	One Hour Martinizing Cleaners 1275 Solano Ave	182	3060	0.00	0.00	0.00
14	Solano Cleanette 1425 Solano Ave	265	8957	68.20	0.181	0.00
15	Clean Living Cleaners 1538 Solano Ave	340	12704	0.00	0.00	0.00
16	Pacific Bell 1612 Solano Ave (generator)	389	13447	29.75	0.011	0.053

BAAQMD 2015, LSA Associates, Inc. 2015

ODOR REPORT

All Sources in city
Albany From: 01/01/2011 To: 03/19/2015 Report Date:
3/20/2015

208798 UNCNF **Rcvd at** SFD ; 1111 Kains Dr 2/19/11 20:57 **Contact at**
2/22/11 **ID#** 000000

Rcvd_by 999
Occur at 2/19/11 20:35 **Report by** 784
Disp at 2/22/11 8:36 **Update** 5/18/11
Disp_to 784
Complaint type: Odor 'bad chemical'
Site Alleged U5612
NOV#

209413 UNCNF **Rcvd at** NONE ; NONE 6/11/11 19:26 **Contact at** 6/13/11
ID# 000000

Rcvd_by 999
Occur at 6/11/11 18:30 **Report by** 784
Disp at 6/13/11 8:41 **Update** 8/9/11
Disp_to 784
Complaint type: Odor 'burning pot handles'
Site Alleged U7471
NOV#

212768 UNCNF **Rcvd at** NONE ; NONE 9/28/12 20:58 **Contact at** 10/1/12
ID# 04115Q

Rcvd_by 999
Occur at 9/28/12 20:00 **Report by** 784
Disp at 10/1/12 8:33 **Update** 12/9/13
Disp_to 784
Complaint type: Odor 'burning plastic'
Site Alleged V5263
NOV#

212917 UNCNF **Rcvd at** NONE ; NONE 10/17/12 21:0 **Contact at** 10/18/12
ID# 04118J

Rcvd_by 999
Occur at 10/17/12 21:00 **Report by** 784
Disp at 10/18/12 8:33 **Update** 12/4/13
Disp_to 784
Complaint type: Odor 'burnt chemical'
Site Alleged N9619
NOV#

213005 UNCNF **Rcvd at** NONE ; NONE 10/29/12 13:5 **Contact at** 10/29/12
ID# 04120F

Rcvd_by 610

All Sources in city
Albany From: 01/01/2011 To: 03/19/2015 Report Date:
3/20/2015

Occur at 10/29/12 12:00 **Report by** 784
Disp at 10/29/12 14:05 **Update** 12/4/13
Disp_to 784
Complaint type: Odor 'burning'
Site Alleged N9619
NOV#

213017 UNCNF **Rcvd at** NONE ; NONE 10/30/12 16:4 **Contact at** 10/30/12
ID# 04120K

Rcvd_by 757
Occur at 10/30/12 16:00 **Report by** 784
Disp at 10/30/12 16:46 **Update** 10/8/13
Disp_to 784
Complaint type: Odor 'organic'
Site Alleged V5840
NOV#

213769 UNCNF **Rcvd at** NONE ; NONE 3/1/13 19:35 **Contact at** 3/4/13
ID# 04135P

Rcvd_by 999
Occur at 3/1/13 18:30 **Report by** 784
Disp at 3/4/13 8:40 **Update** 12/4/13
Disp_to 784
Complaint type: Odor 'organic'
Site Alleged N9619
NOV#

213782 UNCNF **Rcvd at** NONE ; NONE 3/3/13 23:39 **Contact at** 3/4/13
ID# 04135T

Rcvd_by 999
Occur at 3/3/13 23:30 **Report by** 784
Disp at 3/4/13 8:41 **Update** 3/3/14
Disp_to 784
Complaint type: Odor 'burning'
Site Alleged N9619
NOV#

213783 UNCNF **Rcvd at** NONE ; NONE 3/4/13 0:06 **Contact at** 3/4/13
ID# 04135U

Rcvd_by 999
Occur at 3/3/13 23:00 **Report by** 784
Disp at 3/4/13 8:41 **Update** 3/3/14
Disp_to 784
Complaint type: Odor 'wierd'

Site Alleged N9619
NOV#

213800 UNCNF **Rcvd at** NONE ; NONE 3/5/13 9:21 **Contact at** 3/5/13
ID# 04136C

Rcvd_by 610
Occur at 3/5/13 9:15 **Report by** 784
Disp at 3/5/13 9:24 **Update** 3/28/14
Disp_to 784
Complaint type: Odor 'metal'
Site Alleged N9619
NOV#

213806 UNCNF **Rcvd at** NONE ; NONE 3/5/13 13:56 **Contact at** 3/5/13
ID# 04136F

Rcvd_by 610
Occur at 3/5/13 6:30 **Report by** 784
Disp at 3/5/13 14:02 **Update** 3/28/14
Disp_to 784
Complaint type: Odor 'heavy metal'
Site Alleged N9619
NOV#

213812 UNCNF **Rcvd at** NONE ; NONE 3/6/13 9:21 **Contact at** 3/6/13
ID# 04136K

Rcvd_by 757
Occur at 3/6/13 9:21 **Report by** 784
Disp at 3/6/13 9:34 **Update** 3/28/14
Disp_to 784
Complaint type: Odor 'metallic'
Site Alleged V7684
NOV#

213843 CNFRM **Rcvd at** NONE ; NONE 3/13/13 7:25 **Contact at** 3/13/13
ID# 04137C

Rcvd_by 600
Occur at 3/13/13 7:25 **Report by** 784
Disp at 3/13/13 7:35 **Update** 2/28/14
Disp_to 784
Complaint type: Odor 'strong bad'
Site Alleged N9619
NOV#

All Sources in city
Albany From: 01/01/2011 To: 03/19/2015 Report Date:
3/20/2015

213847 UNCNF **Rcvd at** NONE ; NONE 3/13/13 8:08 **Contact at** 3/13/13
ID# 04098R

Rcvd_by 757
Occur at 3/13/13 8:08 **Report by** 784
Disp at 3/13/13 8:11 **Update** 2/28/14
Disp_to 784
Complaint type: Odor 'metal'
Site Alleged V7821
NOV#

213849 UNCNF **Rcvd at** NONE ; NONE 3/13/13 8:51 **Contact at** 3/13/13
ID# 04137G

Rcvd_by 757
Occur at 3/12/13 23:00 **Report by** 784
Disp at 3/13/13 9:01 **Update** 3/3/14
Disp_to 784
Complaint type: Odor 'plastic'
Site Alleged V7830
NOV#

213859 UNCNF **Rcvd at** NONE ; NONE 3/13/13 19:39 **Contact at** 3/14/13
ID# 04136C

Rcvd_by 999
Occur at 3/13/13 19:39 **Report by** 784
Disp at 3/14/13 7:43 **Update** 4/1/14
Disp_to 784
Complaint type: Odor 'bad metal'
Site Alleged N9619
NOV#

214015 UNCNF **Rcvd at** NONE ; NONE 4/3/13 7:52 **Contact at** 4/3/13
ID# 04140N

Rcvd_by 610
Occur at 4/3/13 5:00 **Report by** 784
Disp at 4/3/13 8:09 **Update** 5/15/14
Disp_to 784
Complaint type: Odor 'strong'
Site Alleged N9619
NOV#

214142 UNCNF **Rcvd at** NONE ; NONE 4/22/13 10:26 **Contact at** 4/22/13
ID# 04142R

Rcvd_by 757
Occur at 4/22/13 10:15 **Report by** 784
Disp at 4/22/13 10:34 **Update** 5/15/14
Disp_to 784
Complaint type: Odor 'burning/sour'
Site Alleged V8559
NOV#

214152 UNCNF **Rcvd at** NONE ; NONE 4/23/13 9:42 **Contact at** 4/23/13
ID# 04143A

Rcvd_by 600
Occur at 4/23/13 9:40 **Report by** 784
Disp at 4/23/13 9:46 **Update** 5/15/14
Disp_to 784
Complaint type: Odor 'metal'
Site Alleged N9619
NOV#

214189 UNCNF **Rcvd at** None ; Gooding Way 4/29/13 9:28 **Contact at**
4/29/13 **ID#** 04143Y

Rcvd_by 757
Occur at 4/29/13 0:00 **Report by** 784
Disp at 4/29/13 9:35 **Update** 5/19/14
Disp_to 784
Complaint type: Odor 'metallic'
Site Alleged V8678
NOV#

214306 UNCNF **Rcvd at** UC Village ; 786 Red Oaks Ave 5/14/13 7:57 **Contact**
at 5/14/13 **ID#** 04146J

Rcvd_by 600
Occur at 5/13/13 18:00 **Report by** 550
Disp at 5/14/13 8:02 **Update** 10/8/13
Disp_to 550
Complaint type: Odor 'strng bad sweet meta'
Site Alleged V8975
NOV#

214308 UNCNF **Rcvd at** NONE ; NONE 5/13/13 23:50 **Contact at** 5/14/13
ID# 04146K

Rcvd_by 999
Occur at 5/13/13 23:40 **Report by** 550
Disp at 5/14/13 8:28 **Update** 10/8/13
Disp_to 550

Complaint type: Odor 'chemicals phenol'
Site Alleged N9619
NOV#

214519 UNCNF **Rcvd at** NONE ; NONE 6/13/13 21:48 **Contact at** 6/17/13
ID# 04150N

Rcvd_by 999
Occur at 6/13/13 20:00 **Report by** 550
Disp at 6/17/13 7:43 **Update** 1/14/14
Disp_to 550
Complaint type: Odor 'burnt gas'
Site Alleged N9619
NOV#

214651 UNCNF **Rcvd at** NONE ; NONE 7/4/13 5:39 **Contact at** 7/5/13
ID# 04153G

Rcvd_by 999
Occur at 7/4/13 5:00 **Report by** 764
Disp at 7/5/13 8:34 **Update** 12/3/13
Disp_to 764
Complaint type: Odor 'burning tire'
Site Alleged N9619
NOV#

214749 UNCNF **Rcvd at** NONE ; 6th And Harrison 7/18/13 13:41 **Contact at**
7/18/13 **ID#** 04155C

Rcvd_by 757
Occur at 7/18/13 10:00 **Report by** 550
Disp at 7/18/13 15:02 **Update** 2/11/14
Disp_to 550
Complaint type: Odor 'pungent'
Site Alleged W0196
NOV#

214795 UNCNF **Rcvd at** NONE ; NONE 7/23/13 15:41 **Contact at** 7/23/13
ID# 03683W

Rcvd_by 610
Occur at 7/23/13 7:30 **Report by** 550
Disp at 7/23/13 15:47 **Update** 5/15/14
Disp_to 550
Complaint type: Odor 'hot'
Site Alleged N9619
NOV#

214857 UNCNF **Rcvd at** NONE ; NONE 8/1/13 8:26 **Contact at** 8/1/13
ID# 04098R

Rcvd_by 610
Occur at 8/1/13 8:20 **Report by** 764
Disp at 8/1/13 8:36 **Update** 12/4/13
Disp_to 764
Complaint type: Odor 'bad'
Site Alleged N9619
NOV#

215407 UNCNF **Rcvd at** NONE ; NONE 10/6/13 7:17 **Contact at** 10/7/13
ID# 04170K

Rcvd_by 999
Occur at 10/6/13 7:17 **Report by** 550
Disp at 10/7/13 7:38 **Update** 7/9/14
Disp_to 550
Complaint type: Odor 'very bad'
Site Alleged W1716
NOV#

215410 UNCNF **Rcvd at** NONE ; NONE 10/6/13 7:38 **Contact at** 10/7/13
ID# 000000

Rcvd_by 999
Occur at 10/6/13 7:00 **Report by** 550
Disp at 10/7/13 7:38 **Update** 7/9/14
Disp_to 550
Complaint type: Odor 'strong, bad'
Site Alleged W1717
NOV#

215673 CNFRM **Rcvd at** NONE ; NONE 11/11/13 8:5 **Contact at** 11/11/13
ID# 04135T

Rcvd_by 600
Occur at 11/11/13 8:30 **Report by** 496
Disp at 11/11/13 9:31 **Update** 5/1/14
Disp_to 496
Complaint type: Odor 'burning plastic'
Site Alleged W2336
NOV#
A53144

215681 CNFRM **Rcvd at** NONE ; NONE 11/11/13 9:1 **Contact at** 11/11/13
ID# 04176M

All Sources in city
Albany From: 01/01/2011 To: 03/19/2015 Report Date:
3/20/2015

Rcvd_by 600
Occur at 11/11/13 9:00 **Report by** 496
Disp at 11/11/13 9:56 **Update** 5/1/14
Disp_to 496
Complaint type: Odor 'brng plastic'
Site Alleged R2752
NOV#
A53144

215697 CNFRM **Rcvd at** NONE ; NONE 11/11/13 10:0 **Contact at** 11/11/13
ID# 04177C

Rcvd_by 600
Occur at 11/11/13 9:00 **Report by** 496
Disp at 11/11/13 10:24 **Update** 5/1/14
Disp_to 496
Complaint type: Odor 'chlorine'
Site Alleged N9619
NOV#
A53144

215720 UNCNF **Rcvd at** NONE ; NONE 11/11/13 11:0 **Contact at** 11/12/13
ID# 04098H

Rcvd_by 600
Occur at 11/11/13 10:30 **Report by** 481
Disp at 11/12/13 7:35 **Update** 11/21/13
Disp_to 481
Complaint type: Odor 'metal burning'
Site Alleged N9619
NOV#

215854 UNCNF **Rcvd at** NONE ; NONE 12/2/13 8:26 **Contact at** 12/2/13
ID# 03714X

Rcvd_by 521
Occur at 12/2/13 7:00 **Report by** 481
Disp at 12/2/13 8:33 **Update** 12/5/13
Disp_to 481
Complaint type: Odor 'plastic'
Site Alleged R2752
NOV#

215855 UNCNF **Rcvd at** NONE ; NONE 12/2/13 9:18 **Contact at** 12/2/13
ID# 04180R

Rcvd_by 610
Occur at 12/2/13 9:00 **Report by** 481
Disp at 12/2/13 9:20 **Update** 12/4/13

Disp_to 481
Complaint type: Odor 'burning rubber'
Site Alleged N9619
NOV#

215944 UNCNF **Rcvd at** NONE ; NONE 12/16/13 8:1 **Contact at** 12/16/13
ID# 04182J

Rcvd_by 610
Occur at 12/16/13 7:00 Report by 481
Disp at 12/16/13 8:25 Update 12/30/13
Disp_to 481
Complaint type: Odor 'bad'
Site Alleged N9619
NOV#

216113 UNCNF **Rcvd at** NONE ; NONE 1/4/14 10:14 **Contact at** 1/6/14
ID# 04186Q

Rcvd_by 814
Occur at 1/4/14 10:10 Report by 481
Disp at 1/6/14 7:35 Update 1/9/14
Disp_to 481
Complaint type: Odor 'burning plastic'
Site Alleged W3326
NOV#

216199 UNCNF **Rcvd at** NONE ; NONE 1/16/14 9:14 **Contact at** 1/16/14
ID# 04188N

Rcvd_by 814
Occur at 1/16/14 9:10 Report by 481
Disp at 1/16/14 10:01 Update 3/3/14
Disp_to 481
Complaint type: Odor 'sickly sweet'
Site Alleged W3612
NOV#

216398 UNCNF **Rcvd at** NONE ; NONE 2/24/14 8:54 **Contact at** 2/24/14
ID# 04192P

Rcvd_by 610
Occur at 2/24/14 8:30 Report by 481
Disp at 2/24/14 9:10 Update 3/27/14
Disp_to 481
Complaint type: Odor 'bad'
Site Alleged N9619
NOV#

All Sources in city
Albany From: 01/01/2011 To: 03/19/2015 Report Date:
3/20/2015

216399 CNFRM **Rcvd at** NONE ; NONE 2/24/14 9:07 **Contact at** 2/24/14
ID# 04192Q

Rcvd_by 610
Occur at 2/24/14 8:00 Report by 481
Disp at 2/24/14 9:11 Update 3/19/14
Disp_to 481
Complaint type: Odor 'bad'
Site Alleged N9619
NOV#

216431 UNCNF **Rcvd at** NONE ; NONE 2/27/14 8:32 **Contact at** 2/27/14
ID# 04180R

Rcvd_by 610
Occur at 2/27/14 8:30 Report by 560
Disp at 2/27/14 8:35 Update 4/22/14
Disp_to 560
Complaint type: Odor 'bgd'
Site Alleged N9619
NOV#

216558 UNCNF **Rcvd at** NONE ; NONE 3/27/14 13:08 **Contact at** 3/27/14
ID# 04195X

Rcvd_by 521
Occur at 3/27/14 13:00 Report by 481
Disp at 3/27/14 13:11 Update 4/3/14
Disp_to 481
Complaint type: Odor 'burnt dish holder'
Site Alleged N9619
NOV#

216641 UNCNF **Rcvd at** UC Village ; West End Way 4/15/14 9:27 **Contact at**
4/15/14 ID# 000000

Rcvd_by 1405
Occur at 4/15/14 9:17 Report by 560
Disp at 4/15/14 9:34 Update 7/8/14
Disp_to 560
Complaint type: Odor 'industrial burning'
Site Alleged W5170
NOV#

All Sources in city Albany From: 01/01/2011 To: 03/19/2015 Report Date: 3/20/2015

217164 UNCNF **Rcvd at** NONE ; NONE 7/2/14 20:00 **Contact at** 7/3/14
ID# 04208S

Rcvd_by 999
Occur at 7/2/14 20:00 **Report by** 557
Disp at 7/3/14 8:25 **Update** 7/18/14
Disp_to 557
Complaint type: Odor 'tires'
Site Alleged N9619
NOV#

217384 UNCNF **Rcvd at** autobody shop ; San Pablo, btwn Clay & Castro 8/4/14 14:36
Contact at 8/4/14 **ID#** 04213F

Rcvd_by 610
Occur at 8/4/14 12:00 **Report by** 842
Disp at 8/4/14 14:43 **Update** 8/13/14
Disp_to 842
Complaint type: Odor 'paint'
Site Alleged Q4080
NOV#

218143 UNCNF **Rcvd at** NONE ; NONE 12/5/14 4:26 **Contact at** 12/5/14
ID# 04232X

Rcvd_by 999
Occur at 12/5/14 4:20 **Report by** 560
Disp at 12/5/14 8:54 **Update** 12/29/14
Disp_to 560
Complaint type: Odor 'nail polish like'
Site Alleged W9615
NOV#

219170 UNCNF **Rcvd at** NONE ; NONE 1/21/15 8:27 **Contact at** 1/21/15
ID# 04263H

Rcvd_by 610
Occur at 1/21/15 8:10 **Report by** 481
Disp at 1/21/15 8:30 **Update** 2/3/15
Disp_to 481
Complaint type: Odor 'heavy paint'
Site Alleged N9619
NOV#

219175 UNCNF **Rcvd at** Autobody Shop ; 600 block San Pablo Ave 1/21/15 11:21
Contact at 1/21/15 **ID#** 04263M

Rcvd_by 814

All Sources in city Albany From: 01/01/2011 To: 03/19/2015 Report Date: 3/20/2015

Occur at 1/21/15 11:15 **Report by** 481
Disp at 1/21/15 11:29 **Update** 2/3/15
Disp_to 481
Complaint type: Odor 'spray paint'
Site Alleged X0443
NOV#

219339 UNCNF **Rcvd at** NONE ; Santa Fe St / Ramona St 1/26/15 15:10 **Contact at** 1/26/15
ID# 000000

Rcvd_by 1405
Occur at 1/26/15 15:05 **Report by** 557
Disp at 1/26/15 15:17 **Update** 2/13/15
Disp_to 557
Complaint type: Odor 'burnt metal/plastic'
Site Alleged X0559
NOV#

220596 UNCNF **Rcvd at** NONE ; NONE 3/13/15 23:04 **Contact at** **ID#** 04301W

Rcvd_by 999
Occur at 3/13/15 23:00 **Report by**
Disp at 3/16/15 7:39 **Update**
Disp_to 560
Complaint type: Odor 'burning plastic'
Site Alleged N9619
NOV#

All Sources in city Albany From: 01/01/2011 To: 03/19/2015 Report Date: 3/20/2015

SUMMARY

Complaints

	Confirmed	5
	Unconfirmed	45
	Pending	0
NOVs	Total	50

A53144

Violation Notices Total: 1

APPENDIX C

NOISE MODELING DATA

TABLE Existing (2014)-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Cleveland Avenue - north of Washington Avenue
NOTES: Albany General Plan - Existing (2014)

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6600 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 58.52

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	0.0	95.7

TABLE Existing (2014)-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Pierce Street - north of Washington Avenue
NOTES: Albany General Plan - Existing (2014)

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4100 SPEED (MPH): 20 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 54.27

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	0.0	0.0

TABLE Existing (2014)-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Eastshore Highway - south of Buchanan Street
NOTES: Albany General Plan - Existing (2014)

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5500 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 57.72

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	0.0	84.8

TABLE Existing (2014)-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Buchanan Street - between Fillmore and Taylor Streets
NOTES: Albany General Plan - Existing (2014)

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 29600 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.53

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	60.8	122.7	260.2

TABLE Existing (2014)-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Jackson Street - between Portland Avenue and Castro Street
NOTES: Albany General Plan - Existing (2014)

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3900 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.23

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	0.0	67.5

TABLE Existing (2014)-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: San Pablo Avenue - between Portland and Garfield Avenues
NOTES: Albany General Plan - Existing (2014)

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 24700 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 21 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.38

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	86.4	181.7	389.3

TABLE Existing (2014)-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: San Pablo Avenue - between Buchanan Street and Solano Avenue
NOTES: Albany General Plan - Existing (2014)

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 23500 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 21 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.16

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	83.7	175.9	376.7

TABLE Existing (2014)-08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: San Pablo Avenue - between Monroe and Dartmouth Streets
NOTES: Albany General Plan - Existing (2014)

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 23500 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 21 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.16

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	83.7	175.9	376.7

TABLE Existing (2014)-09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Brighton Avenue - between Stannage and Cornell Avenues
NOTES: Albany General Plan - Existing (2014)

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3500 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 55.76

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	0.0	62.9

TABLE Existing (2014)-10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Solano Avenue - between Stannage and Cornell Avenues
NOTES: Albany General Plan - Existing (2014)

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10400 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.49

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	60.3	129.4

TABLE Existing (2014)-11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Marin Avenue - between Stannage and Cornell Avenues
NOTES: Albany General Plan - Existing (2014)

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 19000 SPEED (MPH): 30 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.36

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	56.4	119.4	256.2

TABLE Existing (2014)-12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Masonic Avenue - between Dartmouth Street and Marin Avenue
NOTES: Albany General Plan - Existing (2014)

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3800 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.12

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	0.0	66.4

TABLE Existing (2014)-13
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Key Route Boulevard - between Portland Avenue and Thousand Oaks Boulevard
NOTES: Albany General Plan - Existing (2014)

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5200 SPEED (MPH): 15 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 51.13

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	0.0	0.0

TABLE Existing (2014)-14
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Solano Avenue - between Santa Fe Avenue and Curtis Street
NOTES: Albany General Plan - Existing (2014)

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 9700 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.19

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	57.6	123.6

TABLE Existing (2014)-15
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Marin Avenue - between Santa Fe Avenue and Curtis Street
NOTES: Albany General Plan - Existing (2014)

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 17600 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.20

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	86.0	183.9

TABLE Existing (2014)-16
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: I-80 - south of Buchanan Street
NOTES: Albany General Plan - Existing (2014)

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 193100 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 48 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 80.49

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
429.9	921.4	1982.6	4269.6

TABLE Existing (2014)-17
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: I-80 - north of Buchanan Street
NOTES: Albany General Plan - Existing (2014)

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 118900 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 48 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 78.38

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
312.9	667.7	1435.4	3090.4

TABLE Existing (2014)-18
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: I-580 - north of Buchanan Street
NOTES: Albany General Plan - Existing (2014)

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 76500 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 36 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 77.06

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
233.5	498.1	1070.8	2305.5

TABLE 2040 No Project-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Cleveland Avenue - north of Washington Avenue
NOTES: Albany General Plan - 2040 No Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7800 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.24

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	0.0	106.9

TABLE 2040 No Project-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Pierce Street - north of Washington Avenue
NOTES: Albany General Plan - 2040 No Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4100 SPEED (MPH): 20 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 54.27

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	0.0	0.0

TABLE 2040 No Project-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Eastshore Highway - south of Buchanan Street
NOTES: Albany General Plan - 2040 No Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8200 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.46

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	51.6	110.5

TABLE 2040 No Project-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Buchanan Street - between Fillmore and Taylor Streets
NOTES: Albany General Plan - 2040 No Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 32100 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.88

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	63.6	129.2	274.5

TABLE 2040 No Project-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Jackson Street - between Portland Avenue and Castro Street
NOTES: Albany General Plan - 2040 No Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4200 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.55

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	0.0	70.9

TABLE 2040 No Project-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: San Pablo Avenue - between Portland and Garfield Avenues
NOTES: Albany General Plan - 2040 No Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 27500 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 21 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.85

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	92.4	195.0	418.2

TABLE 2040 No Project-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: San Pablo Avenue - between Buchanan Street and Solano Avenue
NOTES: Albany General Plan - 2040 No Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 25000 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 21 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.43

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	87.0	183.2	392.5

TABLE 2040 No Project-08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: San Pablo Avenue - between Monroe and Dartmouth Streets
NOTES: Albany General Plan - 2040 No Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 27500 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 21 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.85

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	92.4	195.0	418.2

TABLE 2040 No Project-09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Brighton Avenue - between Stannage and Cornell Avenues
NOTES: Albany General Plan - 2040 No Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3800 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.12

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn 70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	0.0	66.4

TABLE 2040 No Project-10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Solano Avenue - between Stannage and Cornell Avenues
NOTES: Albany General Plan - 2040 No Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10900 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.70

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn 70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	62.2	133.5

TABLE 2040 No Project-11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Marin Avenue - between Stannage and Cornell Avenues
NOTES: Albany General Plan - 2040 No Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 19300 SPEED (MPH): 30 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.43

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn 70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	57.0	120.6	258.8

TABLE 2040 No Project-12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Masonic Avenue - between Dartmouth Street and Marin Avenue
NOTES: Albany General Plan - 2040 No Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4100 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.45

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn 70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	0.0	69.8

TABLE 2040 No Project-13
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Key Route Boulevard - between Portland Avenue and Thousand Oaks Boulevard
NOTES: Albany General Plan - 2040 No Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5900 SPEED (MPH): 15 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 51.67

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	0.0	0.0

TABLE 2040 No Project-14
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Solano Avenue - between Santa Fe Avenue and Curtis Street
NOTES: Albany General Plan - 2040 No Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10100 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.36

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	59.2	126.9

TABLE 2040 No Project-15
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Marin Avenue - between Santa Fe Avenue and Curtis Street
NOTES: Albany General Plan - 2040 No Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 18800 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.48

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	89.8	192.1

TABLE 2040 No Project-16
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: I-80 - south of Buchanan Street
NOTES: Albany General Plan - 2040 No Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 235300 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 48 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 81.34

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
489.7	1050.9	2261.7	4870.9

TABLE 2040 No Project-17
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: I-80 - north of Buchanan Street
NOTES: Albany General Plan - 2040 No Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 140100 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 48 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 79.09

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
348.3	744.5	1601.1	3447.6

TABLE 2040 No Project-18
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: I-580 - north of Buchanan Street
NOTES: Albany General Plan - 2040 No Project

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 103500 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 36 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 78.37

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
284.4	608.8	1309.6	2820.1

TABLE 2040 General Plan-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Cleveland Avenue - north of Washington Avenue
NOTES: Albany General Plan - 2040 General Plan

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7900 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.30

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	0.0	107.8

TABLE 2040 General Plan-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Pierce Street - north of Washington Avenue
NOTES: Albany General Plan - 2040 General Plan

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4400 SPEED (MPH): 20 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 54.58

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	0.0	52.5

TABLE 2040 General Plan-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Eastshore Highway - south of Buchanan Street
NOTES: Albany General Plan - 2040 General Plan

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8600 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.67

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	53.2	114.1

TABLE 2040 General Plan-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Buchanan Street - between Fillmore and Taylor Streets
NOTES: Albany General Plan - 2040 General Plan

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 32300 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.91

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	63.9	129.7	275.7

TABLE 2040 General Plan-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Jackson Street - between Portland Avenue and Castro Street
NOTES: Albany General Plan - 2040 General Plan

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4400 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.76

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	0.0	73.1

TABLE 2040 General Plan-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: San Pablo Avenue - between Portland and Garfield Avenues
NOTES: Albany General Plan - 2040 General Plan

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 28700 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 21 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.03

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	95.0	200.6	430.2

TABLE 2040 General Plan-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: San Pablo Avenue - between Buchanan Street and Solano Avenue
NOTES: Albany General Plan - 2040 General Plan

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 25700 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 21 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.55

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	88.6	186.5	399.8

TABLE 2040 General Plan-08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: San Pablo Avenue - between Monroe and Dartmouth Streets
NOTES: Albany General Plan - 2040 General Plan

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 27900 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 21 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.91

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	93.3	196.9	422.2

TABLE 2040 General Plan-09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Brighton Avenue - between Stannage and Cornell Avenues
NOTES: Albany General Plan - 2040 General Plan

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3900 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.23

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	0.0	67.5

TABLE 2040 General Plan-10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Solano Avenue - between Stannage and Cornell Avenues
NOTES: Albany General Plan - 2040 General Plan

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11100 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.77

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	63.0	135.2

TABLE 2040 General Plan-11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Marin Avenue - between Stannage and Cornell Avenues
NOTES: Albany General Plan - 2040 General Plan

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 20100 SPEED (MPH): 30 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.61

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	58.5	123.9	265.9

TABLE 2040 General Plan-12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Masonic Avenue - between Dartmouth Street and Marin Avenue
NOTES: Albany General Plan - 2040 General Plan

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4200 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.55

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	0.0	70.9

TABLE 2040 General Plan-13
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Key Route Boulevard - between Portland Avenue and Thousand Oaks Boulevard
NOTES: Albany General Plan - 2040 General Plan

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6000 SPEED (MPH): 15 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 51.75

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	0.0	0.0

TABLE 2040 General Plan-14
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Solano Avenue - between Santa Fe Avenue and Curtis Street
NOTES: Albany General Plan - 2040 General Plan

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10200 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.41

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	59.6	127.8

TABLE 2040 General Plan-15
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Marin Avenue - between Santa Fe Avenue and Curtis Street
NOTES: Albany General Plan - 2040 General Plan

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 19200 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.57

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	91.1	194.8

TABLE 2040 General Plan-16
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: I-80 - south of Buchanan Street
NOTES: Albany General Plan - 2040 General Plan

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 235600 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 48 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 81.35

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
490.1	1051.8	2263.6	4875.0

TABLE 2040 General Plan-17
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: I-80 - north of Buchanan Street
NOTES: Albany General Plan - 2040 General Plan

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 140100 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 48 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 79.09

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
348.3	744.5	1601.1	3447.6

TABLE 2040 General Plan-18
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: I-580 - north of Buchanan Street
NOTES: Albany General Plan - 2040 General Plan

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 130700 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 36 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 79.38

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
331.6	711.0	1529.9	3294.6

TABLE 2040 SCS-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Cleveland Avenue - north of Washington Avenue
NOTES: Albany General Plan - 2040 SCS

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 7900 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.30

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	0.0	107.8

TABLE 2040 SCS-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Pierce Street - north of Washington Avenue
NOTES: Albany General Plan - 2040 SCS

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4400 SPEED (MPH): 20 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 54.58

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	0.0	52.5

TABLE 2040 SCS-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Eastshore Highway - south of Buchanan Street
NOTES: Albany General Plan - 2040 SCS

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 8700 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.72

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	53.6	114.9

TABLE 2040 SCS-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Buchanan Street - between Fillmore and Taylor Streets
NOTES: Albany General Plan - 2040 SCS

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 32300 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 63.91

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	63.9	129.7	275.7

TABLE 2040 SCS-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Jackson Street - between Portland Avenue and Castro Street
NOTES: Albany General Plan - 2040 SCS

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4400 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.76

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	0.0	73.1

TABLE 2040 SCS-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: San Pablo Avenue - between Portland and Garfield Avenues
NOTES: Albany General Plan - 2040 SCS

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 28700 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 21 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.03

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	95.0	200.6	430.2

TABLE 2040 SCS-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: San Pablo Avenue - between Buchanan Street and Solano Avenue
NOTES: Albany General Plan - 2040 SCS

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 25800 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 21 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.57

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	88.8	187.0	400.8

TABLE 2040 SCS-08
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: San Pablo Avenue - between Monroe and Dartmouth Streets
NOTES: Albany General Plan - 2040 SCS

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 28000 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 21 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.92

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	93.5	197.3	423.2

TABLE 2040 SCS-09
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Brighton Avenue - between Stannage and Cornell Avenues
NOTES: Albany General Plan - 2040 SCS

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3900 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.23

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	0.0	67.5

TABLE 2040 SCS-10
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Solano Avenue - between Stannage and Cornell Avenues
NOTES: Albany General Plan - 2040 SCS

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11200 SPEED (MPH): 25 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES	
	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.81

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	63.3	136.0

TABLE 2040 SCS-11
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Marin Avenue - between Stannage and Cornell Avenues
NOTES: Albany General Plan - 2040 SCS

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 20300 SPEED (MPH): 30 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.65

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	58.9	124.7	267.7

TABLE 2040 SCS-12
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Masonic Avenue - between Dartmouth Street and Marin Avenue
NOTES: Albany General Plan - 2040 SCS

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 4200 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.55

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	0.0	70.9

TABLE 2040 SCS-13
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Key Route Boulevard - between Portland Avenue and Thousand Oaks Boulevard
NOTES: Albany General Plan - 2040 SCS

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 6300 SPEED (MPH): 15 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 51.96

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	0.0	0.0

TABLE 2040 SCS-14
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Solano Avenue - between Santa Fe Avenue and Curtis Street
NOTES: Albany General Plan - 2040 SCS

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10300 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 60.45

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn			
70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	59.9	128.6

TABLE 2040 SCS-15
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: Marin Avenue - between Santa Fe Avenue and Curtis Street
NOTES: Albany General Plan - 2040 SCS

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 19200 SPEED (MPH): 25 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 62.57

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
0.0	0.0	91.1	194.8

TABLE 2040 SCS-16
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: I-80 - south of Buchanan Street
NOTES: Albany General Plan - 2040 SCS

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 236100 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 48 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 81.36

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
490.8	1053.2	2266.8	4881.9

TABLE 2040 SCS-17
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: I-80 - north of Buchanan Street
NOTES: Albany General Plan - 2040 SCS

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 140200 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 48 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 79.10

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
348.4	744.9	1601.9	3449.2

TABLE 2040 SCS-18
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 09/08/2015
ROADWAY SEGMENT: I-580 - north of Buchanan Street
NOTES: Albany General Plan - 2040 SCS

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 103800 SPEED (MPH): 65 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	NIGHT
AUTOS	88.08	9.34
M-TRUCKS	1.65	0.19
H-TRUCKS	0.66	0.08

ACTIVE HALF-WIDTH (FT): 36 SITE CHARACTERISTICS: SOFT

* * CALCULATED NOISE LEVELS * *

Ldn AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 78.38

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO Ldn

70 Ldn	65 Ldn	60 Ldn	55 Ldn
285.0	610.0	1312.1	2825.5