

MARE ISLAND AMENDED AND RESTATED  
SPECIFIC PLAN PROJECT

**DRAFT SUBSEQUENT ENVIRONMENTAL IMPACT REPORT**

**STATE CLEARINGHOUSE NO. 2003092057**

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*Prepared for the City of Vallejo by:*

**TURNSTONE CONSULTING**



**MARE ISLAND AMENDED AND RESTATED SPECIFIC PLAN  
DRAFT SUBSEQUENT EIR**

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## INTRODUCTION

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The City of Vallejo (the “City”) has selected Lennar Mare Island, LLC (“Lennar”) as the Master Developer for a 650-acre portion of Mare Island’s approximately 5,200 acres. Lennar proposes the *Mare Island Specific Plan, Amended and Restated* (“Mare Island Specific Plan”). When adopted by the City, the proposed Mare Island Specific Plan, which includes Historic Project Guidelines for the entire island, would supersede the 1999 *Mare Island Specific Plan* (the “1999 Specific Plan”) as the guiding document for reuse activities on Mare Island. As part of the implementation of the Mare Island Specific Plan, Lennar proposes a preliminary building development program which identifies, by Reuse Area, existing buildings to be reused, new construction, and demolitions (as necessitated by the Mare Island Specific Plan to allow for infrastructure improvements, residential land uses, parking and laydown areas for non-residential developments, open space, and off-street bikeway and pedestrian access). Lennar also proposes a General Plan Amendment (“G.P.A.”) to address the changes made in the Mare Island Specific Plan and ensure consistency between the plans. The Mare Island Specific Plan and the G.P.A., together with Lennar’s building development program, constitute the “project” for the purposes of this Subsequent Environmental Impact Report (“Subsequent EIR”).

The City carried out environmental review of the 1999 Specific Plan pursuant to the requirements of the California Environmental Quality Act (“CEQA”) in two documents: a *Final Environmental Impact Statement / Environmental Impact Report for Disposal and Reuse of Mare Island Naval Shipyard*, certified on November 17, 1998; and an *Addendum to the Final Environmental Impact Statement / Environmental Impact Report for Disposal and Reuse of Mare Island Naval Shipyard*, adopted February 1999.

The City has determined that a Subsequent EIR is necessary, pursuant to *CEQA Guidelines* Section 15162, to address changes from the 1999 Specific Plan embodied in the project, as well as changed circumstances and new information that have emerged since CEQA review of the 1999 Specific Plan. This Subsequent EIR assesses the environmental impacts of development under the proposed Mare Island Specific Plan that were not covered in the 1999 CEQA Documents. Together with the 1999 CEQA Documents, this Subsequent EIR fulfills CEQA’s requirements for environmental review of the Mare Island Specific Plan and Lennar’s development program thereunder.

### A. BACKGROUND

The proposed Mare Island Specific Plan builds upon and furthers the general objectives of the 1999 Specific Plan. Likewise, assessment of environmental impacts under the Mare Island Specific Plan builds upon the previous environmental analysis for reuse of Mare Island. It is

therefore necessary to present a chronology of earlier actions and environmental analyses related to reuse of Mare Island. These will be referred to throughout this Subsequent EIR document.

### **1975 NATIONAL HISTORIC LANDMARK DESIGNATION**

In 1975 the “Mare Island Naval Shipyard” was listed as a National Historic Landmark (NHL), the highest level of federal recognition available for historical resources.<sup>1</sup> The NHL listing consists of four distinct areas with a combined area of about 150 acres, and encompassed 50 buildings (of which 42 are still extant).<sup>2</sup> These areas were tightly drawn to include only the oldest and most historically significant resources on the island.

### **1994 MARE ISLAND REUSE PLAN**

After Presidential approval and Congressional acceptance of the closure of Mare Island in October 1993, the City of Vallejo conducted a community-based planning process for Mare Island’s reuse that resulted in the *Final Mare Island Reuse Plan* (the “Reuse Plan”). In July 1994, the Vallejo City Council accepted the Reuse Plan as the guiding document for reuse activities on Mare Island.<sup>3</sup> The Reuse Plan identified 13 reuse areas plus wetlands and dredge pond areas located on the west side of the island. The Reuse Plan described the character of each reuse area and potential reuse opportunities.

### **1997 NATIONAL REGISTER OF HISTORIC PLACES DISTRICT**

In 1997 the “Mare Island Historic District” (the “District”) was listed in the National Register. The District boundaries encompassed about 980 acres and contained 502 Contributing Resources. These were built within the District’s period of significance (pre-1945). Among the resources identified as Contributing Resources within the District are the remaining buildings of the National Historic Landmark, 12 contributing landscape features, and one archaeological site (consisting of 27 separate features).<sup>4</sup>

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<sup>1</sup> U.S. Department of the Interior, National Historic Landmark Designation, July 19, 1975.

<sup>2</sup> See Mare Island Specific Plan 2.3.1 for more discussion of the NHL designation.

<sup>3</sup> City of Vallejo, *Final Mare Island Reuse Plan*, July 1994 (“Reuse Plan”).

<sup>4</sup> National Park Service, *National Register of Historic Places Registration Form for Mare Island Historic District, Vallejo, California*, adopted 1997, pp. 1-59.



## 1997 MEMORANDUM OF AGREEMENT

In 1997 a *Memorandum of Agreement* (the “MOA”) was executed by the U.S. Navy, the Advisory Council on Historic Preservation, the State Historic Preservation Officer, the City of Vallejo, and the National Park Service.<sup>5</sup> The MOA provided for the appropriate treatment and documentation of historic buildings and artifacts on Mare Island while the Navy retained ownership. The MOA also required that the City of Vallejo amend its Architectural Heritage and Historic Preservation Ordinance to extend the jurisdiction of the ordinance and the Vallejo Architectural Heritage and Landmarks Commission to Mare Island. Under this arrangement, any action on Mare Island after transfer from the Navy would be subject to City codes and ordinances. The MOA also required that a specific plan be adopted to implement the Reuse Plan and amend its General Plan accordingly.

## 1999 MARE ISLAND AMENDMENT TO THE ZONING ORDINANCE

In 1999, as part of implementation of the MOA, the City amended the Zoning Ordinance, Architectural Heritage and Historic Preservation Chapter of the *Vallejo Municipal Code*, to include the “Mare Island Amendment.”<sup>6</sup> The Mare Island Amendment designated all 50 National Historic Landmarks on Mare Island as “City Landmarks” and established the City of Vallejo Mare Island Historic District. The boundaries of the City’s historic district are identical to the Mare Island National Register Historic District.

The Mare Island Amendment also directed the Planning Manager to develop Project Guidelines in consultation with the Vallejo Architectural Heritage and Landmarks Commission, State Office of Historic Preservation, and the National Parks Service. It states:

These Project Guidelines shall function as the development plan for the City of Vallejo Mare Island Historic District and shall provide specific and detailed standards for each contributing resource by providing recommended and not recommended actions in terms of alteration, new construction, demolition and relocation based on the Standards for Treatment and determine the project site for each resource or group of resources. These Project Guidelines shall include the existing designation status for each resource, including identification of those resources designated as City Landmarks.<sup>7</sup>

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<sup>5</sup> *Memorandum of Agreement Among the United States Navy, the Advisory Council on Historic Preservation and the California State Historic Preservation Officer Regarding the Layaway, Caretaker Maintenance, Leasing, and Disposal of Historic Properties on the Former Mare Island Naval Shipyard, Vallejo California, 1997.*

<sup>6</sup> City of Vallejo, *Municipal Code, Title 16, Zoning, Chapter 16.38.030-049.*

<sup>7</sup> City of Vallejo, *Municipal Code, Title 16, Zoning, Chapter 16.38.036.*

## 1998 EIS/EIR

In November 1998, the City Council certified the *Final Environmental Impact Statement / Environmental Impact Report for Disposal and Reuse of Mare Island Naval Shipyard* (the “1998 EIS/EIR”).<sup>8</sup> The 1998 EIS/EIR was an integrated environmental review document prepared in accordance with both the National Environmental Policy Act (NEPA) and CEQA. The 1998 EIS/EIR assessed the environmental consequences of the Navy’s disposal and the City’s reuse of the Mare Island Naval Shipyard, and identified mitigation measures that would lessen or avoid significant impacts. The 1998 EIS/EIR also considered alternatives to the Reuse Plan including a Medium Density Alternative, Open Space Alternative, and No Project Alternative.

## 1999 SPECIFIC PLAN

In March 1999, the City Council adopted the 1999 *Mare Island Specific Plan* (the “1999 Specific Plan”).<sup>9</sup> The 1999 Specific Plan envisioned Mare Island as a major employment center in the Bay Area and as “a vibrant, balanced neighborhood of Vallejo with opportunities for housing, education, recreation, culture, historic preservation and habitat preservation.”<sup>10</sup> The 1999 Specific Plan’s stated intent was “to allow limited flexibility in densities, uses and reuse area boundaries . . . to accommodate public and quasi-public uses, respond to future market changes, ensure the City is able to pursue superior reuse and development opportunities, and further the economic development and other goals” of the 1999 Specific Plan.<sup>11</sup>

Building upon the Reuse Plan as its conceptual basis, the 1999 Specific Plan included additional detail in describing land use policies, allowable land uses and development standards for urban design. It described the then-existing transportation, infrastructure, and community services conditions and made recommendations for improvements that would be required to serve the island through its conversion to civilian uses. The 1999 Specific Plan identified the same 13 reuse areas as those of the Reuse Plan, plus the wetland and dredge pond areas located on the west side of the island. It also specified allowable land uses for each reuse area, and a development program based on a general understanding of existing facilities and resources.

The 1999 Specific Plan incorporated and included all of the relevant mitigation measures identified in the 1998 EIS/EIR (except those related to impacts resulting from relocation of the

<sup>8</sup> City of Vallejo, *Final Environmental Impact Statement /Environmental Impact Report for Disposal and Reuse of Mare Island Naval Shipyard*, November 17, 1998 (“1998 EIS/EIR”).

<sup>9</sup> City of Vallejo, *Mare Island Specific Plan*, March 1999 (“1999 Specific Plan”).

<sup>10</sup> 1999 Specific Plan, p. 1.

<sup>11</sup> 1999 Specific Plan, p. 8.

rifle range, since this use would not be allowed anywhere on Mare Island under the 1999 Specific Plan).<sup>12</sup>

## **1999 ADDENDUM**

In adopting the 1999 Specific Plan, the City Council approved an *Addendum to the Final Environmental Impact Statement / Environmental Impact Report for Disposal and Reuse of Mare Island Naval Shipyard* (the “1999 Addendum”).<sup>13</sup> The 1999 Addendum, together with the 1998 EIS/EIR, constitute the CEQA environmental documentation for the 1999 Specific Plan (collectively, the “1999 CEQA Documents”). In the Addendum, the City of Vallejo Development Services Department and the City Council determined that the 1999 Specific Plan did not represent a substantial change from the Reuse Plan, that there were no new significant impacts resulting from the project not already analyzed by the 1998 EIS/EIR, and that the 1999 Specific Plan would eliminate, or lessen the significance of, significant impacts identified in the 1998 EIS/EIR.

## **DEVELOPMENT PROJECTS IMPLEMENTING THE 1999 SPECIFIC PLAN**

In implementing aspects of the 1999 Specific Plan, the City has approved a 1.1-mile-long roadway running generally north/south through Reuse Areas 6 and 8 that would serve residential uses anticipated in those reuse areas under the 1999 Specific Plan (formerly the “Residential Parkway,” now “Flagship Drive”). The City has also approved several vesting tentative maps for Reuse Area 6 (6A, 6B, 6C) and for Reuse Area 8 (8A, 8B, 8C, 8D). These development projects would provide for new residential construction, reuse of existing buildings, demolition of existing buildings, roadway improvements, new roadways, and infrastructure. Environmental review of these projects is covered under the 1999 CEQA Documents and subsequent Addenda.

## **B. PROPOSED MARE ISLAND SPECIFIC PLAN**

As discussed above, the City of Vallejo proposes to amend and restate the 1999 Specific Plan. The Mare Island Specific Plan summarizes the changes and reasons behind the changes, as follows:

- State Lands Commission jurisdiction over Reuse Area 10A . . . requires changing the land use designation from residential to industrial, and relocating residential to other areas;

<sup>12</sup> City of Vallejo, *Mitigation Monitoring and Reporting Program, Mare Island Reuse Project*, February 1999.

<sup>13</sup> City of Vallejo, *Addendum to the Final Environmental Impact Statement / Environmental Impact Report for Disposal and Reuse of Mare Island Naval Shipyard*, February 1999 (1999 Addendum).

- More detailed information on the location of environmental contamination, especially in Reuse Area 2, results in the need to relocate residential uses to more suitable Reuse Areas;
- A revised land use program has been developed based on updated studies regarding land use programming, marketing, economic feasibility, employment, housing demand, education and other comparable topics that inform development planning decisions;
- Modifications in Reuse Area boundaries, including sub-divisions of several Reuse Areas, are made to provide logical planning units based on more accurate land surveys and to recognize current boundaries for the State Lands Commission, U.S. Fish and Wildlife Service, and other jurisdictional entities;
- More detailed information on, and criteria for, the design of transportation and infrastructure is provided for use in refining Specific Plan concepts; and
- Additional analyses have been conducted on historic and archaeological resources, including a survey of, and guidelines for, the preservation and reuse of historic structures.

## **C. ENVIRONMENTAL REVIEW OF THE MARE ISLAND SPECIFIC PLAN**

### **NEPA**

No review of the Mare Island Specific Plan in an EIS is required under the National Environmental Policy Act (NEPA). Implementation of the Mare Island Specific Plan would not entail any additional federal action requiring preparation of an Environmental Impact Statement (EIS) under NEPA that is not already covered by the 1998 EIS/EIR.

### **SUBSEQUENT EIR**

The City of Vallejo (the “City”), the Lead Agency, has determined that a Subsequent EIR is necessary for the Mare Island Specific Plan. *CEQA Guidelines* Section 15162 requires a Subsequent EIR in any of the following instances:

1. Substantial changes are proposed in the project which will require major revisions of the previous EIR . . . due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR . . . due to involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
3. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted.

As described in Chapter II, Project Description, the proposed Mare Island Specific Plan and G.P.A. would involve changes in the intensity and distribution of land uses on Mare Island. These changes could result in physical environmental impacts that differ from those already described in the 1999 CEQA Documents. In addition, changed circumstances and new information since certification of the 1998 EIS/EIR and the 1999 Addendum call for reanalysis of certain environmental topics in a Subsequent EIR.

If certified, this Subsequent EIR, together with the 1999 CEQA Documents, would constitute the environmental review for the proposed Mare Island Specific Plan under CEQA. The information in the 1999 CEQA Documents is summarized and incorporated into this Subsequent EIR by reference, as appropriate.

### **Initial Study**

On September 12, 2003, the City published and circulated an Initial Study and Notice of Preparation of a Draft Subsequent Environmental Impact Report for the Proposed Mare Island Amended and Restated Specific Plan (the “Initial Study/NOP”) for public review and comment. It is incorporated into this Subsequent EIR as Appendix A. On October 2, 2003, a public scoping meeting was held at the Mare Island Marketing Center to receive public input on the information that should be included in the Draft EIR. The City also received written comments on the scope of the Subsequent EIR.<sup>14</sup>

*CEQA Guidelines* Section 15063(c) provides that one purpose of an Initial Study is to “assist in the preparation of an EIR, if one is required by: focusing the EIR on the effects determined not to be significant, identifying the effects determined not to be significant, explaining the reasons for determining that potentially significant effects should not be significant . . .” Another purpose of an Initial Study is to avoid duplicative environmental review by determining “whether a previously prepared EIR could be used with the project.”

The Initial Study/NOP identifies those environmental impacts of the Mare Island Specific Plan that were already adequately addressed in the 1999 CEQA Documents, and/or could not result in any new significant environmental impact. It thereby focuses the scope of the Subsequent EIR on the potentially significant effects of the reuse of Mare Island under the Mare Island Specific Plan. Reanalysis of these effects is necessary due to changes in the land use program, changed circumstances or additional information available since certification of the 1999 EIS/EIR and adoption of the 1999 Addendum.

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<sup>14</sup> Public comments received in response to the Initial Study/NOP are available for public review, by appointment, at the City of Vallejo Development Services Department, as part of the project file.

### **Environmental Topics Requiring No Further Study in this Subsequent EIR**

The Initial Study/NOP concludes, with respect to certain Initial Study Environmental Checklist topics, that development under the Mare Island Specific Plan would not result in any new significant environmental impacts that are not already addressed in the 1998 EIS/EIR. These topics are Aesthetics, Agricultural Resources, Construction-Related Air Quality, Biological Resources, Archaeological Resources, Geology and Soils, Hazards and Hazardous Material, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Population and Housing, Public Services, Recreation, and Utilities and Service Systems (except Wastewater and Water Supply). The 1999 CEQA Documents continue to satisfy the environmental review requirements for the project with respect to these topics. Therefore, no further discussion of these topics is necessary in the Subsequent EIR.

### **Environmental Topics Requiring Further Study in this Subsequent EIR**

The Initial Study/NOP concludes that further assessment of impacts in a Subsequent EIR is only required with respect to the following topics: Historical Resources, Transportation/Traffic, Noise, Air Quality, and Utilities (Wastewater and Water Supply).

#### Historical Resources<sup>15</sup>

The Initial Study found that assessment of impacts to historical resources is called for in a Subsequent EIR, based on new information that was not available when the 1999 CEQA Documents were adopted. The proposed Mare Island Specific Plan includes the *Mare Island Historic Resources Project Guidelines*, which establish the criteria and procedures for review of construction, alteration and demolition of resources within the Mare Island Historic District. Additionally Lennar's development program for Reuse Areas 1B through 10A provides specific information on the proposed disposition of Contributing Resources in those reuse areas.

#### Transportation/Traffic

The Initial Study found that an updated assessment of transportation/traffic impacts under the Mare Island Specific Plan is called for in light of changes in the development program under the Mare Island Specific Plan, more detailed project information relating to the location and nature of uses, more detailed information relating to proposed roadway improvements, and the elimination of the proposed southern crossing bridge from the project. In addition, Vallejo has completed a

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<sup>15</sup> The Initial Study concludes that further analysis of impacts on Archaeological Resources (which may also be "Historical Resources" under CEQA) is not necessary in a Subsequent EIR. The Initial Study found that implementation of the *Revised Predictive Archaeological Model for Mare Island* and the *Archaeological Treatment Plan for Mare Island*, included as part of the proposed Mare Island Specific Plan, would reduce potential adverse impacts to archaeological resources to less-than-significant levels.

new citywide traffic model that was not available when the 1999 CEQA Documents were certified.

### Noise

The Initial Study concludes that an updated assessment of traffic noise impacts under the Mare Island Specific Plan is called for in light of an expanded development program, more detailed project information, and an updated traffic analysis.

After publication of the Initial Study, the City of Vallejo revised and adopted a new Noise Element of the General Plan, establishing new criteria for acceptable noise levels. Therefore, a discussion of operational noise in relation to these new criteria, and compared to the analysis in the 1999 CEQA Documents, is called for in the Subsequent EIR.

### Air Quality

The Initial Study concludes that an updated assessment of air quality impacts under the Mare Island Specific Plan is necessary. This is due to changes in the regulatory setting since the 1999 CEQA Documents, an expanded development program, the availability of more detailed project information, and an updated traffic analysis.

### Utilities

The Initial Study found that further discussion of wastewater collection facilities and water supply was required in a Subsequent EIR. *The Mare Island Reuse Infrastructure Study* (MIRIS), prepared as part of the Reuse Plan and adopted in the 1999 Specific Plan, identifies proposed utility system improvements and phasing. The proposed Mare Island Specific Plan would incorporate the *Master Utility Plans* (“MUP”).<sup>16</sup> The MUP analyzes utility system demand at buildout under the proposed Mare Island Specific Plan development program. It also discusses changed conditions that have occurred since preparation of the MIRIS.

## **D. SUBSEQUENT EIR ORGANIZATION**

Following this Introduction, this Subsequent EIR is organized as follows. Chapter I, Summary, summarizes the descriptions, analyses, and conclusions in this Subsequent EIR. Chapter II, Project Description, provides a detailed description of the proposed project’s location and characteristics, lists the project’s objectives, and discusses the intended uses of this SEIR and the required project approvals. Chapter III, Environmental Setting, Impacts and Mitigation, addresses the following environmental topics: A. Historical Resources; B. Transportation; C. Air

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<sup>16</sup> Chaudhary & Associates, *Master Utility Plans*, 2005.

Quality; D. Noise; and E. Utilities. Chapter IV, Other CEQA Considerations, includes a list of significant unavoidable impacts that would occur if the project were implemented. Chapter V, Alternatives to the Proposed Project, presents and assesses the impacts of four alternatives: a No Project Alternative, a Historic Preservation Alternative, a Reuse Area 1A Increased Development Alternative, and an Environmentally Superior Alternative. Chapter VI, Authors and Persons Consulted, lists the preparers of the report and those consulted in its preparation.

## **E. CEQA PROCESS**

This Draft Subsequent EIR is circulated for public review and comment for a period of 45 days. The City of Vallejo EIR process includes a public hearing by the Vallejo Planning Commission to receive oral comments on the Draft Subsequent EIR during the 45-day public comment period. Following receipt of oral and written comments received during the public comment period, a Final Subsequent EIR will be prepared containing the comments, responses to those comments, and clarifications to the Draft Subsequent EIR made in response to the comments.

The Vallejo City Council will certify a Final Subsequent EIR when it finds that it has been completed in compliance with CEQA and reflects the City's independent judgment and analysis.



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## **I. SUMMARY**

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### **A. OVERVIEW OF THE PROPOSED PROJECT**

The proposed Mare Island Specific Plan implements and furthers the general development policies for the reuse of Mare Island established under the Reuse Plan and 1999 Specific Plan. It contains Land Use, Cultural Resources, Urban Design, Transportation, and Utility Systems elements.

#### **Land Use Element**

The Land Use Element envisions a diverse mix of residential, employment-generating, civic, recreational, and visitor-oriented uses. The most notable change in the proposed Mare Island Specific Plan is an increase in the non-residential land use program over that of the 1999 Specific Plan (by approximately 2.7 million square feet). The Mare Island Specific Plan Land Use Program anticipates a total of approximately 9.0 million square feet (sq. ft.) of non-residential development in the Plan Area, comprised of the following: Office/Research & Development - 1.6 million sq. ft.; Light Industrial - 2.2 million sq. ft.; Retail - 0.5 million sq. ft.; Warehouse - 1.4 million sq. ft.; Heavy Industrial - 2.1 million sq. ft.; Educational/Civic - 1.2 million sq. ft.

The locations of land uses in the Mare Island Specific Plan are generally consistent with those envisioned by the Reuse Plan and the 1999 Specific Plan, and considered in the 1999 CEQA Documents. However, in Reuse Area 10A, the Mare Island Specific Plan calls for Mixed Use Light Industrial and Heavy Industrial uses rather than the Residential and Retail uses envisioned by the Reuse Plan and 1999 Specific Plan and considered in the 1999 CEQA Documents. Residential uses have been redistributed to other areas (primarily Reuse Areas 3, 6, and 8). The boundaries of Reuse Area 7 (Open Space) have been changed from those of the 1999 Specific Plan, as a result of the residential redistribution to Reuse Areas 6 and 8. The general area encompassed by Reuse Area 2 under the Reuse Plan is changed to 2A (Town Center) and 2B (West Business Park) under the Mare Island Specific Plan. Residential uses are excluded from Reuse Area 10B and relocated to other reuse areas. As with the 1999 Specific Plan, Reuse Area 4 (the Historic Core) under the Mare Island Specific Plan is envisioned as a visitor-oriented area in an historic setting with retail and civic uses. Under the Mare Island Specific Plan, the area would also include Mixed Use Office and Light Industrial uses.

The Mare Island Specific Plan includes a Lennar Development Plan, which implements the land use program in the Lennar Reuse Areas 1B through 10A. The Lennar Development Plan specifies the location of, and projected square footages by use for, existing retained buildings (both Contributing Resources in the Mare Island Historic District, and Non-Contributing) and for

new construction (both within the Mare Island Historic District and outside the District). The Lennar Development Plan also identifies 183 Contributing Resources of a total of 502 Contributing Resources in the Mare Island Historic District that are proposed for demolition to implement the Lennar Development Plan.

### **Cultural Resources Element**

The Mare Island Specific Plan, Chapter 2, includes a new Cultural Resources Element. This element includes Historic Project Guidelines (“Historic Guidelines”) as an appendix. The purposes of the proposed Historic Guidelines are to articulate the City’s preservation and reuse goals and objectives for the Mare Island Historic District; detail the regulatory framework for preservation and reuse; establish a classification system for Contributing Resources; provide standards for treatment of historic resources; provide District and area review criteria; define a review process for alterations and new construction within the District; define key terms and concepts, including the concept of project site; provide demolition criteria for resources that are proposed to be demolished; provide a separate catalogue of the resources, their characteristics, and designation status; and provide recommended and not recommended actions for each resource.

The Cultural Resources Element of the Mare Island Specific Plan also incorporates a *Revised Predictive Archaeological Model for Mare Island* and an *Archaeological Treatment Plan for Mare Island*. The predictive model/treatment plan identifies and describes archaeological features that occur or are likely to occur on Mare Island and describes the appropriate treatment measures for archaeological resources that may be encountered in the course of construction.

### **Urban Design Element**

The new Urban Design Element, Chapter 4 of the Mare Island Specific Plan, furthers the 1999 Specific Plan’s Urban Design Policies, providing greater specificity. It is intended to preserve Mare Island’s unique historic and natural setting by establishing design guidelines and standards governing site design, landscape design, architectural design of additions and new infill buildings, site furnishings, and signage. This element also includes the Mare Island Sign Program as an appendix.

### **Transportation Element**

The Transportation Element, Chapter 5.0, articulates Mare Island Transportation policies intended to promote and enhance the movement of goods to and from Mare Island, to create a network of bicycle and pedestrian paths combined with transit service that minimizes automobile traffic, and to provide for a streetscape design that is sensitive to the historic nature of Mare Island. Vehicular access to Mare Island would continue to be via the Causeway from the east and

the State Route 37 Interchange to the north. A southern crossing bridge, envisioned by the Reuse Plan and the 1999 Specific Plan, is no longer planned under the Mare Island Specific Plan. The Mare Island Specific Plan includes detailed criteria for the design of specific Mare Island street improvements. The proposed street and roadway system is hierarchical, ranging from four-lane boulevards to narrow historic district lanes and alleyways.

The majority of intersections on Mare Island are expected to remain unsignalized under the Mare Island Specific Plan, with stop signs on the east-west streets to control access to major north-south corridors, although traffic signals may be necessary on Railroad Avenue at “G,” “A” and Connolly (formerly 3<sup>rd</sup>) Streets, and on Azuar Drive (formerly Cedar Avenue) at “G” and “A” Streets, and at Flagship Drive.

The Mare Island Specific Plan calls for local transit service to serve Mare Island, running in a loop through the central portion of the island. It envisions an interconnected bicycle and pedestrian network. The Mare Island Specific Plan presents recommended parking ratios for various land uses, and recommends that criteria be developed for allowing reduced parking ratios for shared use of parking facilities by complementary mixed-uses to minimize the size of required parking facilities.

Chapter 6 of the proposed Mare Island Specific Plan would incorporate the *Master Utility Plans*. The Master Utility Plans would supersede the infrastructure studies adopted under the 1999 Specific Plan. They analyze utility system demand at buildout under the proposed Mare Island Specific Plan development program, and identify proposed utility system improvements and phasing.

The Mare Island Specific Plan also describes the provision of other services, including Public Safety, Education, Parks and Open Space, Solid Waste Disposal and Recycling, Cable Television, and Broadband.

## **B. ENVIRONMENTAL EFFECTS FOUND TO BE LESS-THAN-SIGNIFICANT**

On September 12, 2003, the City published and circulated an Initial Study and Notice of Preparation of a Draft Subsequent Environmental Impact Report for the Proposed Mare Island Amended and Restated Specific Plan (the “Initial Study/NOP”) for public review and comment. This document is incorporated into this Subsequent EIR as **Appendix A**.

The Initial Study/NOP identifies those environmental impacts of the Mare Island Specific Plan that were already adequately addressed in the 1999 CEQA Documents, and/or could not result in any new significant environmental impact. It thereby focuses the scope of the Subsequent EIR on

the potentially significant effects of the reuse of Mare Island under the Mare Island Specific Plan. The Initial Study/NOP concludes, with respect to certain Initial Study Environmental Checklist topics, that development under the Mare Island Specific Plan would not result in any new significant environmental impacts that are not already addressed in the 1998 EIS/EIR. These topics are Aesthetics, Agricultural Resources, Construction-Related Air Quality, Biological Resources, Archaeological Resources, Geology and Soils, Hazards and Hazardous Material, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Population and Housing, Public Services, Recreation, and Utilities and Service Systems (except Water Supply and Wastewater). The 1999 CEQA Documents continue to satisfy the environmental review requirements for the project with respect to these topics. Therefore, no further discussion of these topics is necessary in the Subsequent EIR.

This Subsequent EIR further assesses potential impacts relating to Historical Resources, Transportation/Traffic, Noise, Air Quality, and Water Supply and Wastewater topics. It finds that the following potential project impacts under the above topics would be less than significant and require no mitigation.

- Impact A.3: The proposed demolition of Component Contributors would impact each of these Contributing Resources at the level of individual resource.
- Impact B.5: Full buildout of the proposed project would contribute to the demand for bicycle and pedestrian facilities in the project area.
- Impact C.3: Operation including occupation and use of the development would cause localized carbon monoxide hot spots.
- Impact C.5: Development of the Mare Island Specific Plan would be consistent with adopted air quality management plans.
- Impact E.1: Full buildout of the proposed project would result in an increased demand for water conveyance facilities.
- Impact E.2: Implementation of the Mare Island Specific Plan would increase the demand for water. This increase would not exceed the water supply available to the City of Vallejo in normal, single dry, or multiple dry years.
- Impact E.4: Full buildout of the proposed project would result in an increased demand for wastewater collection and transport facilities.

## **C. ENVIRONMENTAL IMPACTS AND MITIGATION**

Under CEQA and the *CEQA Guidelines*, a significant effect on the environment is defined as a substantial, or potentially substantial, adverse change in any of the physical conditions within the areas affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. Significance criteria are based on standards identified in CEQA, the *CEQA Guidelines*, City and agency policy or regulation, and/or professional

judgment. Implementation of the proposed project would result in potentially significant impacts on some of these resources.

The Initial Study and Notice of Preparation determined that the proposed project could potentially result in significant impacts related to the following topics: Historical Resources, Transportation/Traffic, Noise, Air Quality, and Water Supply. Chapter III of this Subsequent EIR, Environmental Setting, Impacts and Mitigation, describes the existing conditions with respect to each of these topics (Setting), identifies impacts of the proposed project related to these topics, and identifies mitigation measures that could be implemented by the City and/or project sponsors to reduce the identified significant impacts to a less-than-significant level.

**Table I-1, Summary of Impacts and Mitigation Measures**, presented at the end of this chapter summarizes the analyses contained in Chapter III. Environmental impacts and the degree of significance are listed, followed by mitigation measures identified in this Subsequent EIR, and the level of significance after mitigation.

## D. PROJECT ALTERNATIVES

The alternatives to the Mare Island Specific Plan analyzed in the SEIR are as follows:

- No Project Alternative:** There are two No Project scenarios: the No Development Alternative, and Development Under the Existing 1999 Specific Plan Alternative.

The No Development Alternative creates no change to existing conditions. Under this alternative, Mare Island would remain in its existing condition. Existing land uses would continue in their current location and intensity. Buildings would remain largely vacant. No new land uses would be introduced. No buildings would be demolished and no new buildings would be constructed.

The Development Under the Existing 1999 Specific Plan Alternative assumes development of Mare Island would proceed according to the 1999 Specific Plan.
- Historic Preservation Alternative:** This alternative would preserve a greater number of Contributing Resources in the Mare Island Historic District than under the proposed project. Retained Contributing Resources would be reused as multi-unit residential buildings if they are 2,000 square feet or larger (totaling about 500 additional dwelling units occupying approximately 900,000 square feet). Additional building area from Contributing Buildings retained for residential use (approximately 900,000 sq. ft.) would be offset by a decrease, in the same amount, of non-residential/non-civic uses, distributed proportionally across all non-residential/non-civic land use categories and all reuse areas. Full build-out under the Historic Preservation Alternative would result in a total of about 6.47 million square feet of non-residential/non-civic development in reused and new buildings in the Plan Area. The Preservation Alternative would also include a relaxed parking rate for projects that reuse Contributing Resources, which would be 70 percent of the amount that would otherwise be required for the same use(s) under the Mare Island Specific Plan.

- Reuse Area 1A Increased Development Alternative: The Area 1A - Increased Development Alternative would increase the amount of development in Reuse Area 1A, adding a total of about 678,000 sq. ft. of non-residential development over that of the proposed project. In all other respects, the Area 1A Increased Development Alternative would resemble the proposed project. Reuse Areas 1B through 10A would have the same development program as that of the proposed project.

## **E. POTENTIAL AREAS OF CONTROVERSY**

Section 15123 of the *CEQA Guidelines* requires the agency preparing an EIR to disclose any areas of controversy about the project that became known to it during the preparation of the EIR. Members of the Architectural Heritage and Landmarks Commission and the public have expressed concern over the impact of the proposed project on the historical resources.

Table I.1: Summary of Impacts and Mitigation Measures			
Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
<p><b>Cultural Resources</b></p> <p><b>A.1</b> The proposed demolition of Contributing Resources would diminish the integrity of the Mare Island Historic District.</p>	S	<p><b>A.1a:</b> Retain all Contributing Resources at the Northern End of the Historic District.</p> <p>All Contributing Resources within Reuse Areas 2A, 2B, 3A, and 6 north of 5<sup>th</sup> Street shall be retained. Retention of the resources would maintain the justification for the Mare Island Historic District boundaries in the northern portion of the District, and thereby reduce Impact A.1 to a less-than-significant level.</p> <p><b>A.1b:</b> Landmarks Commission Review of Demolition or Relocation of Contributing Resources at the Northern End of the Historic District.</p> <p>All Contributing Resources within Reuse Areas 2A, 2B, 3A and 6, north of 5<sup>th</sup> Street shall be retained, except that Contributing Resources may be demolished or relocated subject to Landmarks Commission review and approval, on a case-by-case basis, based on a report by a qualified historic preservation professional, upon the following findings: that such a demolition meets the applicable District-Level Demolition Criteria in Historic Guidelines Section 6.1; that such a relocation meets the applicable criteria for Relocated Resources in Historic Guidelines Section 5.3.2; that the Historic District boundaries would continue to be justified after such demolition or relocation.</p> <p>Implementation of this measure would reduce Impact A.1 to a less-than-significant level. If it cannot be found that the boundaries of the Historic District would continue to be justified after demolition or relocation of a Contributing Resource, such demolition or relocation would result in a significant unavoidable impact on the integrity of the Mare Island Historic District.</p>	LS

(cont'd.)

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Table I.1: Summary of Impacts and Mitigation Measures			
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		<p><b>A.1c:</b> Implement the Interpretive Program.</p> <p>Implementation of an Interpretive Program, as described in the Mare Island Specific Plan Section 8.4.1 at the conceptual level, could partially mitigate the significant adverse impact of demolition on the integrity of the Mare Island Historic District. However, an interpretive program would not reduce significant impacts to a less-than-significant level.</p> <p><b>A.2:</b> Require Relocation Rather Than Demolition of Notable Resources Where Appropriate.</p> <p>In order to mitigate the effects of demolishing Notable Resources in the Historic District, the criteria for allowing demolition of Notable Resources could include the following finding: "Relocation of the Notable Resource consistent with both the Secretary's Standards and the technical preservation report entitled <i>"Moving Historic Buildings"</i> is not reasonably feasible."</p> <p>Relocation of a Notable Resource consistent with both the Secretary's Standards and the technical preservation report entitled <i>"Moving Historic Buildings"</i> by John Obed Curtis (1978) would reduce this impact to a less-than-significant level in those instances where this was feasible. Where not feasible, demolition of a Notable Resource would be permitted and would have a significant and unavoidable impact on an historical resource.</p> <p>No mitigation necessary.</p>	
<b>A.2</b> The proposed demolition of Notable Resources would impact each of these Contributing Resources at the level of the individual resource.	S		SU
<b>A.3</b> The proposed demolition of Component Resources could impact each of these Contributing Resources at the level of individual resource.	LS		NA
<b>A.4</b> Proposed new infill construction would impact remaining historical resources. <i>(cont'd.)</i>	S	<b>A.4:</b> Implement the <i>Mare Island Historic District Design Guidelines</i> by requiring that all new construction or alterations within the Historic District comply with the Historic District Design Guidelines.	LS

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		The Historic District Design Guidelines describe and illustrate how to apply the Secretary of the Interior's Standards to the specific conditions of Mare Island Historic District. The Historic District Design Guidelines describe the design character of the Historic District, provide illustrative guidelines for the treatment of Mare Island's Contributing Resources under the Secretary of the Interior's Standards, and provide design guidelines for new construction. The Historic District Design Guidelines would be used by City staff and the Architectural Heritage and Landmarks Commission to evaluate the appropriateness of work proposed within the Mare Island Historic District. Implementation of the <i>Mare Island Historic District Design Guidelines</i> would mitigate impacts of new infill construction on remaining historic resources. Note, however, that they would not mitigate impacts of demolition of Contributing Resources that would precede new construction.	
A.5	S	Same as Mitigation Measure A.4.	LS
A.6	S	A.6a: Same as Mitigation Measure A.4. A.6b: Cultural Landscape Evaluation.  In addition to utilizing the Secretary's <i>Guidelines for Cultural Landscapes</i> , a cultural landscape evaluation should be completed in order to document the existing landscape features, which are historically and architecturally significant to the Historic District. Along with the cultural landscape evaluation, a detailed map with the significant landscape features should be provided, in order to identify and preserve those features that are significant to the Historic District. Currently, the <i>Historic Guidelines</i> do not provide for any specific historic landscape features or area. Should this mitigation measure be pursued, a qualified consultant would be required to complete the cultural landscape evaluation.	LS

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**Table I.1: Summary of Impacts and Mitigation Measures**

	Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
A.7	The proposed project would contribute to cumulative impacts on Mare Island historical resources.	S	No mitigation available.	SU
<b>Transportation and Traffic</b>				
B.1	Traffic generated by full buildout of the proposed project would cause levels of service to degrade to unacceptable levels at 10 intersections in the near-term Existing Plus Project scenario.	S	<p><b>B.1:</b> The following mitigations are necessary to address impacts of the Existing Plus Project scenario. The City of Vallejo or the project sponsor shall construct the intersection improvements listed below as new buildings are constructed and occupied in the Plan Area. The City shall establish a financing mechanism and the project sponsor shall pay a fair share of the costs of the traffic mitigation at off-island locations; the project sponsor shall construct improvements at Mare Island intersections.</p> <p><b>B.1a: Intersection 3 – Walnut Street and G Street.</b> Widen G Street to provide a third eastbound lane between Walnut Street and Railroad Avenue, to provide a receiving lane for the northbound right turn movement from Walnut Street to eastbound G Street. Prohibit northbound left turn movements from Walnut Street onto westbound G Street.</p> <p><b>B.1b: Intersection 4 – Railroad Avenue and G Street.</b> Widen the northbound approach on Railroad by approximately 24 feet to provide a third through lane and a second right-turn lane. Widen the southbound approach on Railroad Avenue to provide a second left-turn lane. Widen the eastbound approach on G Street to provide three through lanes. (LOS D – p.m.)</p> <p>Note that this measure would require relocation of a part of Resource 491, the wall that lines this portion of G Street on the north side. Resource 491 is a Notable Resource and as such, is an individually significant Historical Resource under CEQA. Relocation of this wall would result in a significant impact to this historical resource if it would damage the physical integrity of this historical resource and would result in a loss of its integrity of</p>	LS

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**Table I.1: Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>location.</p> <p><b>B.1c: Intersection 6 – Wilson Avenue and SR 37 EB Ramps.</b> Install a traffic signal. Widen the eastbound freeway off-ramp by approximately 12 feet to provide separate left- and right-turn lanes at the Wilson Avenue intersection. (LOS D – p.m.)</p> <p><b>B.1d: Intersection 8 – Mare Island Way and Tennessee Street.</b> The project sponsor shall widen the northbound approach on Mare Island Way by approximately 12 feet and restripe to provide two left-turn lanes, one shared left-through lane, a through lane, and a right-turn lane. The project sponsor shall also configure the southbound departure lanes on Mare Island Way to allow a free right-turn movement from the eastbound approach from the Causeway.</p> <p><b>B.1e: Intersection 9 - Sonoma Boulevard and Tennessee Street.</b> Add an exclusive right-turn lane on the northbound approach on Sonoma Boulevard.</p> <p><b>B.1f: Intersection 12 - Tennessee Street and I-80 WB Ramps.</b> Signalize intersection. (LOS B – p.m.)</p> <p><b>B.1g: Intersection 14 – Humboldt Street and Tennessee Street.</b> Add an exclusive right-turn signal indication on the southbound approach overlapping with the eastbound left-turn indication.</p> <p><b>B.1h: Intersection 17 – Sonoma Boulevard and Curtola Parkway.</b> Revise signal timings. (LOS D – p.m.)</p> <p><b>B.1i: Intersection 18 - Solano Avenue and Curtola Parkway.</b> Revise signal timings. (LOS C – p.m.)</p> <p>With implementation of these mitigation measures, the service</p>	
<i>(cont'd.)</i>			

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		<p>levels at all intersections would improve to acceptable levels. Mitigation measures implemented at the ramp junctions along I-80 may involve construction within the jurisdiction of the California Department of Transportation. An encroachment permit may be required from Caltrans before these measures can be implemented. The traffic signal installation included in Measure B.1c (not including the street widening) and Measures B.1g, B.1h, and B.1i are included in the Transportation Impact Mitigation Fee Study, to which the project sponsor would contribute. The project sponsor plans to implement Measures B.1a and B.1b.</p> <p>The widening included in Measure B.1c and Measures B.1e, and B.1f have no established funding mechanism; therefore impacts at these intersections would remain significant and unavoidable if the project sponsor's fair share were not sufficient to accomplish the measure and other funding sources were not established. Other development projects proposed and under consideration in Vallejo would also contribute to cumulative impacts at these intersections, as discussed under Impact B.8. With cumulative growth in the future, three intersections, at Wilson Avenue / SR 37 EB Ramps (6), at Sonoma Boulevard / Tennessee Street (9) and at Tennessee Street / I-80 westbound ramps (12), are expected to operate at acceptable LOS, as shown in Table III.B-8 on p. III.B.34, as traffic volumes grow and motorists choose different, less congested routes. The City will monitor these intersections and will require the project sponsor to cooperate with the City in the formation of a funding mechanism to fund any of the mitigation measures that are found to be necessary in the future; the project sponsor shall contribute a fair share of the cost of mitigation through this funding mechanism. If required, the project sponsor shall advance additional funds, subject to a reimbursement agreement with the City, to ensure completion of these measures. With implementation of these funding measures, impacts would be reduced to less-than-significant levels.</p>	

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<b>B.2</b> Traffic generated by full buildout of the proposed project would cause average delays to increase by more than five seconds at three intersections that operate at LOS E or F without the project.	S	<p><b>B.2:</b> The City of Vallejo shall construct the intersection improvements listed below as new buildings are constructed and occupied in the Plan Area. The City shall establish a financing mechanism and the project sponsor shall pay a fair share of the costs of the traffic mitigation.</p> <p><b>B.2a: Intersection 13 - Admiral Callaghan Lane and I-80 EB Ramps.</b> Signalize intersection. (LOS B – p.m.)</p> <p><b>B.2b: Intersection 15 - Humboldt Street and I-80 EB Ramps.</b> Signalize intersection. (LOS A – p.m.)</p> <p>Implementation of these mitigation measures would reduce the significant impacts to less-than-significant levels. These measures have no established funding mechanism; therefore impacts at these intersections would remain significant and unavoidable if the project sponsor's fair share is not sufficient to accomplish them and other funding sources are not established. When signal warrants are met at these intersections, the City shall install signals. The project sponsor shall cooperate with the City in the formation of a funding mechanism to fund installation. If required, the project sponsor shall advance additional funds, subject to a reimbursement agreement with the City, to ensure completion of these measures. With implementation of these funding measures, impacts would be reduced to less-than-significant levels.</p>	LS
<b>B.3</b> Traffic generated by full buildout of the proposed project would cause levels of service to degrade to unacceptable levels on two freeway segments and three local street segments in the near-term Existing Plus Project scenario. ( <i>cont'd.</i> )	S	<p><b>B.3a – State Route 37:</b> The California Department of Transportation will complete the current improvement project on SR 37 that will provide two lanes in each direction west of SR 29. The improvement will provide LOS C operations in the eastbound direction and LOS B in the westbound direction.</p> <p><b>B.3b – Mare Island Causeway:</b> The project sponsor shall construct intersection improvements at the intersection of Railroad</p>	LS

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		<p>Avenue with G Street to ensure that the westbound segment of the Causeway would operate at LOS D (see Mitigation Measure B.1b).</p> <p><b>B.3c – Curtola Parkway:</b> The City of Vallejo shall construct intersection improvements at the intersections of Curtola Parkway with Solano Way and Sonoma Avenue to ensure that the segment will operate at LOS D (see Mitigation Measures B.1h and B.1i). The City shall establish a financing mechanism and the project sponsor shall pay a fair share of the costs of the mitigation.</p> <p><b>B.3d – Railroad Avenue:</b> The project sponsor shall widen Railroad Avenue to provide three northbound lanes approaching G Street. The improvement would provide LOS D operations on the street segment.</p> <p>Measure B.3a is under construction, the City has included Measure B.3c in its Transportation Impact Mitigation Fee Study, and Measures B.3b and B.3d are included in the Mare Island development program. Therefore impacts to road segments would be reduced to a less-than-significant level.</p> <p><b>B.4:</b> The Project Applicant shall construct parking facilities based on the requirements described below as existing buildings are renovated or remodeled and as new buildings are constructed and occupied in the Plan Area.</p> <p>For historic buildings that are being reused, the recommended parking requirements may be applied provided that a justification for a rate reduction of 30-35% is provided for City staff review in each unit plan for buildings that could accommodate office or light industrial uses at any time in the future.</p> <p>For new construction, the parking requirements in the City of Vallejo Zoning Ordinance shall be applied for office uses. For</p>	
<p><b>B.4</b> Full buildout of the proposed project would affect parking demand in the project vicinity.</p> <p><i>(cont'd.)</i></p>	S		LS

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<b>Table I.1: Summary of Impacts and Mitigation Measures</b>			
<b>Impact</b>	<b>Level of Significance Prior to Mitigation</b>	<b>Mitigation Measure(s)</b>	<b>Level of Significance After Mitigation</b>
		<p>new construction of light industrial uses, a parking rate of 1.25 stalls per 1,000 square feet shall be applied. The project applicant shall prepare a parking management plan for the central historic district. The plan shall provide a shared parking analysis.</p> <p>With implementation of the mitigation measure, the parking provided by the proposed project would be adequate and the impact would be reduced to a less-than-significant level.</p> <p>Mitigation not necessary.</p>	<b>NA</b>
<b>B.5</b> Full buildout of the proposed project would contribute to the demand for bicycle and pedestrian facilities in the project area.	<b>LS</b>		
<b>B.6</b> The full buildout of the proposed project would increase demand for public transit service to an area that is not currently served by transit.	<b>S</b>	<p><b>B.6:</b> The project sponsor, the City of Vallejo, and/or other revenue sources shall fund the implementation of transit service as new buildings are constructed and occupied in the Plan Area, as described in the Mare Island Specific Plan, Chapter 5.6, and as shown on Figure II-4 of this Subsequent EIR. The project sponsor shall contribute its fair-share of the costs associated with providing public transit service to the Plan Area.</p> <p>If all costs to implement this mitigation measure are provided, the transit service provided in the Plan Area would be adequate and the impact would be reduced to a less-than-significant level. As no funding source is assured, this impact could be significant and unavoidable.</p>	<b>SU</b>
<b>B.7</b> The full buildout of the proposed project would increase demand for rail service and would increase vehicular traffic, resulting in rail/vehicle conflict. <i>(cont'd.)</i>	<b>S</b>	<p><b>B.7:</b> The project sponsor, the City of Vallejo, and/or other revenue sources shall fund the implementation of rail improvements as new buildings are constructed and occupied in the Plan Area. The project sponsor shall contribute its fair-share of the costs associated with providing rail improvements in the Plan Area.</p> <p>If all costs to implement this mitigation measure are provided, the rail service in the Plan Area would be adequate and the impact</p>	<b>LS</b>

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**Table I.1: Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
<p><b>B.8</b> Traffic generated by full buildout of the proposed project would affect traffic levels of service at local intersections in the project vicinity in the long-term 2020 Future Baseline Plus Project scenario.</p>	S	<p>would be reduced to a less-than-significant level.</p> <p><b>B.8:</b> The project sponsor shall construct the intersection improvements listed below as new buildings are constructed and occupied in the Plan Area. The City shall establish a financing mechanism and the project sponsor shall pay a fair share of the costs of the traffic mitigation.</p> <p><b>B.8a: Intersection 3 - Walnut Street and G Street.</b> Widen G Street to provide a third eastbound lane between Walnut Street and Railroad Avenue, to provide a receiving lane for the northbound right turn movement from Walnut Street to eastbound G Street. Prohibit northbound left turn movements from Walnut Street onto westbound G Street.</p> <p><b>B.8b: Intersection 4 - Railroad Avenue and G Street.</b> Construct all improvements currently planned by the project sponsor and the City of Vallejo. In addition, the project sponsor shall: widen the northbound approach on Railroad Avenue by 12 feet to provide a second right-turn lane; widen the southbound approach on Railroad Avenue by 12 feet to provide a second left-turn lane; widen eastbound G Street to provide a third through lane, merging to two lanes east of Railroad Avenue; widen the westbound approach on G Street to provide a right-turn lane; and, to accommodate widening the eastbound merge area on G Street, prohibit future street or driveway access to G Street east of Railroad Avenue. This would require motorists destined for the parking lot adjacent to the Welcome Center (Building 485) to travel south on Railroad Avenue, turn east on E Street and then north along the existing Nimitz Avenue right-of-way. While inconvenient, the impact of this mitigation measure would not be a significant environmental effect. (LOS D – p.m.)</p>	LS
<p>(cont'd.)</p>		<p>Note that this measure would require relocation of a part of Resource 49I, the wall that lines this portion of G Street on the</p>	

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**Table I.1: Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>north side. Resource 491 is a Notable Resource and as such, is an individually significant Historical Resource under CEQA. Relocation of this wall would result in a significant impact to this historical resource if it would damage the physical integrity of this historical resource and would result in a loss of its integrity of location.</p> <p><b>B.8c: Intersection 8 - Mare Island Way/Wilson Street and Mare Island Causeway/Tennessee Street.</b> The project sponsor shall widen the northbound approach on Mare Island Way by approximately 12 feet and restripe to provide two left-turn lanes, one shared left-through lane, a through lane and a right-turn lane. The project sponsor shall also reconfigure the southbound departure lanes on Mare Island Way to allow a free right-turn movement from the eastbound approach from the Causeway. (LOS D – p.m., LOS D – a.m.)</p> <p><b>B.8d: Intersection 17 - Sonoma Boulevard and Curtola Parkway.</b> Widen the northbound approach on Sonoma Boulevard to accommodate two left-turn lanes, one through lane and one shared through-right lane. (LOS D – p.m., LOS D – a.m.)</p> <p>With implementation of these mitigation measures, the service levels at all intersections would improve to LOS D or better. Measures B.8a, B.8b, and B.8c would be implemented by the project sponsor as part of the Mare Island development program and these impacts would be reduced to less-than-significant levels. To the extent that funding is not assured for Measure B.8d, these impacts would remain significant and unavoidable. Other development projects proposed and under consideration in Vallejo would contribute to cumulative impacts at these two intersections. The City will monitor these intersections and will require the project sponsor to cooperate in the formation of a funding mechanism to fund mitigation measures at these two intersections.</p>	

(cont'd.)

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Table I.1: Summary of Impacts and Mitigation Measures			
Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>The project sponsor shall contribute a fair share of the cost of mitigation. If required, the project sponsor shall advance additional funds, subject to a reimbursement agreement with the City, to ensure completion of these measures. With implementation of these funding measures, impacts would be reduced to less-than-significant levels.</p>	
<b>B.9</b>	S	<p><b>B.9a: Intersection 15 – Humboldt Street and I-80 Eastbound Ramps.</b> Signalize the intersection. (LOS A – p.m.)</p> <p><b>B.9b: Intersection 18 - Solano Avenue and Curtola Parkway.</b> Add an exclusive right-turn lane on the southbound approach. (LOS D – p.m.)</p> <p>When a signal warrant is met at the intersection of Humboldt Street and the I-80 eastbound ramps, the City shall install a signal. The project sponsor shall cooperate with the City in the formation of a funding mechanism to fund installation and shall contribute a fair share to the cost of installation. The intersection of Solano Avenue and Curtola Parkway is included in the Transportation Impact Mitigation Fee Study; the project sponsor will be required to contribute a fair share to improvements at this location. If required, the project sponsor shall advance additional funds, subject to a reimbursement agreement with the City, to ensure completion of these measures. With implementation of these funding measures, impacts would be reduced to less-than-significant levels.</p>	LS
<b>B.10</b>	S	<p><b>B.10: SR 37 east of Mare Island.</b> The California Department of Transportation shall widen the Napa River Bridge on SR 37 from four lanes to six lanes.</p> <p>With implementation of this mitigation measure, the service levels at all roadway segments would improve to acceptable levels. Mitigation Measure B.10, along SR 37, would involve widening the Napa River Bridge, a facility that is within the jurisdiction of</p>	SU

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Table I.1: Summary of Impacts and Mitigation Measures		
Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)
		the California Department of Transportation. The City of Vallejo would have no jurisdiction to implement this measure, and the cost of implementing this measure on a regional-serving facility would not be reasonable for any individual developer or group of local developers. As funding is not assured for this measure, the impact is significant and unavoidable.
<b>B.11</b> Traffic generated by full buildout of the proposed project with the 2020 Baseline would cause several impacts to study intersections and roadway segments that are significant and unavoidable.	<b>S</b>	<p><b>B.11: Implement Transportation Demand Management (TDM) Plan.</b> The project sponsor shall develop and implement a TDM Plan that will reduce the ultimate number of trips generated by the project by 15 percent. The project sponsor shall fund the ongoing annual TDM Plan costs. The TDM Plan could include a number of the following suggested measures, as needed to meet the overall reduction goal.</p> <ul style="list-style-type: none"> <li>• Mare Island TDM Coordinator &amp; Information Kiosks</li> <li>• Coordination of a Rideshare Matching System</li> <li>• Central Historic District Transit Center</li> <li>• Operation of Mare Island Shuttle linking to Vallejo Destinations</li> <li>• Operation of Mare Island Express Buses linking to Regional Destinations</li> <li>• Development of Pedestrian Corridors to Transit Center/Stops</li> <li>• Transit Amenities (bus stops, shelters, etc.)</li> <li>• Transit Pass Sale and/or Subsidy</li> <li>• Preferential Carpool and/or Vanpool Parking</li> <li>• Development of Additional On-Island Housing</li> <li>• On-site Bike Lockers</li> </ul> <p>With implementation of this mitigation measure, the number of vehicular trips would be reduced, thereby reducing traffic impacts and parking needs. The implementation of the TDM Plan would not eliminate the significant and unavoidable impacts described above, but would reduce the level of impact.</p>
		Level of Significance After Mitigation
		<b>SU</b>

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**Table I.1: Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
<p><b>Air Quality</b></p> <p><b>C.1</b> Building demolition, renovation, and construction activities would cause temporary emissions of dust.</p> <p><i>(cont'd.)</i></p>	S	<p><b>C.1:</b> The following dust control practices would mitigate fugitive dust impacts during demolition, renovation, and construction activities:</p> <p>Basic control measures to be implemented at all construction sites:</p> <ul style="list-style-type: none"> <li>• Water all active construction areas at least twice daily.</li> <li>• Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.</li> <li>• Pave, apply water three times daily, or apply (nontoxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.</li> <li>• Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at construction sites.</li> <li>• Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.</li> </ul> <p>Enhanced control measures to be implemented at construction sites larger than four acres in area in conjunction with basic measures above:</p> <ul style="list-style-type: none"> <li>• Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).</li> <li>• Enclose, cover, water twice daily, or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.)</li> <li>• Limit traffic speeds on unpaved roads to 15 mph.</li> <li>• Install sandbags or other erosion control measures to prevent silt runoff to public roadways.</li> <li>• Replant vegetation in disturbed areas as quickly as possible.</li> </ul> <p>Following are optional control measures that are strongly encouraged for large construction sites located near sensitive receptors, or that for any other reason may warrant additional</p>	LS

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**Table I.1: Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>emissions reductions. To the extent that these measures are feasible, implementation would further reduce dispersion of fine particulates.</p> <ul style="list-style-type: none"> <li>• Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site.</li> <li>• Install wind breaks, or plant trees/vegetative wind breaks at windward side(s) of construction areas.</li> <li>• Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph.</li> <li>• Limit the area subject to excavation, grading, and other construction activity at any one time.</li> </ul> <p>To reduce emissions from construction equipment exhaust:</p> <ul style="list-style-type: none"> <li>• Use alternative fueled construction equipment, when feasible.</li> <li>• Minimize idling time (e.g., 5-minute maximum).</li> <li>• Maintain properly tuned equipment.</li> <li>• Limit the hours of operation of heavy-duty equipment and/or the amount of equipment in use.</li> </ul>	
<p><b>C.2</b> Operation including occupation and use of the development would cause long-term traffic-related emissions of ozone precursors and particulate matter.</p> <p><i>(cont'd.)</i></p>	S	<p><b>C.2:</b> Incorporating the following design features would reduce traffic-related emissions:</p> <p>For commercial, institutional, and industrial uses within the Specific Plan area:</p> <ul style="list-style-type: none"> <li>• Encourage area tenants to implement carpool/vanpool programs, e.g., carpool ride matching for employees, assistance with vanpool formation, provision of vanpool vehicles, etc.</li> <li>• Construct transit facilities such as bus turnouts/bus bulbs, benches, shelters, etc.</li> <li>• Design and locate new buildings to facilitate transit access, e.g., locate building entrances near transit stops, eliminate building setbacks, etc.</li> <li>• Provide on-site shops and services, e.g., cafeteria, bank/ATM, dry cleaners, convenience market, for area employees, where</li> </ul>	SU

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**Table I.1: Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>feasible.</p> <ul style="list-style-type: none"> <li>• Provide on-site child-care facilities within walking distance of area employment centers, where feasible.</li> <li>• Provide shuttle service to transit stations and multimodal centers, where needed.</li> <li>• Provide preferential parking (e.g., near building entrance, sheltered area) for carpool and vanpool vehicles.</li> <li>• Implement parking fees for single occupancy vehicle commuters.</li> <li>• Provide secure, weather-protected bicycle parking for area employees.</li> <li>• Provide safe, direct access for bicyclists to adjacent bicycle routes.</li> <li>• Provide showers and lockers for employees bicycling or walking to work.</li> <li>• Provide secure short-term bicycle parking for retail customers and other non-commute trips.</li> </ul> <p>For residential uses within the Specific Plan area:</p> <ul style="list-style-type: none"> <li>• Provide neighborhood-serving shops and services within one-half mile of residential areas, where feasible.</li> <li>• Provide transit facilities, e.g., bus bulbs/turnouts, benches, shelters, etc.</li> <li>• Provide shuttle service to transit stations and multimodal centers.</li> <li>• Provide shuttle service to major destinations such as employment centers, shopping centers, and schools.</li> <li>• Connect bicycle lanes and/or paths in residential areas to the rest of the network on Mare Island.</li> <li>• Connect pedestrian sidewalks and/or paths to adjacent land uses, transit stops, and/or citywide network.</li> </ul>	

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Table I.1: Summary of Impacts and Mitigation Measures			
Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
<b>C.3</b> Operation including occupation and use of the development would cause localized carbon monoxide hot spots.	LS	No mitigation necessary.	NA
<b>C.4</b> Operation of industrial land uses would cause emissions from new stationary sources and heavy-duty diesel truck traffic.	S	<b>C4:</b> Provide an adequate buffer zone between any source of toxic air contaminants or odors and land uses sensitive to air contaminants, such as residential, educational, and health care facilities. Possible sources of toxic air contaminants include land uses attracting a high level of diesel vehicle activity, heavy-duty truck routes, and industrial uses, depending on the tenant. The appropriate dimensions of each buffer zone would depend on a variety of factors, including the nature of the activities occurring at the source and the types and quantities of materials being stored or used at the facility. For example, any use that has the potential to generate 200 heavy-duty diesel truck trips per day should be located at least 20 meters (about 65 feet) away from sensitive uses.  Project sponsor shall require that each industrial tenant provide information on daily truck trips expected to be generated. Any industrial use generating 200 or more diesel truck trips per day shall be located at least 65 feet from sensitive uses such as residential, educational and health care facilities.  Mitigation not necessary.	LS
<b>C.5</b> Development of the Mare Island Specific Plan would be consistent with adopted air quality management plans.	LS		NA
<b>Noise</b>			
<b>D.1</b> Project demolition and construction activities would cause temporary disturbance to adjacent land uses.	S	<b>D.1:</b> Limit construction activities to normal daytime hours (7 a.m. to 6 p.m.), Monday through Saturday, with no construction on Sundays or federal holidays unless approved by the Chief Building Official.	LS
<b>D.2</b> Construction activities for the proposed southern crossing bridge would not occur.	NI	No mitigation necessary.	NI
<b>D.3</b> Noise impacts from relocating the rifle range would not occur.	NI	No mitigation necessary.	NI

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**Table I.1: Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
<p><b>D.4</b> Noise from industrial operations could be incompatible with adjacent noise-sensitive land uses.</p>	<p>S</p>	<p><b>D.4.a:</b> A qualified acoustical consultant shall be retained by the project sponsor to perform annual noise evaluations near light and heavy industrial uses that are located adjacent to residential areas in Reuse Areas 4, 6, 8 and 9, and in Reuse Area 10A near the planned regional park and report to the City. If the ambient Ldn exceeds Noise Element standards in any location, the acoustical consultant shall provide detailed recommendations as to one of the following: installation of noise insulation in the industrial building; changing the types of activities performed or enclosing the activities on the industrial site; or relocating the industrial use elsewhere on Mare Island, at an appropriate distance from residential uses or the regional park.</p> <p><b>D.4.b:</b> Industrial uses shall provide a maximum separation between industrial and adjacent residential, educational, or recreational development; noise-intensive industrial operations shall be concentrated away from adjacent residential, educational, or recreational development; and light industrial and office uses in enclosed buildings should be used to provide a buffer zone and isolate industrial noise from adjacent residential, educational, or recreational development.</p>	<p>LS</p>
<p><b>D.5</b> Traffic would cause noise increases at locations near sensitive land uses.</p>	<p>S</p>	<p><b>D.5.a:</b> Use roadway designs and traffic controls to discourage high traffic volumes and speeds along Azuar Drive south of G Street, and establish a heavy truck prohibition on Azuar Drive south of G Street, on Walnut Avenue between Kansas Street and G Street, and on Flagship Drive.</p> <p><b>D.5.b:</b> Establish a noise monitoring program to provide for biennial noise measurements along the residential portions of Azuar Drive and Walnut Avenue taken in conjunction with traffic counts; a detailed acoustical study prepared by an appropriately qualified acoustical consultant documenting results of the measurements and discussing noise levels in relation to Noise Element criteria; and implementation of a noise insulation</p>	<p>SU</p>

(cont'd.)

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Table I.1: Summary of Impacts and Mitigation Measures				
Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation	
		<p>program if any residences along these streets are shown to be exposed to traffic noise levels that have increased by 5 dB or more.</p> <p><b>D.5.c:</b> Provide building construction and noise insulation to achieve interior noise levels of less than 45 dBA Ldn, approximately 25 dBA exterior-to-interior reduction as required in Title 24 of the California Code of Regulations, for high-density residential development in mixed uses of Reuse Areas 2A and 3B.</p> <p><b>D.5.d.1:</b> Develop a noise insulation strategy with the Waterfront Project proponent to provide building construction and noise insulation to achieve interior noise levels of less than 45 dBA Ldn, approximately 25 dBA exterior-to-interior reduction as required in Title 24 of the California Code of Regulations, for planned residential development adjacent to and south of Mare Island Causeway, west of Mare Island Way.</p> <p><b>D.5.d.2:</b> The project sponsor shall participate by contributing a fair share of funding for acoustical studies and window replacement for residential uses along Tennessee Street between Mare Island Way and Sonoma Boulevard, similar to the program described for Mare Island in Measure D.5b.</p>		
<b>Utilities/Services</b>				
<b>E.1</b>	Full buildout of the proposed project would result in an increased demand for water conveyance facilities.	LS	No mitigation necessary	NA
<b>E.2</b>	Implementation of the Mare Island Specific Plan would increase the demand for water. This increase would not exceed the water supply available to the City of Vallejo in normal, single dry, or multiple dry years.	LS	No mitigation necessary	NA

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Turnstone Consulting      I.25      Mare Island Amended and Restated Specific Plan  
For City of Vallejo      Draft Subsequent EIR

**Table I.1: Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
<p><b>E.3</b> Implementation of the Mare Island Specific Plan would increase the demand for water and would contribute to a cumulative water shortage in the third year of a series of multiple dry water years.</p>	<p><b>S</b></p>	<p><b>E.3a.</b> The City could implement water conservation measures the same as or similar to those included in the draft Water Shortage Contingency Plan. Implementation of these measures would offset the water deficit in the third year of consecutive dry years.</p> <p><b>E.3b.</b> The City could construct the facilities necessary to allow use of the Lake Curry water supply. Utilization of this water supply source would provide sufficient water to serve cumulative project development in the third year of consecutive dry years without implementation of the conservation measures identified in Measure E.3a. The Lake Curry supply could be accessed by two alternative water transport systems: either a pipeline from Lake Curry to the Putah South Canal, or increased release of water to Suisun Creek. The pipeline alternative would be approximately five miles long and would be constructed below ground adjacent to Gordon Valley Road. If the alternative of releasing water to Suisun Creek were selected, the water would be withdrawn from the Creek where it crosses the Putah South Canal and conveyed to the WTP via the Canal.</p> <p>Implementation of either of these alternative methods would create impacts. Short-term impacts of pipeline construction would include dust, noise, and temporary traffic disruption. Air quality impacts of dust generation could be mitigated with standard measures for dust suppression. Impacts would last a few weeks in any one location along the five miles of the pipeline route and would not result in permanent impacts to ambient noise levels or traffic.</p> <p>Construction of the pipeline would also result in impacts to biological resources. Impacts to biological resources were studied at a general level along the expected pipeline route. These impacts could include the following:</p> <ul style="list-style-type: none"> <li>• Loss or temporary disturbance of developed, non-native</li> </ul>	<p><b>LS</b></p>

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**Table I.1: Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>grassland, and oak woodland habitats. Given the limited extent of these habitats expected to be impacted, the regional abundance of developed and non-native grassland habitats, and the lack of sizable populations of special-status species expected to occur in these habitats on the project site, impacts to these habitats would be less than significant.</p> <ul style="list-style-type: none"> <li>• Loss of foraging habitat for various special-status animal species. Due to the minimal amount of overall habitat loss, as well as the local abundance of these habitats, there would be a less-than-significant loss of foraging habitat.</li> <li>• Potential direct and indirect losses of freshwater emergent wetlands and disturbance to aquatic habitat in Suisun Creek and supporting tributaries. These impacts could be mitigated to a less-than-significant level by avoidance or replacement of these habitats.</li> <li>• Potential direct loss of riparian habitat. This impact could be mitigated to a less-than-significant level by avoidance or restoration of these habitats.</li> <li>• Loss or temporary disturbance to California native bunchgrass habitat. This impact could be mitigated to a less-than-significant level by avoidance or restoration of this habitat.</li> <li>• Loss of or temporary disturbance to special-status plant species. Plant species that could be affected are big-scale balsamroot, Mount Diablo fairy-lantern, dwarf downingia, adobe-lily, and Brewer's western flax. This impact could be mitigated to a less-than-significant level by avoidance of occurrences of these species.</li> <li>• Loss of the valley elderberry longhorn beetle. This impact could be mitigated to a less-than-significant level by avoidance of occurrences of this species or transplantation of elderberry plants to a mitigation area if they cannot be avoided by the proposed pipeline.</li> <li>• Potential indirect impacts to steelhead rainbow trout. This impact could be mitigated to a less-than-significant level by</li> </ul>	

*(cont'd.)*

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**Table I.1: Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>minimizing impacts to water quality during the construction of the project or replacing lost steelhead rainbow trout habitat.</p> <ul style="list-style-type: none"> <li>• Potential impacts to western pond turtles. This impact could be mitigated to a less-than-significant level by avoidance of occurrences of this species.</li> <li>• Potential impacts to pallid bats. This impact could be mitigated to a less-than-significant level by avoidance of occurrences, or relocation, of this species.</li> <li>• Potential impacts to San Francisco dusky-footed woodrats. This impact could be mitigated to a less-than-significant level by avoidance of occurrences, or relocation, of this species.</li> </ul> <p>Therefore, pipeline construction impacts would be less than significant with appropriate mitigation. There would be no long term impacts from operation of the pipeline. It is not known whether changes in water levels in the reservoir due to use of the water in some years would result in impacts to biological resources within the reservoir. The City will study effects of the pipeline alternative in more detail as part of its environmental review of use of Lake Curry water.</p> <p>Impacts of release to, and withdrawal from, Suisun Creek would be primarily related to the anadromous steelhead rainbow trout population in the Creek and could potentially be significant and unavoidable. If the released water is cool (less than 70° F), such releases could benefit the federally threatened steelhead by maintaining low water temperatures, and possibly lowering water temperatures, in Suisun Creek. Conversely, the release of water 70° F or warmer would have adverse effects on steelhead. The increase in the discharge rate from two cubic feet per second (cfs) to seven cfs could potentially result in increased turbidity, which could adversely affect both steelhead and foothill yellow-legged frogs. The City will undertake more detailed environmental evaluation of this alternative.</p>	

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<b>Table I.1: Summary of Impacts and Mitigation Measures</b>			
	<b>Impact</b>	<b>Level of Significance Prior to Mitigation</b>	<b>Level of Significance After Mitigation</b>
<b>E.4</b>	Full buildout of the proposed project would result in an increased demand for wastewater collection and transport facilities.	LS	NA
			<b>Mitigation Measure(s)</b> No mitigation necessary.

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## II. PROJECT DESCRIPTION

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This Project Description addresses the proposed project's location, objectives, and characteristics, as well as the intended uses of this EIR, as required by *CEQA Guidelines* Section 15124.

### A. PROJECT LOCATION

#### REGIONAL LOCATION AND SURROUNDING VICINITY

Mare Island is located in southwestern Solano County, in the incorporated boundaries of the City of Vallejo, approximately 22 miles northeast of San Francisco (see **Figure II-1: Regional Location**).

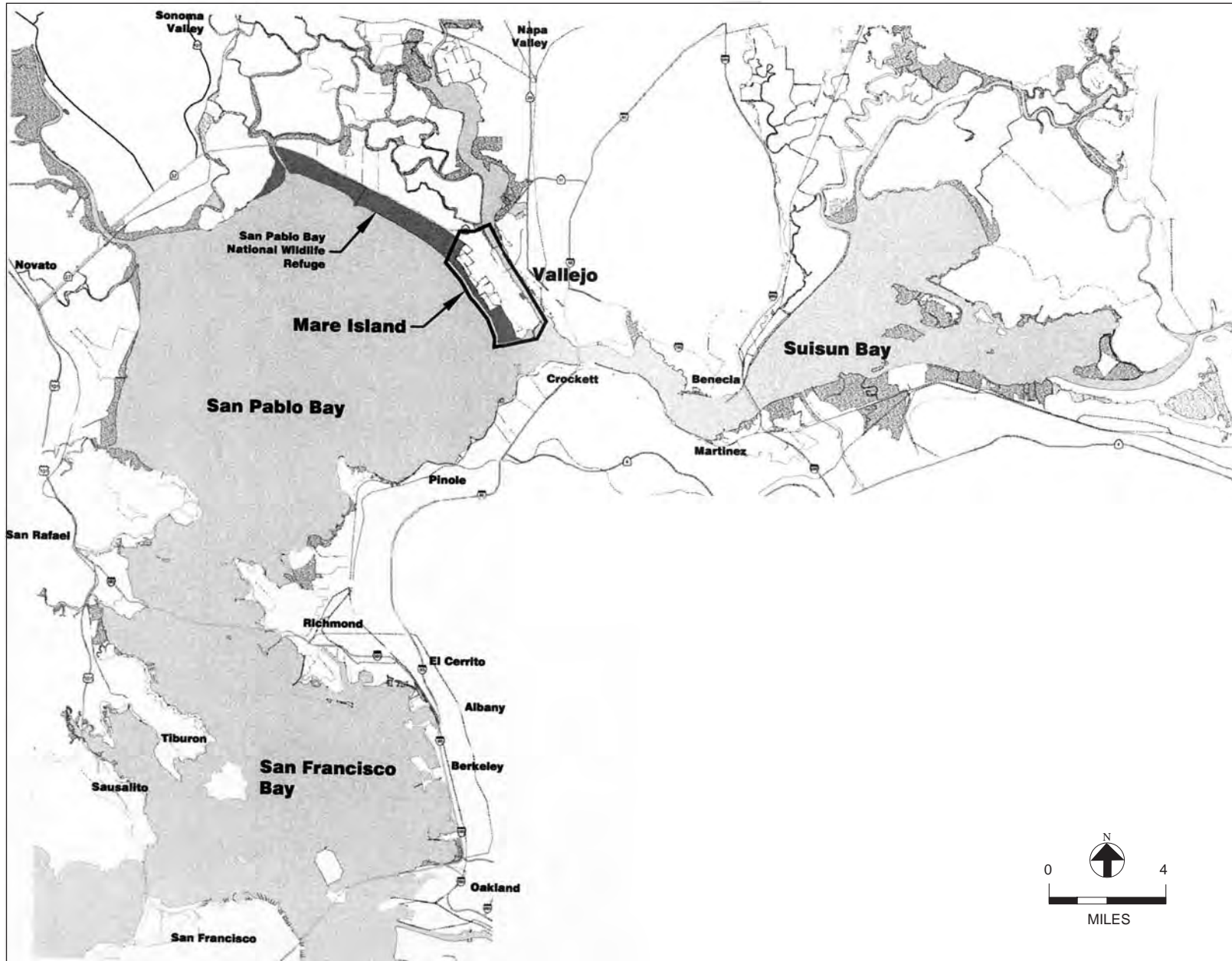
To the west of Mare Island is San Pablo Bay. A series of sloughs and marshland separates Mare Island from the mainland to the north. To the east, the island is separated from the mainland by Mare Island Strait. The Vallejo waterfront parallels the eastern side of Mare Island across Mare Island Strait, and includes River Park, a marina, a yacht club, and the ferry terminal, Independence Park, and developed and vacant commercial land. Professional buildings, City government buildings, and Marina Vista Park line the east side of the waterfront area. Further east, residential areas overlook the strait. The waterfront across the strait from the southern portion of Mare Island is occupied by industrial and residential uses. The Vallejo Sanitation and Flood Control District wastewater treatment plant is located at this portion of the waterfront. To the south of Mare Island is Carquinez Strait, and across Carquinez Strait are industrial uses in northern Contra Costa County.

#### MARE ISLAND

Mare Island is approximately 3.5 miles long by 1 mile wide, comprising approximately 5,200 acres. About 1,400 acres are dry uplands, and 3,800 acres are wetlands, submerged lands, and dredged material disposal ponds. The island is relatively flat, ranging in elevation from sea level to 284 feet above sea level at the southern end.

The two existing points of access are from State Route 37 (the primary route across the North Bay connecting U.S. Route 101 and Interstate-80), and from the Mare Island Causeway at Tennessee Street (one of Vallejo's main arterials and a primary connection with Interstate-80).

At the time of transfer, the buildings on Mare Island totaled approximately 10.5 million square feet of space for industrial, office, educational, commercial, recreational, cultural, and institutional uses and residential units. Many of the structures are currently vacant.



SOURCE: SWA



### **1999 Specific Plan**

The 1999 Specific Plan identifies 13 reuse areas, based on those of the Reuse Plan, plus wetland and dredge pond areas located primarily on the west side of the island (see **Figure II-2: 1999 Specific Plan Reuse Areas**). It also specified allowable land uses for each reuse area, and a development program based on a general understanding of existing facilities and resources.

### **General Plan Designation and Zoning**

Mare Island currently has various General Plan land use designations, including “Employment,” “Commercial - General,” “Commercial - Waterfront,” “Residential - Medium Density,” “Open Space - Community Park,” and “Open Space - Wetlands.” These designations were adopted to reflect use categories and policies in the 1999 Specific Plan.

The upland portions of the island are zoned Mixed Use Planned Development (MUPD).<sup>1</sup> The wetlands and dredge areas are zoned Resource Conservation (RC).<sup>2</sup>

### **Ownership**

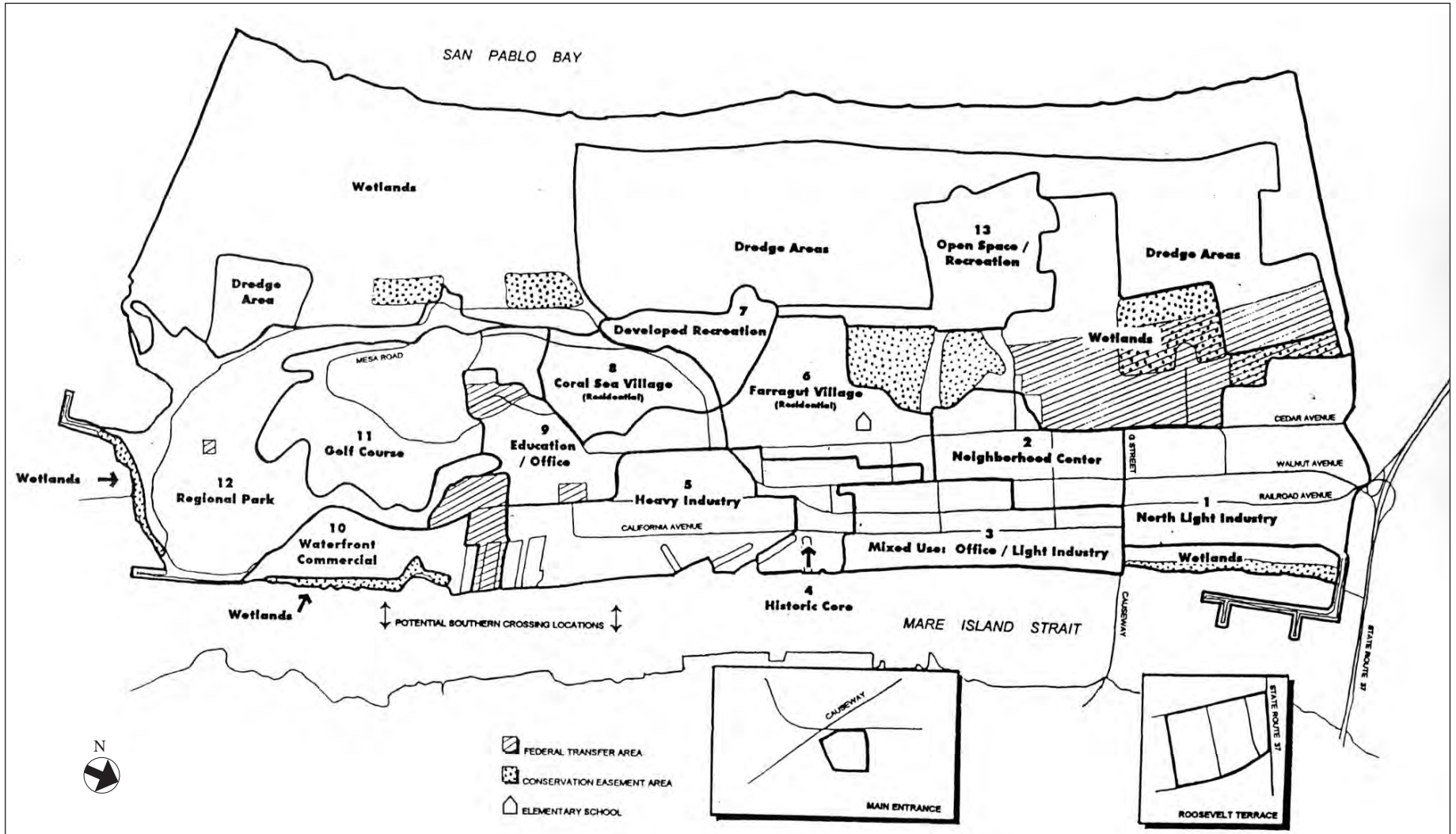
The City has selected Lennar Mare Island (“Lennar”) as the Master Developer of the island. In March 2002, the 650-acre “Eastern Early Transfer Parcel” was transferred from the Navy to the City and then to Lennar. This included part of Reuse Area 1 and Reuse Areas 2 through 9. Touro University currently occupies a portion of Reuse Area 9 with an option to purchase the majority of Reuse Area 9. Portions of Reuse Area 10 and the waterfront area will be owned by the City (with certain public trust covenants), which will sublease it to Lennar. A portion of Reuse Area 1 (Reuse Area 1A under the proposed Mare Island Specific Plan) is currently owned by the City and other portions by the Navy. These areas will be transferred to another developer(s) at a later date. Reuse Area 1B is owned by private parties. Ownership of the golf course, Reuse Area 11, has been transferred to a new owner/operator. The golf course will continue to be used as a public facility.

Public entities that own or control property on Mare Island, or will own or control property upon completion of the transfer process, include the U.S. Forest Service (Building 1324/1324A in Reuse Area 9); the U.S. Army Reserve (Reuse Area 10B and a building in Reuse Area 9); the Veterans Administration (a medical clinic building in Reuse Area 3B); the California State Lands Commission (wetlands and dredge disposal areas on the western portion of the island, Reuse Areas 12, 13, 10A, and the waterfront); the City of Vallejo (an area of wetlands adjacent to

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<sup>1</sup> Vallejo Zoning Ordinance, Section 16.112.

<sup>2</sup> Vallejo Zoning Ordinance, Section 16.10.



SOURCE: City of Vallejo

Reuse Areas 6 and 2B); and the Vallejo Unified School District (school buildings in Reuse Area 6). Federal and state properties are not subject to local regulatory jurisdiction.

### MARE ISLAND SPECIFIC PLAN AREA

The area included in the Mare Island Specific Plan Area (the “Plan Area”) is bordered by the San Pablo National Wildlife Refuge and Route 37 to the north, Mare Island Strait on the east, Carquinez Strait on the south, and San Pablo Bay on the west. The Plan Area includes the Causeway from Mare Island to Tennessee Street, Building 513 located on the northeast corner of Tennessee Street and Mare Island Way at Wilson Avenue, the Main Entrance at the eastern end of the Causeway, the rail spur that extends approximately 3 miles from Mare Island through the City of Vallejo to Broadway, and a bulkhead extending from Sandy Beach into Mare Island Strait.

The Plan Area remains largely the same as that of the adopted Reuse Plan and 1999 Specific Plan and considered in the 1999 CEQA Documents. The exception is that Roosevelt Terrace, an off-island naval housing complex included in the 1999 Specific Plan, is no longer part of the Plan Area and is being developed separately by a private developer. The Plan Area is divided into distinct subareas based on those of the Reuse Plan and the 1999 Specific Plan (see **Figure II-3: Amended and Restated Specific Plan Reuse Areas**). The boundaries of Reuse Areas 6, 7, and 8 are changed from the Reuse Plan and the 1999 Specific Plan. Reuse Areas 1, 2, 3, and 10 have each been divided into two subareas, “A” and “B.” They retain their original reuse area number for continuity. Minor adjustments to overall acreage figures reflect more accurate land surveys.

## B. PROJECT OBJECTIVES

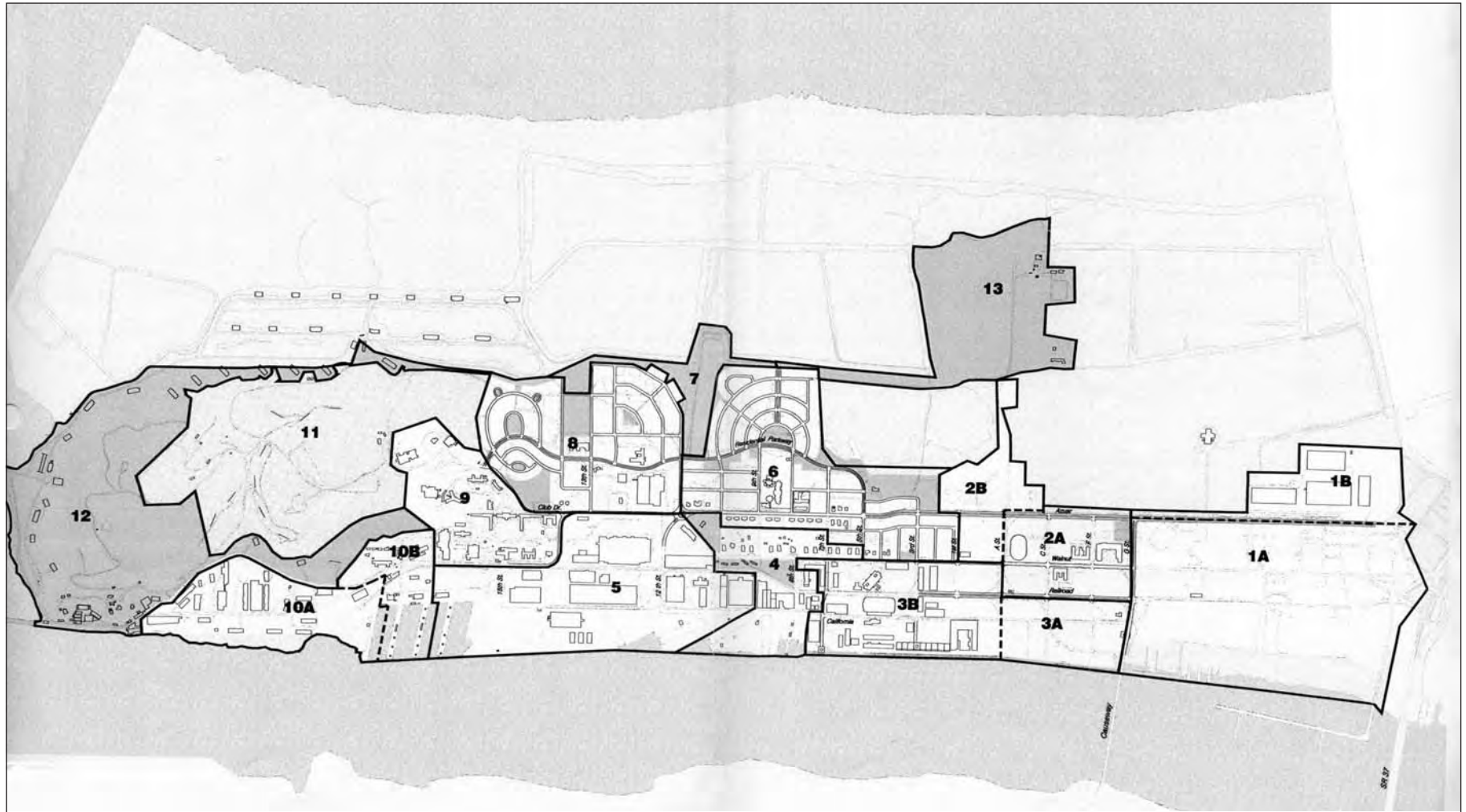
The proposed Mare Island Specific Plan would supersede the 1999 Specific Plan. It would serve as the land use policy document for Mare Island, representing the goals, reuse and development standards, and provide an implementation program for Mare Island. The proposed project would provide for a more detailed land use and development program; additional non-residential development; demolition of historic and non-historic structures; incorporation of the *Mare Island Historic Resources Project Guidelines*; additional urban design guidelines; a final transportation plan; and infrastructure plans.

As articulated in the Mare Island Specific Plan, the City of Vallejo’s general goals for the reuse of Mare Island are as follows:<sup>3</sup>

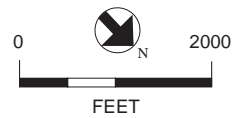
- Create jobs and other economic development opportunities to sustain and improve the economic conditions on the City of Vallejo, Solano County, Napa County and the Greater San Francisco Bay Area in the 21<sup>st</sup> Century.

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<sup>3</sup> Mare Island Specific Plan, Chapter 1.3.



SOURCE: SWA



- Create a self-sustaining and multi-use community that is unified under a common design theme with a balance of industrial, office, commercial, residential, educational, recreation, cultural and open space uses to meet the needs of future generations.
- Preserve and enhance the history of Mare Island.
- Use a variety of innovative economic development tools, including public-private partnerships, for acquiring, financing and marketing new development on Mare Island.
- Ensure that job retraining and educational career opportunities for higher paying jobs and careers are provided.
- Ensure that the human services needed as a result of downsizing and closure of the naval base are easily accessible and available.

Other objectives that would be furthered by the proposed Mare Island Specific Plan, including the Lennar Development Plan, are as follows:

- Develop the 650-acre eastern portion of Mare Island, owned primarily by Lennar Mare Island, with residential, recreational, office, light industrial, retail, warehouse, heavy industry, and education/civic uses.
- Implement job creation and economic development goals.
- Meet current and future infrastructure needs for Mare Island, through participation in Mello-Roos Financing Districts.
- Provide flexibility in the uses, density, and intensity of development on Mare Island to address changing market conditions, technological innovations, and real estate development trends over the long term.
- Preserve and enhance the historic setting of Mare Island and establish criteria and procedures for review of proposals involving new construction, demolition, and alteration of Contributing Resources within the Mare Island Historic District.

### **C. PROJECT CHARACTERISTICS**

The proposed Mare Island Specific Plan implements and furthers the general development policies for the reuse of Mare Island established under the Reuse Plan and 1999 Specific Plan. It contains Land Use, Cultural Resources, Urban Design, Transportation, and Utility Systems elements.

#### **LAND USE ELEMENT**

The Land Use Element, Chapter 3 of the Mare Island Specific Plan, builds upon and articulates overall land use goals for Mare Island that are similar to those in the Reuse Plan and the 1999 Specific Plan, envisioning a diverse mix of residential, employment-generating, civic, recreational, and visitor-oriented uses. The most significant changes in the Mare Island Specific Plan are increases in the land use program over that of the 1999 Specific Plan. The Mare Island

Specific Plan also includes a development plan, which implements the land use program in the Lennar Reuse Areas 1B through 10A.

### **Land Use Program**

The Land Use Element of the Mare Island Specific Plan establishes square footage “targets” within each reuse area and for each non-residential land use category.<sup>4</sup> For the Plan Area overall, the Mare Island Specific Plan Land Use Program as proposed by the Lennar Development Plan anticipates a total of approximately 9.0 million square feet (sq. ft.) of non-residential development in the Plan Area. This encompasses the following:

- Office/Research & Development - 1.6 million sq. ft.
- Light Industrial - 2.2 million sq. ft.
- Retail - 0.5 million sq. ft.
- Warehouse - 1.4 million sq. ft.
- Heavy Industrial - 2.1 million sq. ft.
- Educational/Civic - 1.2 million sq. ft.

Compared with the 1999 Specific Plan, non-residential development under the Mare Island Specific Plan would amount to a total increase of approximately 2.7 million square feet. The majority of the increase is the result of additional retention of Contributing Resources. Increases would be reflected in all land use categories. **Table II-1: Proposed Specific Plan Land Use Program by Reuse Area: Changes from the 1999 Specific Plan**, presents the Mare Island Specific Plan’s Land Use program by land use category and by reuse area and compares it with that of the 1999 Specific Plan.

The number of dwelling units proposed for Mare Island (1,400 dwelling units) remains the same under the Mare Island Specific Plan as under the 1999 Specific Plan and as considered in the 1999 CEQA Documents (300 off-island dwelling units, considered in the 1999 CEQA Documents for Roosevelt Terrace are no longer within the Plan Area under the Mare Island Specific Plan).

### **Land Use Designations and Plan**

The following land use categories are described in the Land Use Element: Federal Transfer; Conservation Easement; Open Space; Developed Recreation; Education/Civic; Residential (including High Density, Medium Density, Low Density, Group, Live/Work, and Work/Live); Mixed Use (including Office/R&D, Light Industrial, Retail Commercial, and Warehouse); and Industrial. The Land Use Element also identifies and defines the following types of parks and

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<sup>4</sup> Mare Island Specific Plan, Chapter 3.5, Table 3-2.

II. Project Description

TABLE II-1: PROPOSED SPECIFIC PLAN LAND USE PROGRAM BY REUSE AREA: CHANGES FROM THE 1999 SPECIFIC PLAN<sup>a</sup>

REUSE AREA	Specific Plan	Resid. (D.U) <sup>b</sup>	Park/ Rec./ Cons./ (Acres)	Non-Residential (Square Feet)							Federal (as noted) <sup>c</sup>	Total Non-Residential	
				Mixed Use			Heavy Industry	Education / Civic	Warehouse	Retail			Light Ind.
				Office/ R&D	Warehouse	Warehouse							
1	1999 SP	80	29	56,600	566,000	42,100	1,285,100	0	16,200	0	1,966,000		
	Proposed	0	30	54,000	450,000	348,000 <sup>d</sup>	370,000	0	16,000	0	1,238,000		
	SP	0	0	0	271,128	0	245,435	183,437	0	0	700,000		
	Sum	0	30	54,000	721,128	348,000	615,435	183,437	16,000	0	1,938,000		
Change	(80)	1	(2,600)	155,128	305,900	(669,665)	183,437	(200)	0	0	(28,000)		
2	1999 SP	83	25	234,300	0	40,000	0	0	131,200	0	405,500		
	Proposed	100	0	288,730	100,025	50,000	0	0	131,245	0	570,000		
	SP	0	0	335,000	165,000	0	0	0	0	0	500,000		
	Sum	100	0	623,730	265,025	50,000	0	0	131,245	0	1,070,000		
Change	17	(25)	389,430	265,025	10,000	0	0	45	0	0	664,500		
3	1999 SP	0	9	371,000	690,000	0	0	0	0	0	1,122,000		
	Proposed	0	2	318,325	159,162	10,013	112,500	0	0	0	600,000		
	SP	129	3	364,000	695,493	6,500	216,000	0	16,900	61,000	1,359,893		
	Sum	129	5	682,325	854,655	16,513	328,500	0	16,900	61,000	1,959,893		
Change	129	(4)	311,325	164,655	16,513	328,500	0	16,900	0	0	837,893		
4	1999 SP	25	7	0	0	5,000	0	0	30,100	0	35,100		
	Proposed SP	47	10	117,000	36,400	76,100	0	0	81,003	0	310,503		
	Change	22	3	117,000	36,400	71,100	0	0	50,903	0	275,403		
5	1999 SP	0	0	0	419,500	0	0	934,300	0	0	1,353,800		
	Proposed SP	0	14	52,272	593,172	14,210	0	1,225,419	0	0	1,885,073		
	Change	0	14	52,272	173,672	14,210	0	291,119	0	0	531,273		
6	1999 SP	222	0	0	0	40,000	0	0	0	0	121,000		
	Proposed SP	610	25	0	0	3,180	0	0	25,035	81,000	109,215		
	Change	388	25	0	0	(36,820)	0	0	25,035	0	(11,785)		

(continued)

II. Project Description

TABLE II-1 (continued)

REUSE AREA	Specific Plan	Resid. (D.U) <sup>b</sup>	Park/ Rec./ Cons./ (Acres)	Non-Residential (Square Feet)							Total Non-Residential
				Mixed Use			Heavy Industry	Education / Civic	Federal (as noted) <sup>c</sup>	Total Non-Residential	
				Office/ R&D	Light Ind.	Retail					
7	1999 SP	0	48	0	0	0	0	0	0	0	0
	Proposed SP	0	26	0	0	0	0	0	0	0	0
	Change	0	(22)	0	0	0	0	0	0	0	0
8	1999 SP	270	4	0	27,100	0	0	0	0	0	27,100
	Proposed SP	514	0	20,000	0	387,690	0	13,625	0	0	421,315
	Change	244	(4)	20,000	0	(27,100)	0	13,625	0	0	394,215
9	1999 SP	50	8	113,000	387,700	1,500	0	457,500	175,000 <sup>e</sup>	0	1,134,700
	Proposed SP	0	0	33,128	0	0	0	542,890	175,000	0	751,018
	Change	(50)	(8)	(79,872)	(387,700)	(1,500)	0	85,390	0	0	(383,682)
10	1999 SP	750	9	0	20,000	0	0	0	91,000 <sup>h</sup>	0	111,000
	Proposed SP	10A	9	0	370,309	0	128,270	0	0	0	498,579
		10B	0	0	0	0	0	0	0	91,000	91,000
	Change	(750)	0	0	370,309	(20,000)	0	128,270	0	0	478,579
11	1999 SP	0	172	0	0	0	0	3,000	0	0	3,000
	Proposed SP	0	172	0	0	3,000	0	0	0	0	3,000
	Change	0	0	0	0	3,000	0	(3,000)	0	0	0
12	1999 SP	6	11	0	0	0	0	1,250	0	0	1,250
	Proposed SP	0	187	0	0	0	0	0	0	0	0
	Change	(6)	176	0	0	0	0	(1,250)	0	0	(1,250)
13	1999 SP	0	92	0	0	0	0	0	0	0	0
	Proposed SP	0	92	0	0	0	0	0	0	0	0
	Change	0	0	0	0	0	0	0	0	0	0
Wetlands	1999 SP	0	32	0	0	0	0	0	20,000 <sup>i</sup>	0	20,000
	Proposed SP	0	32	0	0	0	0	0	20,000	0	20,000
	Change	0	0	0	0	0	0	0	0	0	0

(continued)



II. Project Description

TABLE II-1 (continued)

REUSE AREA	Specific Plan	Resid. (D.U) <sup>b</sup>	Park/ Rec./ Cons./ (Acres)	Non-Residential (Square Feet)						Total Non-Residential	
				Mixed Use			Heavy Industry	Education / Civic	Federal (as noted) <sup>c</sup>		
				Office/ R&D	Light Ind.	Retail					Warehouse
Dredge	1999 SP	0	0	0	0	0	0	0	0	0	
	Proposed SP	0	0	0	0	0	0	0	0	0	
	Change	0	0	0	0	0	0	0	0	0	
Roosevelt Terrace <sup>j</sup>	1999 SP	300	0	0	0	0	0	0	0	0	
	Proposed SP	0	0	0	0	0	0	0	0	0	
	Change	(300) <sup>j</sup>	0	0	0	0	0	0	0	0	
Main Gate / Rail Spur	1999 SP	0	0	26,200	0	0	0	0	0	26,200	
	Proposed SP	0	0	0	0	0	0	0	0	0	
	Change	0	0	(26,200)	0	0	0	0	0	(26,200)	
PLAN AREA TOTALS	1999 SP	1,786	446	801,100	2,063,200	175,700	1,285,100	934,300	639,250	428,000	6,326,650
	Proposed SP	1,400	602	1,582,455	2,840,689	511,003	1,331,625	1,537,126	826,698	428,000	9,057,596
	CHANGE	(386)	156	781,355	777,489	335,303	46,525	602,826	187,448	0	2,730,946

Notes: <sup>a</sup> This table is compiled from the following sources: the 1998 EIS/EIR, Table 2-1 (p. 2-8); the Mare Island Specific Plan, Table 3-2; and the Mare Island Specific Plan, Section 3.5, "Land Use Program By Reuse Area."

<sup>b</sup> Dormitory units are not included in the Mare Island Specific Plan.

<sup>c</sup> With the exception of the Veterans Administration Clinic, federal tenants were not included in the 1998 EIS/EIR Reuse Plan development program. Likewise, federal tenants are not part of the Mare Island Specific Plan development program. Although not part of the project to be analyzed under CEQA, federal tenants are included in this table because they are located within the Plan Area and are part of the overall land use setting of Mare Island. Since they are added to both the 1998 EIS/EIR and the Mare Island Specific Plan, they do not contribute to the total net change in non-residential land uses from the Reuse Plan to the Mare Island Specific Plan.

<sup>d</sup> Comprised of 320,000 sq. ft. of Service Commercial and 28,000 sq. ft. of Retail.

<sup>e</sup> Veterans Administration Clinic.

<sup>f</sup> As part of a public benefit transfer from the Navy to the Department of Education, the Vallejo Unified School District will continue to maintain and operate school buildings in Reuse Area 6.

<sup>g</sup> Comprised of 120,000 sq. ft. U.S. Forest Service and 55,000 sq. ft. U.S. Army Reserve Barracks.

<sup>h</sup> U.S. Army Reserve.

<sup>i</sup> U.S. Fish and Wildlife Service.

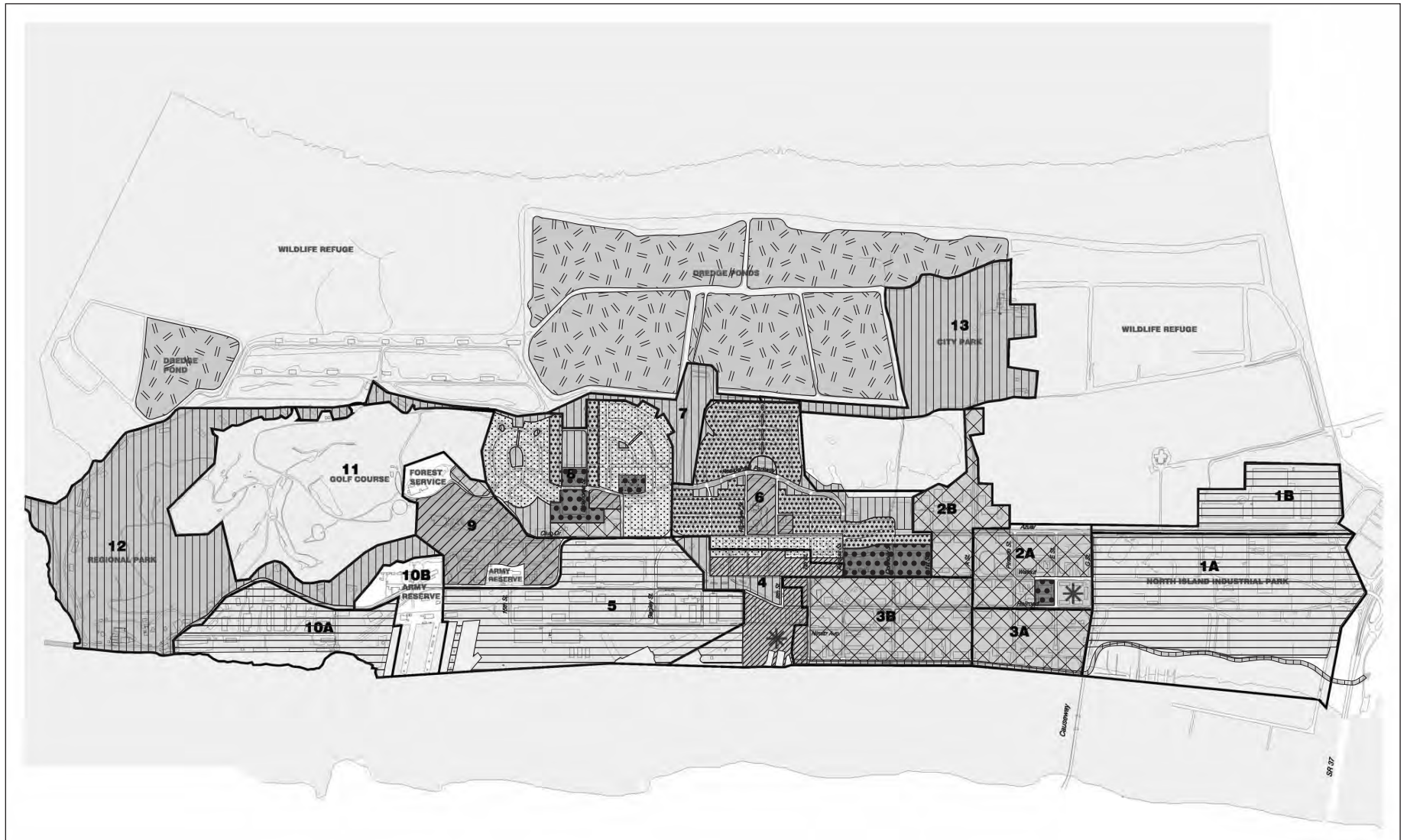
<sup>j</sup> Roosevelt Terrace, located off-island, is no longer part of the Plan Area under the Mare Island Specific Plan, accounting for 300 of the 380 total fewer dwelling units under the Mare Island Specific Plan.

open space existing on, and envisioned for, Mare Island: Neighborhood Parks, Community Parks, District/Citywide Parks, Historic Core Plaza, and Pocket Parks.

The Land Use Element describes the spatial distribution of the major land use designations among the reuse areas. The locations of land uses in the Mare Island Specific Plan are generally consistent with those envisioned by the Reuse Plan and the 1999 Specific Plan, and considered in the 1999 CEQA Documents (see **Figure II-4: Proposed Land Use Plan**). However, Area 10A calls for Mixed Use Light Industrial and Heavy Industrial uses rather than the Residential and Retail uses envisioned by the Reuse Plan and 1999 Specific Plan and considered in the 1999 CEQA Documents. State Lands Commission jurisdiction over Reuse Area 10A restricts residential use in that area and requires changing the land use designation from Residential to Industrial, and redistributing Residential to other areas (primarily Reuse Areas 3, 6, and 8). The boundaries of Reuse Area 7 (Open Space) have been changed from those of the 1999 Specific Plan, as a result of the residential redistribution to Reuse Areas 6 and 8. The general area encompassed by Reuse Area 2 under the Reuse Plan is changed to 2A (Town Center) and 2B (West Business Park) under the Mare Island Specific Plan. Due to more detailed information on the location of environmental contamination, residential uses are excluded from Reuse Area 10B under the Mare Island Specific Plan and relocated to more suitable reuse areas. As with the 1999 Specific Plan, Reuse Area 4 (the Historic Core) under the Mare Island Specific Plan is envisioned as a visitor-oriented area in an historic setting with retail and civic uses. Under the Mare Island Specific Plan, the area would also include Mixed Use Office and Light Industrial uses.

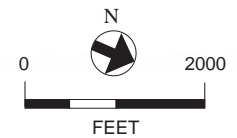
### **Implementation: The Lennar Development Plan**

The proposed Mare Island Specific Plan includes the *Preliminary Master Development Plan* as Appendix E to the Mare Island Specific Plan, which implements the Mare Island Specific Plan land use program for Reuse Areas 1B-10A. See **Table II-2: Summary of Lennar's Non-Residential Development Program for Reuse Areas 1B-10A**. (For greater detail, see also Appendix B to this Subsequent EIR, which includes the table entitled "Preliminary Master Development Plan Tabulations," excerpted from the Preliminary Master Development Plan.) The Lennar Development Plan specifies the location of, and projected square footages by use for, existing retained buildings (both Contributing and Non-contributing Resources) and for new construction (both within the Mare Island Historic District and outside the District). **Figure II-5: Proposed Preliminary Development Plan** illustrates the location of development in new and reused buildings under the Lennar Development Plan. The Lennar Development Plan also identifies 183 Contributing Resources (out of a total of 502 Contributing Resources in the Historic District) that are proposed for demolition to implement the Lennar Development Plan.



SOURCE: SWA

- |                   |  |
|-------------------|--|
| Mixed-Use         | Residential High Density (<2500 SF/DU)       |
| Retail/Commercial | Residential Medium Density (2500-5000 SF/DU) |
| Historic Core     | Residential Low Density (>500 SF/DU)         |
| Industrial        | Developed Recreation                         |
| Educational/Civic | Dredge Ponds                                 |
| Reuse Boundary    |  |



**TABLE II-2: SUMMARY OF LENNAR'S NON-RESIDENTIAL DEVELOPMENT PROGRAM FOR REUSE AREAS 1B-10A**

	AREA 1B	AREA 2A	AREA 2B	AREA 3A	AREA 3B	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9	AREA 10A	ALL AREAS
<b>OFFICE/</b>	0	88,679	0	0	148,256	117,000	52,272	0	0	0	13,128	0	419,335
<b>R&amp;D</b>	0	200,051	335,000	318,325	278,000	0	0	0	0	20,000	20,000	0	1,171,376
<b>TOTAL</b>	0	288,730	335,000	318,325	426,256	117,000	52,272	0	0	20,000	33,128	0	1,590,711
<b>LIGHT</b>	172,733	0	20,000	0	394,393	36,400	345,078	0	0	0	0	370,309	1,338,913
<b>INDUS.</b>	36,960	100,025	145,000	159,162	100,000	0	245,000	0	0	0	0	0	786,147
<b>TOTAL</b>	209,693	100,025	165,000	159,162	494,393	36,400	590,078	0	0	0	0	370,309	2,125,060
<b>RETAIL/</b>	0	0	0	6,013	0	64,260	14,210	3,180	0	0	0	0	87,663
<b>COMM.</b>	0	50,000	0	4,000	6,500	10,000	0	0	0	0	0	0	70,500
<b>TOTAL</b>	0	50,000	0	10,013	6,500	74,260	14,210	3,180	0	0	0	0	158,163
<b>WARE-</b>	306,870	0	0	0	360,000	0	0	0	0	0	0	0	666,870
<b>HOUSE</b>	0	0	0	112,500	0	0	0	0	0	0	0	0	112,500
<b>TOTAL</b>	306,870	0	0	112,500	360,000	0	0	0	0	0	0	0	779,370
<b>HEAVY</b>	183,437	0	0	0	0	0	1,283,943	0	0	0	0	18,270	1,485,650
<b>INDUS.</b>	0	0	0	0	0	0	0	0	0	0	0	110,000	110,000
<b>TOTAL</b>	183,437	0	0	0	0	0	1,283,943	0	0	0	0	128,270	1,595,650
<b>CIVIC</b>	0	131,245	0	0	16,900	83,663	0	25,035	0	0	542,890	0	799,733
<b>NEW</b>	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	0	131,245	0	0	16,900	83,663	0	25,035	0	0	542,890	0	799,733
<b>ALL</b>	663,040	219,924	20,000	6,013	919,549	301,323	1,695,503	28,215	0	0	556,018	388,579	4,798,164
<b>USES</b>	36,960	350,076	480,000	593,987	384,500	10,000	245,000	0	0	20,000	20,000	110,000	2,250,523
<b>TOTAL</b>	700,000	570,000	500,000	600,000	1,304,049	311,323	1,940,503	28,215	0	20,000	576,018	498,579	7,048,687

Source: Lennar Mare Island.

The totals for existing space in this table exclude the following:

- Federal Buildings: Veterans Administration Clinic (Area 3); U.S. Forest Service building (Area 9); U.S. Army Reserve buildings (Areas 9 and 10).
- Vallejo Unified School District buildings (Area 6).



SOURCE: SWA

- Reuse Boundary
- ▨ Existing Buildings to Remain
- New Buildings



## CULTURAL RESOURCES ELEMENT

The Mare Island Specific Plan, Chapter 2, includes a new Cultural Resources Element.<sup>5</sup> This element includes the *Mare Island Historic Resources Project Guidelines* (Historic Guidelines) as Appendix B.1 to the Mare Island Specific Plan; a *Revised Predictive Archaeological Model for Mare Island/Archaeological Treatment Plan for Mare Island* as Appendix B.2; a *Catalog of Historic Resources* as Appendix B.3; and the *Historic Design Guidelines* as Appendix B.4 to the Mare Island Specific Plan.

### Historic Resources Project Guidelines

As discussed in the Introduction to this Subsequent EIR, the Mare Island Historic District is listed in the National Register of Historic Places. The District identifies 502 Contributing Resources within its boundaries. As required by the Mare Island Amendment to the Vallejo Municipal Code,<sup>6</sup> the Cultural Resources Element of the Mare Island Specific Plan incorporates the proposed Historic Guidelines. The purposes of the proposed Historic Guidelines, as excerpted below, are to:

- Articulate the City’s preservation and reuse goals and objectives for the Mare Island Historic District.
- Detail the regulatory framework for preservation and reuse.
- Provide standards for treatment of historic resources.
- Provide District and area review criteria.
- Define a review process which ensures that no significant impact occurs to the District or to the Landmarks within the District.
- Define key terms and concepts, including the concept of project site.
- Provide demolition criteria for resources that are proposed to be demolished.
- Catalogue the resources, their characteristics, and designation status.
- Provide recommended and not recommended actions for each resource.<sup>7</sup>

See Section III.A, Historical Resources, in this Subsequent EIR for a detailed description of the proposed Historic Guidelines.

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<sup>5</sup> Mare Island Specific Plan, Chapter 2.0.

<sup>6</sup> Vallejo Zoning Ordinance, Section 16.38.036. That section requires that the City develop project guidelines that provide “specific and detailed standards for each contributing resource by providing recommended actions in terms of alteration, new construction, demolition and relocation.”

<sup>7</sup> Historic Guidelines, Chapter 1.3.

### **Archaeological Resources**

The Revised Predictive Archaeological Model for Mare Island and an Archaeological Treatment Plan for Mare Island<sup>8</sup> identifies and describes archaeological features that occur or are likely to occur on Mare Island that have the potential to yield important information regarding Mare Island's history and prehistory. The predictive model also identifies potential areas of high and medium prehistoric archaeological sensitivity. The archaeological treatment plan describes the appropriate treatment measures for archaeological resources that may be encountered in the course of construction.

### **URBAN DESIGN ELEMENT**

The new Urban Design Element, Chapter 4 of the Mare Island Specific Plan, furthers the 1999 Specific Plan's Urban Design Policies. It articulates policies such as development of strong Island Gateways and entrance corridors; reuse and extension of the existing street grid; establishment of Walnut Avenue as a historic "Main Street" spine; use of the island's east-west streets as view corridors; development of Mare Island Strait Waterfront as an exciting urban space; and provision of building setbacks that are compatible with the established historic setting. The proposed Urban Design Element is intended to preserve Mare Island's unique historic and natural setting by establishing design guidelines and standards governing site design, landscape design, architectural design of additions and new infill buildings, site furnishings, and signage. The Urban Design Element also establishes Reuse Area-specific urban design guidelines and standards to preserve established character. A *Mare Island Sign Program* is included as Appendix C to the Mare Island Specific Plan.

### **TRANSPORTATION ELEMENT**

The Transportation Element, Chapter 5 of the Mare Island Specific Plan, furthers the general transportation goals of the Reuse Plan and 1999 Specific Plan, but provides more detailed information about proposed roadway improvements and transit service based on the availability of more detailed project information.

### **Policies**

The Transportation Element articulates Mare Island Transportation policies intended to promote and enhance the movement of goods to and from Mare Island, to create a network of bicycle and

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<sup>8</sup> Mare Island Specific Plan, Appendix B.2, PAR Environmental Services, Inc., *Revised Predictive Archaeological Model for Mare Island*, October 2000; and *Archaeological Treatment Plan for Mare Island*, November 2000.

pedestrian paths combined with transit service that minimizes automobile traffic, and to provide for a streetscape design that is sensitive to the historic nature of Mare Island.

### **Proposed Street and Roadway System**

Vehicular access to Mare Island would continue to be via the Causeway from the east and the State Route 37 Interchange to the north. A southern crossing bridge, envisioned by the Reuse Plan and the 1999 Specific Plan, is no longer planned under the Mare Island Specific Plan. The existing 30-foot-wide Causeway is striped for two westbound and one eastbound lane with railroad tracks aligned down the center. The Mare Island Specific Plan calls for the center lane to become a reversible lane to support peak traffic flows.

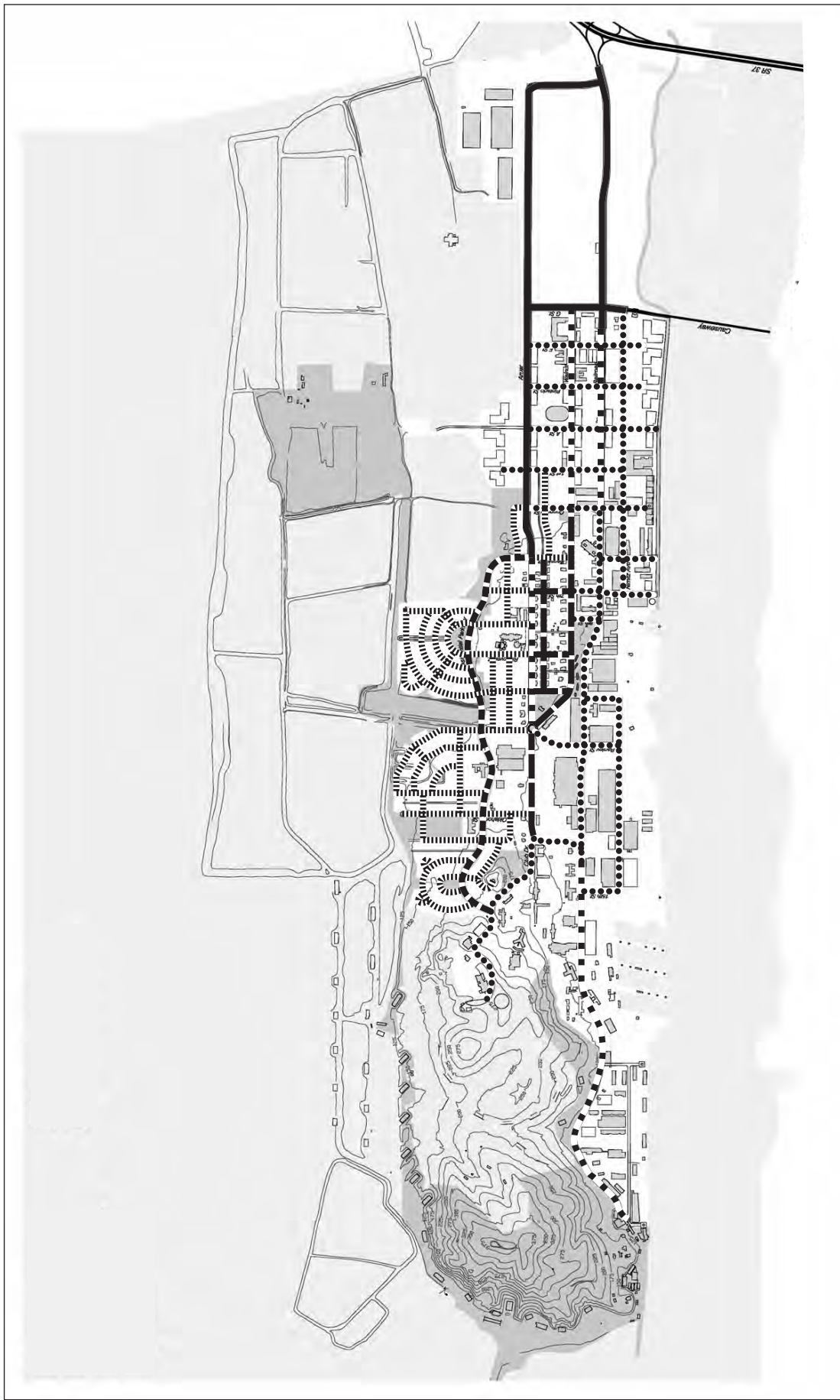
The Mare Island Specific Plan includes detailed criteria for the design of specific Mare Island street improvements in the *Lennar Mare Island Street Cross-Sections*<sup>9</sup> as Appendix D to the Mare Island Specific Plan. The proposed roadway system is intended to enhance the existing street grid and to complement the island's historic character (see **Figure II-6: Proposed Mare Island Street Framework**). The proposed street and roadway system is hierarchical, ranging from four-lane boulevards to narrow historic district lanes and alleyways.

The primary north-south traffic corridors would be Railroad Avenue, Azuar Drive (formerly Cedar Avenue), and Walnut Avenue. Railroad Avenue would primarily serve employment and industrial land uses (see **Figure II-7: Railroad Avenue Between 7<sup>th</sup> and 8<sup>th</sup> Streets - Representative Proposed Cross-Section**). Azuar Drive would primarily serve residential and civic land uses (see **Figure II-8: Azuar Drive Between 7<sup>th</sup> and 8<sup>th</sup> Streets - Representative Proposed Cross Section**). Walnut Avenue is envisioned as a low-volume transit, bicycle and pedestrian-oriented "Main Street" (see **Figure II-9: Walnut Avenue Between 7<sup>th</sup> and 8<sup>th</sup> Streets - Representative Proposed Cross-Section**). East-west traffic corridors would generally continue to be a series of low-volume streets (see, for example, **Figure II-10: "A" Street Between Azuar and Railroad Avenues - Representative Proposed Cross-Section**; and **Figure II-11: 8th Street Between Walnut and Railroad Avenues - Representative Proposed Cross-Section**). "G" Street would connect the north-south streets with the Causeway (see **Figure II-12: G Street Between Azuar and Walnut Avenues - Representative Proposed Cross-Section**). New two-lane residential streets would serve the proposed new residential subdivisions

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<sup>9</sup> Chaudhary & Associates, Inc., *Lennar Mare Island Street Cross-Sections*, June 1, 2004.



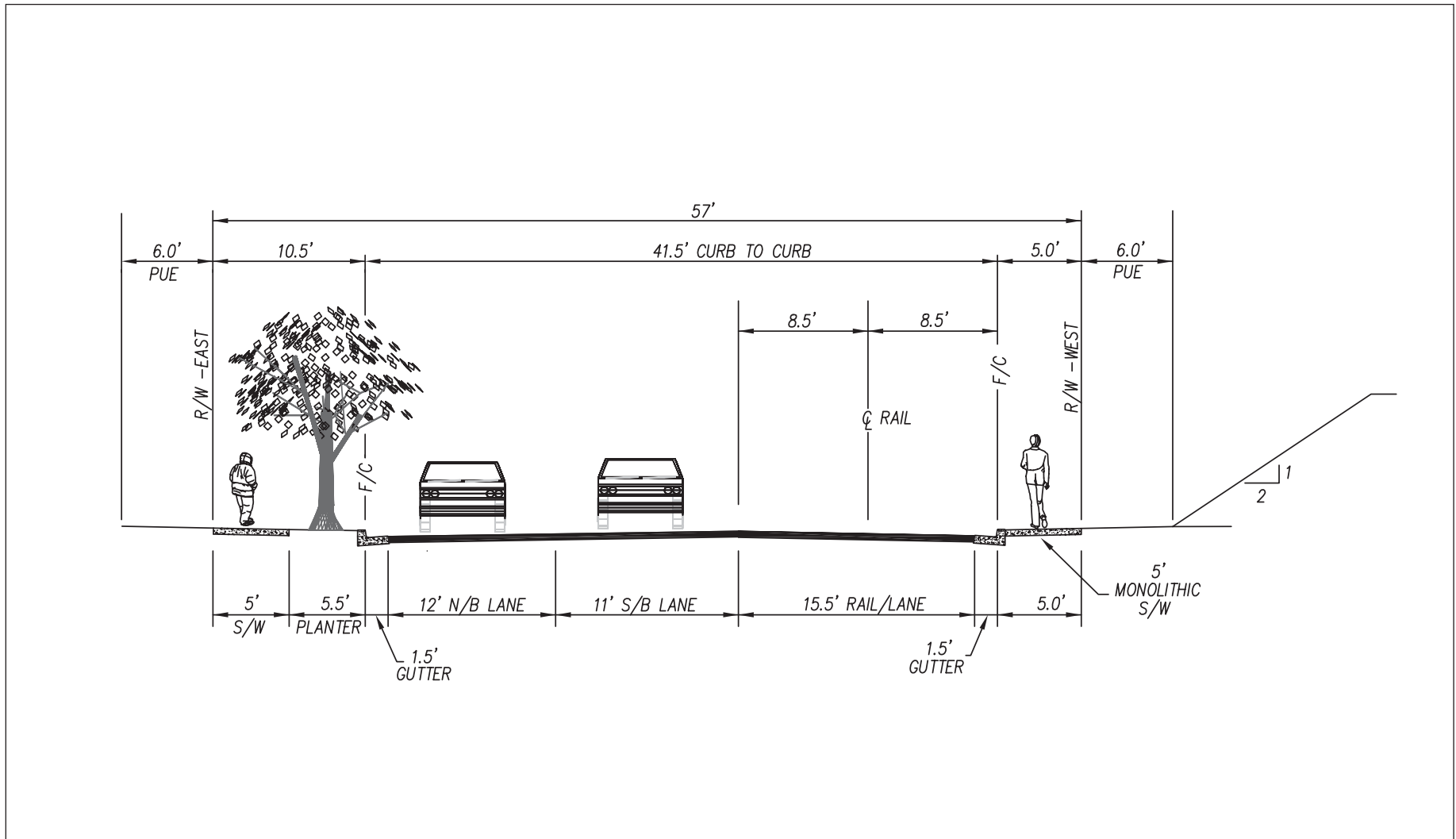


SOURCE: SWA

- Boulevard
- - - Avenue
- ..... Commercial Street
- - - - Parkway
- Residential Street
- Historic District Street

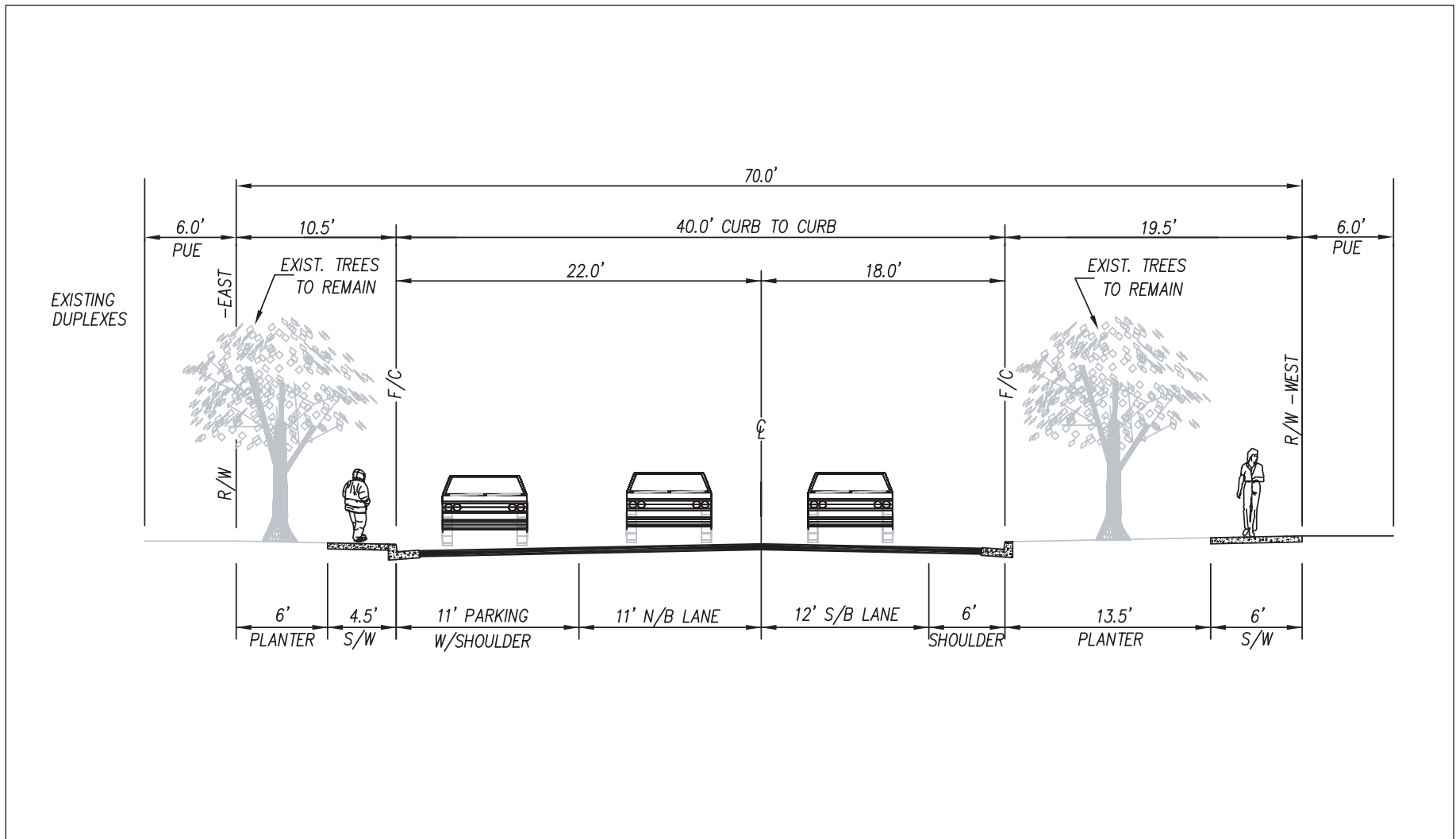
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MARE ISLAND AMENDED AND RESTATED SPECIFIC PLAN  
**FIGURE II-6: PROPOSED MARE ISLAND STREET FRAMEWORK**

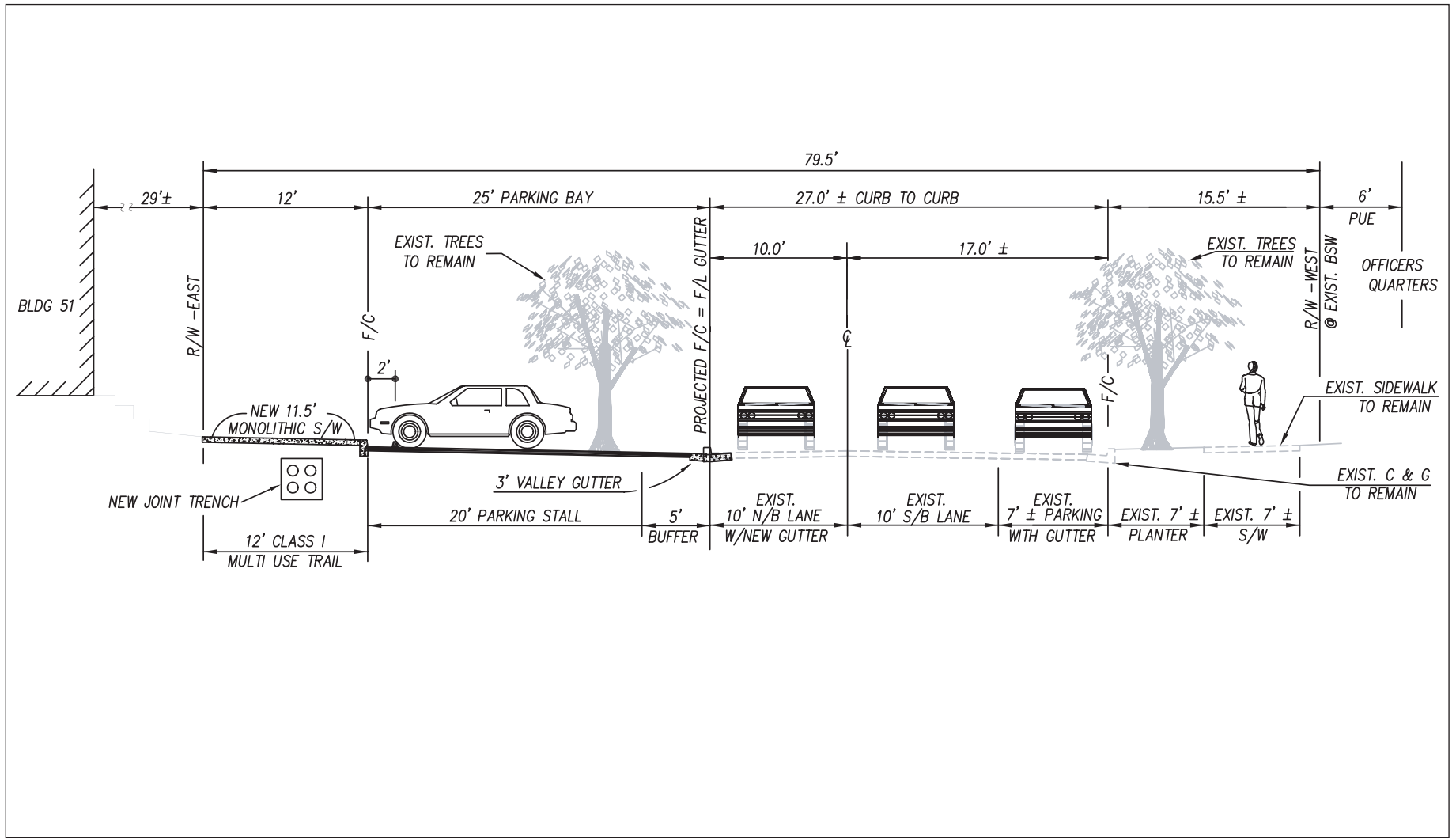


SOURCE: Chaudhary & Associates

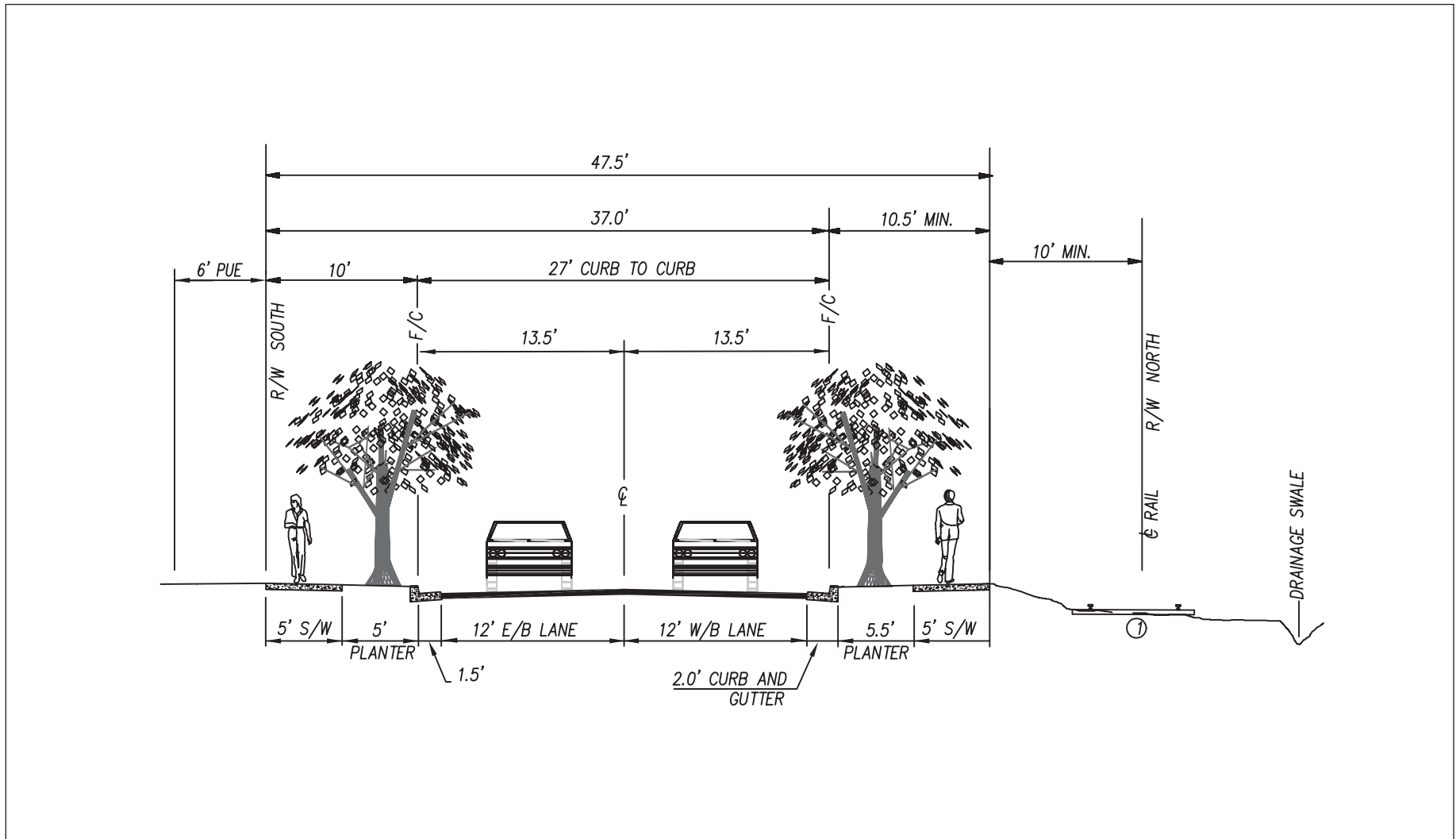
MARE ISLAND AMENDED AND RESTATED SPECIFIC PLAN  
**FIGURE II-7: RAILROAD AVENUE BETWEEN 7TH AND 8TH STREETS-  
REPRESENTATIVE PROPOSED CROSS-SECTION**



SOURCE: Chaudhary & Associates

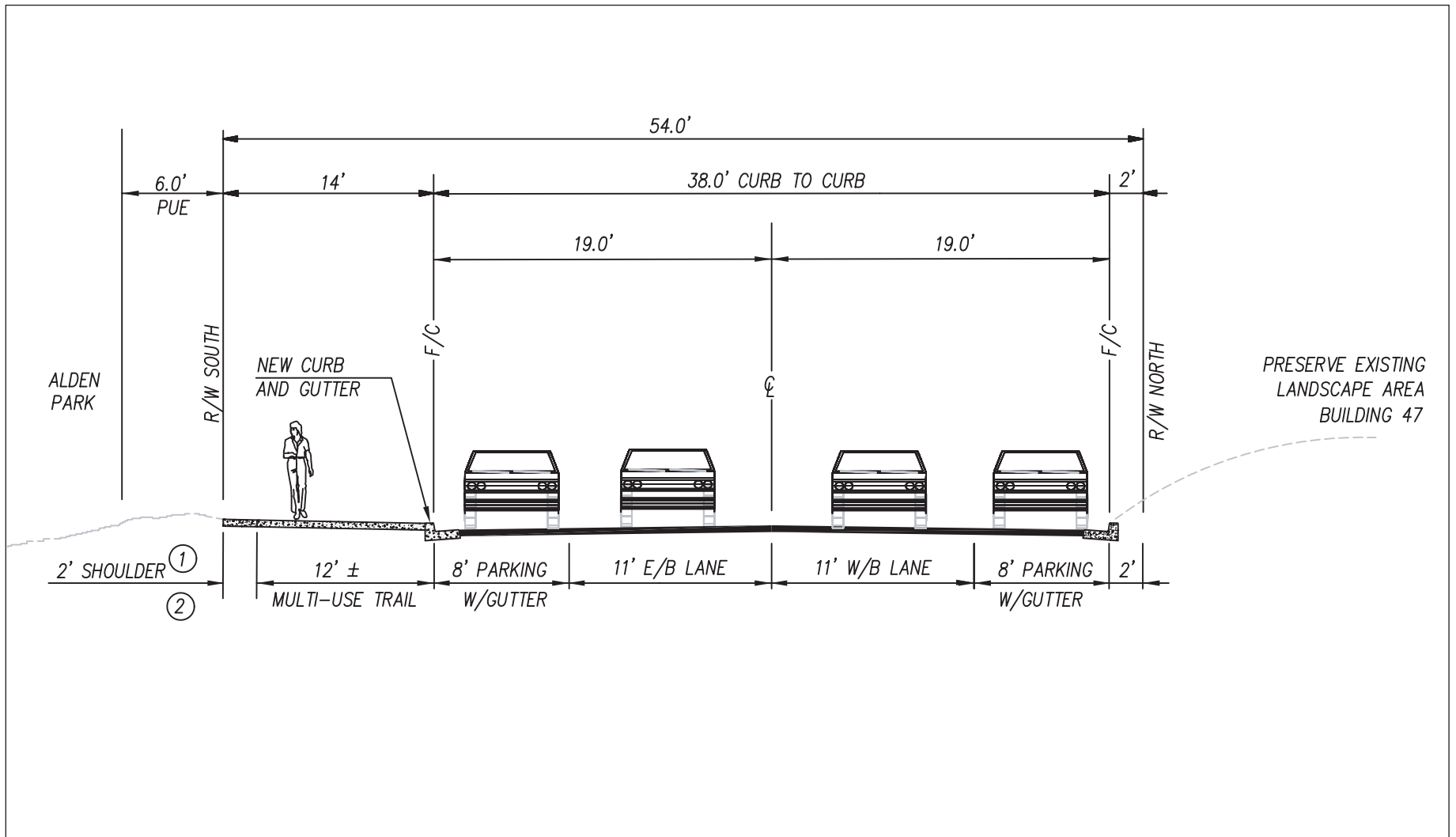


SOURCE: Chaudhary & Associates



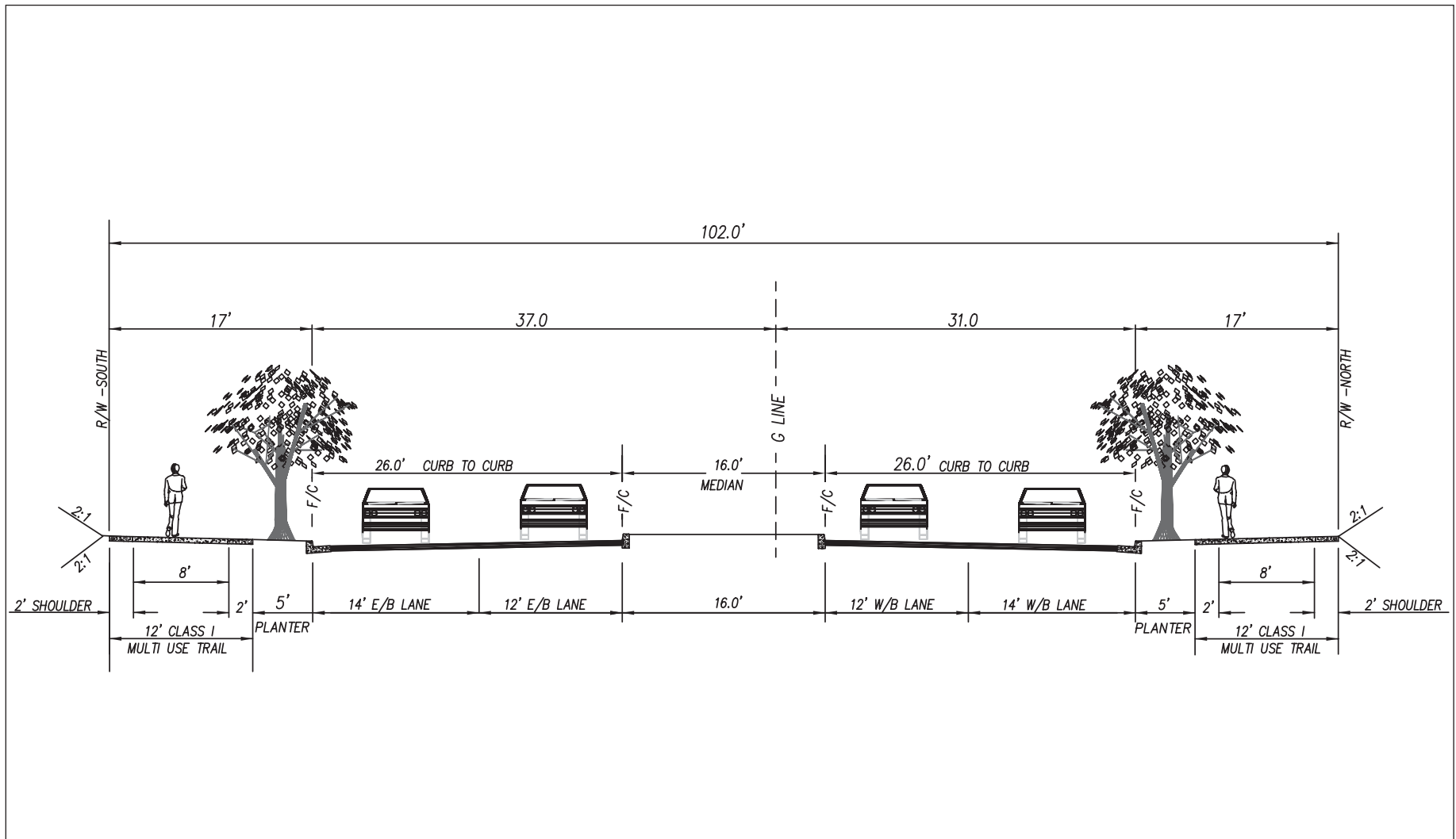
SOURCE: Chaudhary & Associates

FIGURE II-10: "A" STREET BETWEEN AZUAR AND RAILROAD AVENUES- REPRESENTATIVE PROPOSED CROSS-SECTION



SOURCE: Chaudhary & Associates

FIGURE II-11: 8TH STREET BETWEEN WALNUT AND RAILROAD AVENUES- REPRESENTATIVE PROPOSED CROSS-SECTION



SOURCE: Chaudhary & Associates

in Reuse Areas 6 and 8 (see **Figure II-13: Representative Residential Street**).<sup>10</sup>

### **Intersections**

The majority of intersections on Mare Island are expected to remain unsignalized under the Mare Island Specific Plan, with stop signs on the east-west streets to control access to major north-south corridors. Certain locations are expected to require signalization, based on travel demand forecasts under the proposed development program, in order to maintain an Acceptable Level of Service (“LOS”). Traffic signals may be necessary on Railroad Avenue at “G”, “A” and Connolly (formerly 3<sup>rd</sup>) Streets. Traffic signals may also be appropriate on Azuar Drive at “G” and “A” Streets, and at Flagship Drive.

### **Transit**

The Mare Island Specific Plan calls for local transit service to serve Mare Island. This service would loop through the central portion of the island to connect the residential, institutional, employment, historical, and recreational areas to each other and to the City of Vallejo’s ferry terminal, downtown, and transit center. Funding could be jointly provided by the City and an Island-Wide Municipal Service District (see **Figure II-14: Transit Service**).

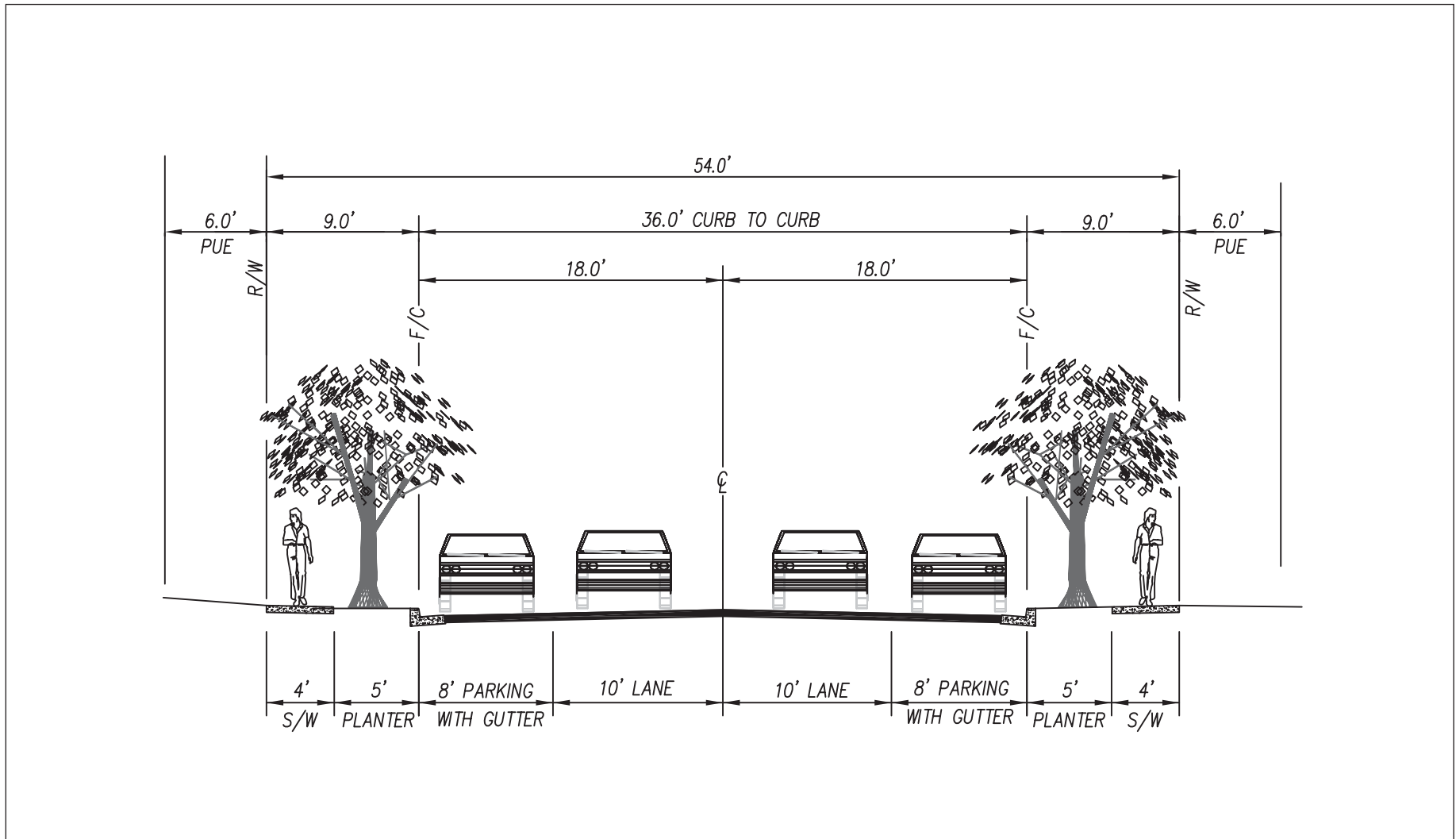
### **Bicycle and Pedestrian Routes**

The Mare Island Specific Plan envisions an interconnected bicycle and pedestrian network, as illustrated in **Figure II-15: Bicycle and Pedestrian Routes**. The proposed West Island Path would be a Class I (off-street), shared bikeway/path proposed along Azuar Drive and the Residential Parkway at the western edge of the developed portion of Mare Island. The proposed East Island Path would be a Class I, shared bikeway/path running along the proposed Waterfront Promenade through the easterly portion of Reuse Area 1A to connect with the San Pablo Bay National Wildlife Refuge. The Walnut Avenue Class I bikeway/path would follow the alignment of Walnut Avenue and Club Drive southward to end at the proposed Regional Park (Reuse Area 12). A Class III (on-street with dedicated lane) bikeway/path is proposed as part of the Azuar Drive roadway between Kansas Street and the roundabout at the intersection of Azuar Drive

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<sup>10</sup> Flagship Drive (formerly Residential Parkway), a new curvilinear landscaped street, would connect the new residential neighborhoods with Azuar Drive. Flagship Drive has been approved under the Reuse Plan and 1999 Specific Plan. It is not included as part of the proposed project for the purposes of this Subsequent EIR. Impacts of Flagship Drive were considered in the 1999 CEQA Documents and were further evaluated, pursuant to *CEQA Guidelines* Section 15164, in the *Addendum to the Final EIS/EIR for the Disposal and Reuse of Mare Island Naval Shipyard – Residential Parkway*, February 2004.



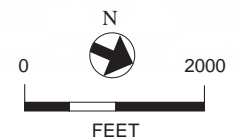


SOURCE: Chaudhary & Associates



SOURCE: SWA

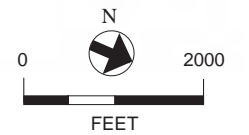
- Bus Route and Potential Stops
- Ferry Pier
- Potential Water Taxi Dock





SOURCE: SWA

- Class I
- No Class II
- - - Class III



and Walnut Avenue.<sup>11</sup> No Class II bikeways (On-Street, Shared Use) are proposed on Mare Island.

**Parking**

Table 5-3 of the Mare Island Specific Plan presents the recommended parking ratios for various land uses. It is reproduced below as **Table II-3: Specific Plan Recommended Parking Requirements**.

**Table II-3: Specific Plan Recommended Parking Requirements**

LAND USE	PARKING RATIO
Retail	One space per 250 square feet of floor area
Office	One space per 475 square feet of floor area
Warehousing	One space per 1,800 square feet of floor area
Light Industrial	One space per 900 square feet of floor area
Heavy Industrial	One space per 1,200 square feet of floor area

Source: Mare Island Specific Plan.

The Mare Island Specific Plan also recommends that criteria be developed for allowing reduced parking ratios for shared use of parking facilities by complementary mixed-uses to minimize the size of required parking facilities.

**UTILITY AND SERVICE SYSTEMS ELEMENTS**

The *Mare Island Reuse Infrastructure Study* (MIRIS), prepared in 1997 as part of the City’s Reuse Plan and the adopted 1999 Specific Plan, evaluated the conditions and capacities of the water, sewer, and storm drainage systems existing at that time on Mare Island and made recommendations for the reuse of these systems based on the City’s Reuse Plan for Mare Island.

Chapter 6 of the proposed Mare Island Specific Plan would supersede the MIRIS by incorporating the *Master Utility Plans* (the “MUP”)<sup>12</sup> as Appendix A to the Mare Island Specific Plan. The MUP analyzes utility system demand at buildout under the proposed Mare Island Specific Plan development program, discusses changed conditions that have occurred since the completion of the MIRIS, and identifies proposed utility system improvements and phasing.

<sup>11</sup> Note that impacts of the proposed Roundabout component of the Mare Island Specific Plan have been evaluated, pursuant to *CEQA Guidelines* Section 15164, in the *Addendum to the Final EIS/EIR for the Disposal and Reuse of Mare Island Naval Shipyard – Area 6C (A Portion of the Former Farrugut Village)*, February 2004.

<sup>12</sup> Chaudhary & Associates, *Master Utility Plans*, 2005.

### **Water Distribution System**

The Water Division of the City of Vallejo provides water service to Mare Island through two transmission mains crossing Mare Island Strait. The system has an active, newly constructed 5.7-million-gallon water storage tank. The MUP identifies recommended improvements to Mare Island's water system in its *Proposed Water Backbone Improvement Plan*. Existing water mains would remain in use and would be supplemented by new 12-inch, 16-inch, and 20-inch lines to accommodate the projected demand under the proposed development program. These lines would be within rights-of-way or easements that are owned, or would be ultimately owned, by the City. Criteria for sizing the new lines and determining the adequacy of existing lines are based on the demands outlined in the "City of Vallejo Regulations and Standard Specifications for Public Improvement."

### **Sanitary Sewer System**

The Vallejo Sanitation and Flood Control District (the "VSFCD") provides sanitary sewer and stormwater service to Mare Island. In recent years, the City has repaired and upgraded existing domestic sewage pump stations, which would remain in use under the Mare Island Specific Plan. The MUP identifies recommended improvements to Mare Island's sanitary sewer system to accommodate projected demand under the development program of the Mare Island Specific Plan. New 8-inch, 10-inch, and 12-inch pipes would comprise most of the system. These lines would be within rights-of-way or easements that are owned, or would be ultimately owned, by the VSFCD. Criteria for sizing new sewer lines and for determining the adequacy of existing lines are based on new standards in the *Vallejo Sanitation and Flood Control District Guide to Existing Policies and Engineering Design Standards*.<sup>13</sup>

### **Other Services**

The Mare Island Specific Plan describes the provision of other services, including Public Safety, Education, Parks and Open Space, Solid Waste Disposal and Recycling, Cable Television, and Broadband.<sup>14</sup>

## **GENERAL PLAN AMENDMENT**

The proposed project includes General Plan amendments to ensure consistency between the proposed Mare Island Specific Plan and the General Plan (see Appendix C to this Subsequent EIR).

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<sup>13</sup> City of Vallejo, *Vallejo Sanitation and Flood Control District Guide to Existing Policies and Engineering Design Standards*, May 2002.

<sup>14</sup> Mare Island Specific Plan, Chapter 7.0.

## **D. INTENDED USES OF THIS SUBSEQUENT EIR**

The 1999 CEQA Documents and this Subsequent EIR would together constitute and function as a “Project EIR” for the Mare Island Specific Plan. They will be considered by the City Council, in its deliberations on whether to approve, modify or deny the proposed project.

Pursuant to *CEQA Guidelines* Section 15161, a Project EIR examines the environmental impacts of a specific development project. The proposed Lennar Development Plan for the eastern portion of Mare Island owned by Lennar (Reuse Areas 1B through 10A) provides specific information on the location, nature, and intensity of proposed development. Potential impacts of this development program are analyzed at a sufficient level of detail to function as a Project EIR for the Lennar Mare Island development proposal for Reuse Areas 1B through 10A. The impacts of development of non-Lennar owned parcels, including Reuse Area 1A , 12, and 13 are also analyzed.

CEQA Section 21083.8.1(b)(2) and *CEQA Guidelines* Section 15229(c) are special provisions, intended to streamline environmental review of base reuse projects. These describe a presumption that actions implementing a reuse plan for which an EIR was certified are covered under the reuse plan EIR as part of a single base reuse project.

All public and private activities taken pursuant to or in furtherance of a reuse plan for which an EIR was prepared and certified pursuant to this section shall be deemed to be a single project. A subsequent or supplemental EIR shall be required only if the lead agency determines that any of the circumstances described in Section 15162 or 15163 exist.

This provision generally allows base reuse implementation actions to proceed under a certified EIR for a reuse plan, avoiding additional project-level environmental review, provided that the substantial revisions to the existing EIR would not be required.

## **E. APPROVALS REQUIRED**

The following City approvals are required for the proposed Mare Island Specific Plan:

- Certify this Subsequent EIR which, together with the 1999 CEQA Documents, would satisfy the requirements of CEQA for the proposed actions listed below.
- Adopt a General Plan Amendment (Appendix C to this Subsequent EIR).
- Adopt the Mare Island Specific Plan and the following Appendices to the Mare Island Specific Plan:
  - Appendix A: Master Utility Plans
  - Appendix B.1: Historic Project Guidelines

## II. Project Description

- Appendix B.2: Revised Predictive Archaeological Model for Mare Island and Archaeological Treatment Plan for Mare Island
- Appendix B.3: Historic Resources Catalog
- Appendix B.4: Historic Design Guidelines
- Appendix C: Sign Program
- Appendix D: Street Cross Sections
- Appendix E: Preliminary Master Development Plan





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### **III. ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION**

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#### **A. HISTORICAL RESOURCES**

This section analyzes the potential impact of the proposed Mare Island Specific Plan on Mare Island's historical resources, under the California Environmental Quality Act (CEQA).<sup>1</sup> This chapter has three main sections: Setting, Project Summary, and Impacts and Mitigation. The first subsection, Setting, describes the existing status of Mare Island historical resources under the National Register of Historic Places (National Register), the California Register of Historical Resources (California Register), and local landmark designation. The second subsection, Project Summary, describes those aspects of the proposed project that are relevant to the analysis of impacts to historical resources. The third subsection, Impacts and Mitigation, evaluates the impacts of the proposed project on Mare Island's historical resources and identifies mitigation measures that would reduce or eliminate identified significant impacts.

#### **SETTING**

The proposed project area defined by the Mare Island Specific Plan is located within the physical boundaries of Mare Island. Historical resources identified in the project vicinity are exclusively associated with the Mare Island Naval Shipyard, a former naval base operated by the U.S. Navy between 1854 and 1996.

Mare Island is the oldest shipyard and naval facility on the West Coast of the United States. The Shipyard has been listed in national, state, and local historic registers. In 1976, the Mare Island Naval Shipyard was named a National Historic Landmark. In 1997, the Mare Island Historic District was listed in the National Register. The National Register Historic District is complemented by state and local landmark listings.

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<sup>1</sup> Impacts related to Archaeological Resources, which may also be considered Historical Resources for the purposes of CEQA, are discussed separately in the Initial Study (see Appendix A to this Subsequent EIR).

## STATUS UNDER NATIONAL, STATE, AND LOCAL REGISTERS

### National

#### Mare Island National Register Historic District

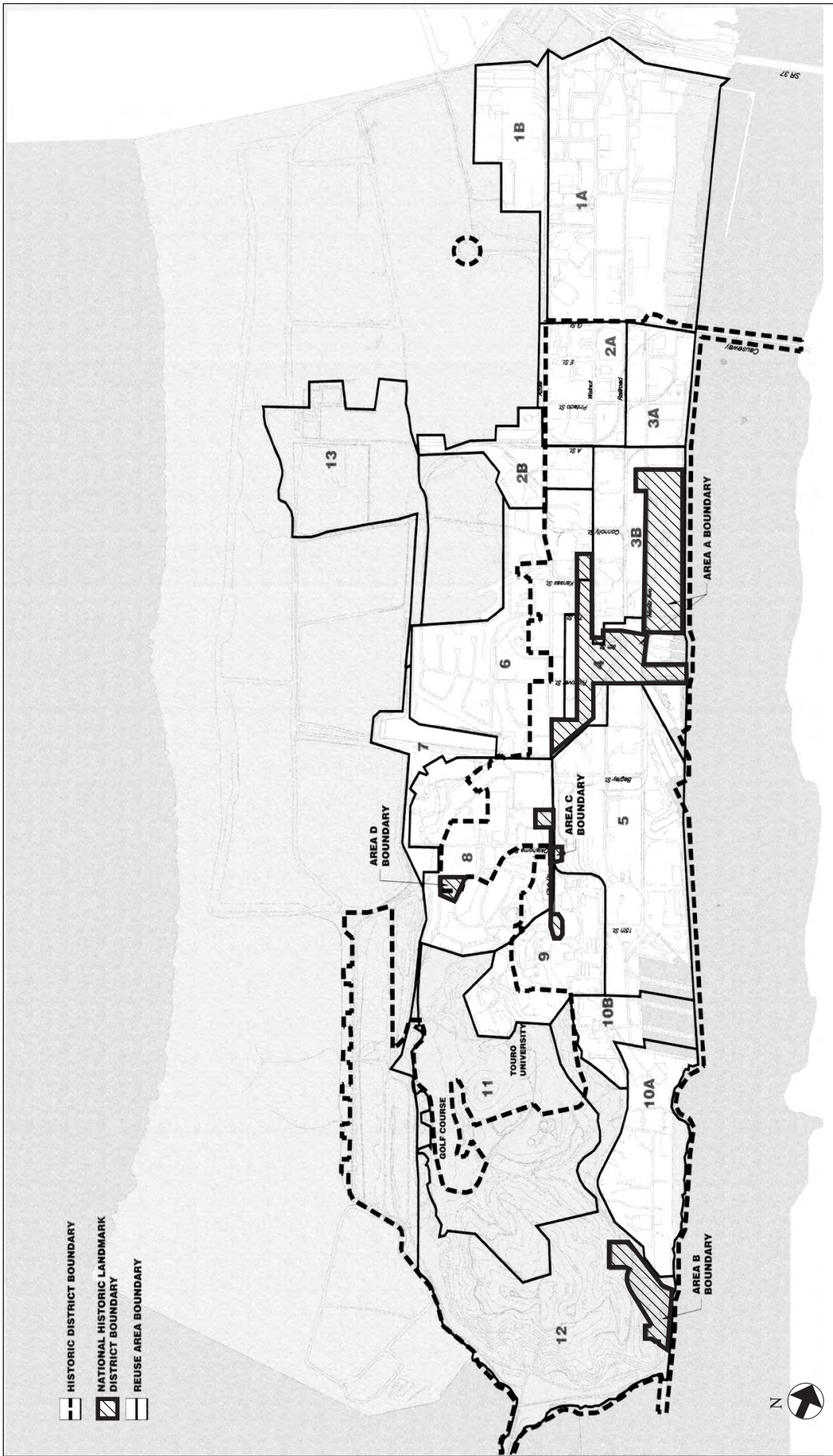
The National Register of Historic Places is the country's official list of historic resources recognized as significant in American culture and history. Administered by the National Park Service of the U.S. Department of the Interior, the National Register identifies and protects properties deemed worthy of preservation.

The Mare Island National Register Historic District (Historic District) was listed on January 21, 1997. See **Figure III.A-1: National Register Historic District and National Historic Landmark Boundaries**. The Historic District represents the evolution of the shipyard and the naval community over a period of almost 100 years (1854-1945). As discussed in the 1998 EIS/EIR, a total of 502 buildings and structures are listed as Contributing Resources in the National Register of Historic Places (NRHP) Registration Form. The buildings and structures are varied and diverse, in both function and importance. Properties associated with military operations include a large ammunition depot, a hospital, marine barracks, and a submarine base. Warehouses and maintenance facilities were used for storage and base support. A wide variety of housing indicates the range of personnel assigned to the base. Smaller, individually undistinguished structures were used as garages, power substations, bomb shelters, and first aid stations.<sup>2</sup> The long history of the Historic District has led to a wide architectural and functional diversity, within a unified framework of military planning. See **Figure III.A-2: Views of Historic District - Historic Core**, and **Figure III.A-3: Views of Historic District - Industrial Areas**.

The Historic District is significant at the national level under National Register Criteria A (Events), C (Architecture), and D (Information Potential). As the oldest shipyard on the Pacific Coast of the United States, Mare Island has played a significant role in naval history and military defense during the Civil War, Spanish-American War, and World Wars I and II, and therefore fulfills Criterion A. Criterion C makes reference to the District's architectural and engineering diversity, as well as to its significance as an example of development and construction from five defined time periods (1854-1865 Founding of the Navy Base through the Civil War; 1866-1897 Civil War to the Spanish-American War; 1898-1918 Spanish-American War through World War I; 1919-1938 The Interwar Years; and 1939-1945 World War II). The Historic District is

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<sup>2</sup> Stephen D. Mikesell, Stephen R. Wee, David S. Byrd, and Mary Maniery, *National Register of Historic Places Registration Form: Mare Island Historic District*, January 22, 1996.



MARE ISLAND AMENDED AND RESTATED SPECIFIC PLAN  
**FIGURE III.A-1: NATIONAL REGISTER HISTORIC DISTRICT  
 AND NATIONAL HISTORIC LANDMARK BOUNDARIES**



Smithery Building (Right) and Industrial Shops along California Avenue



Officer's Quarters along Walnut Avenue

SOURCE: Lennar Mare Island

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MARE ISLAND AMENDED AND RESTATED SPECIFIC PLAN  
**FIGURE III.A-2: VIEWS OF HISTORIC DISTRICT-  
HISTORIC CORE**



Aerial View of Reuse Area 5



Aerial View of Reuse Area 2A

SOURCE: Lennar Mare Island

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MARE ISLAND AMENDED AND RESTATED SPECIFIC PLAN  
**FIGURE III.A-3: VIEWS OF HISTORIC DISTRICT-  
INDUSTRIAL AREAS**

III. Environmental Setting, Impacts and Mitigation  
A. Historical Resources

significant under Criterion D for the subsurface deposits, which contain information from the Mare Island Naval Shipyard's early history. The cemetery, the oldest Navy cemetery on the West Coast, also fulfills Criteria Consideration D: Cemeteries.<sup>3</sup>

The NRHP Registration Form identifies 674 total resources. According to the National Register nomination criteria, Contributing Resources were any buildings, structures, sites or objects that met three criteria: (1) exists within the district boundaries; (2) was built during the period of significance; and (3) retains integrity.<sup>4</sup> Contributing Resources include 482 buildings, 20 structures, and 13 sites (12 historic landscape areas and 1 archaeological site with 27 features). Prior to the transfer of the property to the City, eight Contributing Resources were demolished by the Navy and no longer exist.<sup>5</sup>

A resource was considered to be a "Non-Contributing Resource" when it met one of two conditions: (1) was within the boundaries of the historic district but was built after the period of significance; and (2) was within the boundaries of the historic district, was built during the period of significance, but has been modified to an extent that it no longer retains integrity.<sup>6</sup> A total of 159 properties were listed as Non-Contributing.

The boundaries of the Historic District include nearly all buildings that notably add to the District's significance and fall within the period of significance 1854-1945. As noted in the NRHP Registration Form, "The historic district has a period of significance that extends from 1854-1945 and is significant in the areas of military history, industrial history, architecture and engineering, and historic archaeology. The intent in defining this historic district boundary was to include all or nearly all properties that conform with that period of significance and those areas of significance."<sup>7</sup> If the entire island had been included, post-World War II structures would outnumber the Contributing elements. The boundaries include 65 percent of Mare Island (approximately 980 of 1,500 acres) and exclude the far northern end of the island, the west-central part of the island, and the golf course.

#### National Historic Landmark

A National Historic Landmark designation is made by the Secretary of the Interior to observe especially noteworthy places in American history and culture. There are over 2,300 National Historic Landmarks, which are automatically listed in the National Register of Historic Places.

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<sup>3</sup> Mikesell, Wee, Byrd, Maniery 1996.

<sup>4</sup> National Park Service, *National Register Bulletin: How to Complete the National Register Registration Form*, pp. 16-17.

<sup>5</sup> Lennar Mare Island, *Mare Island Historic Resource Project Guidelines*, June 2005.

<sup>6</sup> Mikesell, Wee, Byrd, Maniery 1996.

<sup>7</sup> Mikesell, Wee, Byrd, Maniery 1996:10.2.

The “Mare Island Naval Shipyard” was listed as a National Historic Landmark District on May 15, 1975. See Figure III.A-2, p. III.A.4. The listing includes 50 buildings and structures, divided into four non-contiguous areas: A, B, C, and D.<sup>8</sup> The Landmarks are mainly made up of officers’ quarters, but also include the oldest Navy chapel on the West Coast, a hospital, several coal sheds, and a dry dock. These buildings include some of the earliest built at Mare Island and represent the early development of U.S. Navy on the West Coast. The four non-contiguous areas are outlined below.

#### *Area A*

Area A contains the most significant structures on Mare Island, including the smithery, maintenance facilities, coal sheds, drydock, administration building, officers’ quarters, and chapel.

- *Smithery (Building 46)*. The smithery was one of the first buildings erected by Commander David G. Farragut in 1856. It is 260 feet long and 200 feet wide and has a parapet gable roof, arcaded sides, and semi-circularly arched windows. The chimneys have been removed and the interior has been altered, but the structure is in fair condition. It is now used as a museum.
- *Steam Engineering Complex and Foundry (Buildings 85, 87, 89, 91)*. The Navy erected these rectangular-shaped, gable-roofed, red brick edifices in 1858, and together they form a large “U” that measures at least 330 feet along each side. Building 87, the base of the “U,” has two stories, while the other structures have one.
- *Supply Warehouse (Building 69)*. This is a slate-roofed structure constructed in 1865.
- *Coal Sheds (Buildings 141, 143, 145, 147, 149, 151, 153, 155, 163)*. Built at the turn of the century, these nine gambrel-roofed sheds are made almost entirely of steel and open at the ends. They are situated side by side, and together they extend about 700 feet along the northern part of the waterfront. In 1900, Mare Island was the chief West Coast coaling depot for the U.S. Navy. These coal sheds represent a significant part of U.S. and Mare Island naval history.
- *Drydock 1*. Begun in 1872 and completed in 1891, drydock 1 was the first drydock constructed on the U.S. West Coast. It is built of cement and granite block. It is approximately 122 feet wide at the bottom, about 508 feet long, and 32 feet deep.
- *Administration Building (Building 47)*. This 1870 structure has been altered, but there are still many original features. The domed, octagonal cupola and centrally placed front pediment adorn the roof, and brick pilasters, semi-circularly arched first-story windows, and segmental arched second-story windows still decorate the façade. A full-length, single-tiered veranda has been removed from the front, and a second level has been added to each of the formerly one-story wings.
- *Officers’ Quarters (Buildings 17, 19, 21, 29)*. These white-painted, frame dwellings were built in 1897-1898 and make up part of officers’ row on Walnut Avenue.

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<sup>8</sup> George R. Adams, *National Register of Historic Places Inventory-Nomination Form: Mare Island Naval Shipyard*, December 1, 1971.

### III. Environmental Setting, Impacts and Mitigation

#### A. Historical Resources

- *Officers' Quarters (Buildings A, B, C, D, E, G, H, J, K, L, M, N, O)*. These two-story, white-painted, stucco-covered residences were constructed about 1900 on the foundations of earlier base quarters, erected between 1856 and 1858. The quarters make up part of officers' row on Walnut Avenue.
- *Saint Peter's Chapel (Building 104)*. Albert Sutton designed the one-story, cross-shaped church in 1900-1901. It is believed to be the first chapel built with Government funds on any military post, and was the oldest continuously operated Navy chapel on the West Coast. There are 17 Tiffany stained glass windows in the Chapel.

#### Area B

Area B includes munitions storage facilities and the base cemetery.

- *Stone Magazines (Buildings A-1, A-4, A-20)*. The earliest stone magazines were constructed between 1857 and 1864. The buildings are rectangular, surmounted with sheet metal roofs. Stone quoins embellish the walls.
- *Brick Magazines (Buildings A-3, A-5, A-6, A-11)*. Constructed in the 1890s, the brick magazines are characterized by parapet gable roofs and denticulated cornices along the parapet.
- *Base Cemetery*. Established in 1896, the base cemetery is situated a few hundred yards northwest of the magazines. The cemetery contains approximately 900 graves and is surrounded by a white picket fence.

#### Area C

Area C consists of three nineteenth-century structures constructed along what is now known as Azuar Drive.

- *Hospital (Building H-1)*. This was the first U.S. naval hospital on the West Coast when it was constructed in 1899. The building is vaguely H-shaped and has a three-story central block with two two-story wings. Together these three sections measure almost 300 feet in length. The building has undergone numerous alterations, including removal of the original mansard roof and addition of a full-height, pedimented portico over the front entrance.
- *Marine Officers' Quarters (Building M-1)*. Constructed in 1870, the building occupies its original site, once part of the original Marine Corps compound. In 1917, the bulk of the Marine Corps compound moved to its current location further west. Building M-1 features entablatures above most windows, a boxed cornice with frieze and supporting scroll brackets, and a semi-circular arched entrance portico.
- *Stable (Building 88)*. Constructed between 1854 and 1860, the stable is a rectangular-shaped, red-brick, structure surmounted by a gable roof. The building features a slate roof and three square ventilation cupolas. It was last used as a stable in 1929, and was a storehouse after that.



III. Environmental Setting, Impacts and Mitigation  
A. Historical Resources

*Area D*

Area D contains relocated officers' residences, separated from the other Landmark buildings.

- *Officers' Quarters (Buildings M-2, M-3, M-4, M-5).* These buildings were moved from their original locations at the north side of the original Marine Parade Ground, to their present location in 1952. Unique among family dwellings on the base, Buildings M-2 and M-5 are irregularly shaped, two-and-one-half-story, wood-frame structures, built in 1888. Both have a hip-roofed central block and two gable-roofed ells. A one-story, L-shaped section connects the ells. Richly ornamented scroll work, overlapping wooden shingles, and bargeboards decorate the gable ends. Buildings M-3 and M-4, also constructed in 1888, combine to form a duplex. They have been approved for relocation to near Building M-1, closer to their original location.

All National Historic Landmarks are included in the National Register of Historic Places.<sup>9</sup> Therefore, the 42 extant individual buildings and associated four groupings are listed in the National Register of Historic Places and are incorporated into the Mare Island National Register Historic District.

**State**

California Register of Historical Resources

The California Register of Historical Resources (California Register) “was created by the State Legislature in 1992 and is intended to serve as an authoritative listing of significant historical and archeological resources in California. Additionally, the eligibility criteria for the California Register (codified in PRC § 5024.1 and further amplified in 14 CCR § 4852) are intended to serve as the definitive criteria for assessing the significance of historical resources for the purposes of CEQA.”<sup>10</sup> The California Register includes objects, buildings, structures, sites, areas, or places which are historically or archaeologically significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. The program mirrors the National Register and maintains similar evaluation criteria. Any California resource included in the National Register is automatically listed in the California Register.

As a resource listed in the National Register, the Mare Island Historic District is included in the California Register and comprises the same Contributing Resources and boundaries as the National Register District.

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<sup>9</sup> National Historic Preservation Act, 16 U.S.C. 470a(a)(1)(B).

<sup>10</sup> California Office of Historic Preservation, *Technical Assistance Series #1 – California Environmental Quality Act (CEQA) and Historical Resources*, May 23, 2001, p. 27.

### California State Historical Landmark

California State Historical Landmarks are sites, buildings, features, or events that are of statewide significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. Nominated by the State Historic Resources Commission, all properties listed as a *California State Historical Landmark* are automatically listed on the California Register. All landmarks must address one of the following criteria for designation:

1. The first, last, only, or most significant of its type in the state or within a large geographic region (Northern, Central, or Southern California).
2. Associated with an individual or group having a profound influence on the history of California.
3. A prototype of, or an outstanding example of a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer or master builder.

Mare Island Naval Shipyard became a California State Historical Landmark (No. 751) in 1979 under the title “First U.S. Naval Station in the Pacific.”

### **Local**

#### City of Vallejo Mare Island Historic District

In 1999, the “Mare Island Historic District” became a local historic district in accordance with a 1997 Memorandum of Agreement (MOA) that transferred the Naval Shipyard to the City of Vallejo.<sup>11</sup> Thus in March 1999, the City adopted the mandated Mare Island Amendment to the Preservation Ordinance and in March 2002, the title was transferred to the City. The City Historic District is coterminous with the National Register District and includes all structures listed as Contributing Resources.

Within the local historic district, the 42 extant National Historic Landmark buildings are each designated as individual City Landmarks.<sup>12</sup> This provides the structures additional local protection under the City’s Preservation Ordinance and Mare Island Amendment.

## **ASPECTS OF THE PROPOSED PROJECT RELATED TO HISTORICAL RESOURCES**

The following section summarizes key aspects of the Mare Island Specific Plan and the Lennar Development Plan most directly relevant to the evaluation and treatment of historical resources.

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<sup>11</sup> City of Vallejo, *Zoning Ordinance*, Section 16.38.035.

<sup>12</sup> City of Vallejo, *Zoning Ordinance*, Section 16.38.034.

## MARE ISLAND SPECIFIC PLAN HISTORIC GUIDELINES

The Cultural Resources Element of the Mare Island Specific Plan<sup>13</sup> incorporates *Mare Island Historic Resource Project Guidelines* (the “Historic Guidelines,” Appendix B.1 to the Mare Island Specific Plan).<sup>14</sup> The Historic Guidelines establish criteria and procedures for review of demolition, alteration, and new construction within those portions of Reuse Areas 1A-10B that are in the Mare Island Historic District. The Historic Guidelines of the Mare Island Specific Plan are “intended to guide reuse of the Naval Shipyard, by allowing for a mix of rehabilitation and reuse of historic resources, new construction, and limited demolition within the Historic District as appropriate to the City’s reuse goals.”<sup>15</sup> The Historic Guidelines address the challenges of regulating a large and heterogeneous historic district, containing Contributing Resources of varying degrees of historic significance, and containing subareas of varying degrees of sensitivity. Each of the 392 Contributing Resources in Reuse Areas 1A-10B is cataloged in the *Catalog of Historic Resources*.<sup>16</sup> Reuse Areas 11 and 12 and the Dredge Pond areas contain 110 Contributing Resources within the Mare Island Historic District, but are not part of the Lennar Development Plan and are not cataloged or classified under the Historic Guidelines. No proposals for reuse, alteration or demolition of these unclassified resources is proposed under the project, or covered under this Subsequent EIR. Future decisions as to the disposition of these unclassified resources would require review under a separate project and would also require separate review under CEQA.

### Planning Considerations

Chapter 4 of the Historic Guidelines identifies and would establish the planning considerations that would guide the City’s review of proposals for demolition, new construction, and alterations within the District. These are District Characteristics; Individual Historic Significance; Property Type; Repetitive Resources; Period of Significance and Eras; and Area Resources and Character-Defining Features.<sup>17</sup>

#### District Characteristics

The Historic Guidelines identify the characteristics that define the historic character of the Mare Island Historic District.<sup>18</sup>

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<sup>13</sup> Mare Island Specific Plan, Chapter 2, Cultural Resources.

<sup>14</sup> Mare Island Specific Plan, Appendix B.1, *Mare Island Historic Resources Project Guidelines*, June 2005.

<sup>15</sup> Historic Guidelines Chapter 4.1.

<sup>16</sup> Mare Island Specific Plan, Appendix B.3, *Catalog of Historic Resources*.

<sup>17</sup> Historic Guidelines Chapter 4.3.

<sup>18</sup> Historic Guidelines Chapter 4.3.1.

### Individual Historic Significance

The existing National Register Historic District designation identifies all unaltered, pre-1945 structures within the District as “Contributing Resources.” It does not further distinguish Contributing Resources by degree of historical significance.

The proposed Historic Guidelines would classify 392 Contributing Resources in Reuse Area 1A-10B into one of three groupings: 1. City Landmarks (Highly Significant); 2. Notable Resources (Individually Significant); and 3. Component Resources (Not Individually Significant). Of the 392 Contributing Resources in Reuse Areas 1A-10B, the Historic Guidelines identify 11 percent as Landmarks (Highly Significant), 42 percent as Notable Resources (Individually Significant), and 47 percent as Component Resources (Not Individually Significant). The three significance classifications are described below.<sup>19</sup>

#### *City Landmarks (Highly Significant)*

This group includes all 42 extant structures within the four National Historic Landmark groupings. These resources have also been designated by the City of Vallejo as City Landmarks.

#### *Notable Resources (Individually Significant)*

The Historic Guidelines identify 165 Notable Resources (Individually Significant). These consist of structures that are,

identified as Contributing Resources in the National Register Nomination Form which are not listed as City Landmarks, but which are of noteworthy historical or architectural significance. All structures within this group are individually noted as having individual historical or architectural significance in the National Register Registration form which includes individual descriptions of these resources. Notable resources must contribute to the historic significance of the District by location, design, setting, materials, workmanship, feeling and association. They must add to the District’s sense of time and place and historical development. They cannot have been so altered or have so deteriorated that the overall integrity of the building has been irretrievably lost. Generally they must be 50 years or older. A resource which lacks individual significance, but which is part of a cluster or subarea of resources that communicates a sense of time, place, and historical development may be included within this group.<sup>20</sup>

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<sup>19</sup> Historic Guidelines Chapter 4.3.2.

<sup>20</sup> Historic Guidelines Chapter 4.3.2.

*Component Resources (Not Individually Significant)*

This group includes 185 structures that, although identified as Contributing Resources in the National Register Nomination Form, the City has determined to be not individually historically significant. These structures,

lack individual historical, engineering, or architectural significance, are small secondary structures, or lack overall integrity due to alteration or deterioration of location, design, setting materials, workmanship, feeling or association.<sup>21</sup>

Property Type

The Historic Guidelines categorizes the 392 Contributing Resources in Reuse Areas 1A-10B under one of 19 property types (e.g., Single Family Residential, Barracks, Bomb Shelter, Landscape, Masonry Industrial/Ordnance Storage or Warehouse), and describes the essential characteristics of each category.<sup>22</sup>

Repetitive Resources

The Historic Guidelines identify Repetitive Resource types. “Repetitive Resources are largely ancillary structures, or similar property types or subtypes, consisting primarily of structures that are not individually significant.”<sup>23</sup> The Historic Guidelines identify 10 of the 19 property types described above as containing repetitive resources, and identify 219 repetitive resources among the 392 Contributing Resources. “Some repetitive resources may be more significant as a group, such as the bomb shelters, than as individual structures. Others, including sheds and electrical enclosures, are simply repetitive ancillary structures that do not communicate substantial additional sense of time or place as a group, nor are they visually cohesive.”

Period of Significance and Eras

The Historic Guidelines identify the resources within Reuse Areas 1A-10B by era.<sup>24</sup> The five eras of significance are 1854-1865 (Founding of the Base through the Civil War); 1866-1897 (Civil War to the Spanish-American War), 1898-1918 (Spanish-American War through World War I), 1919-1938 (the Interwar Years); and 1939-1945 (World War II).

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<sup>21</sup> Historic Guidelines Chapter 4.3.2.

<sup>22</sup> Historic Guidelines Chapter 4.4.

<sup>23</sup> Historic Guidelines Chapter 4.5.

<sup>24</sup> Historic Guidelines Chapter 4.6.

### Area Resources and Character-Defining Features

The Historic Guidelines identify the Contributing Resources within Reuse Areas 1A-10B and describe the area features that contribute to the character of each Reuse Area.<sup>25</sup>

### **Development Criteria**

Chapter 5 of the Mare Island Specific Plan's Historic Guidelines establishes development review criteria for proposals for alteration, relocation, and new construction in the Historic District.<sup>26</sup>

### Establishment of Project Sites

The "Mare Island Amendment," Vallejo Municipal Code Section 16.38, provides that new construction or alteration within the Project Site of a Contributing Resource triggers Certificate of Appropriateness review.<sup>27</sup> In the Mare Island Amendment, the project site is defined as the legal parcel on which the project is located. However, the Mare Island Amendment Section 16.38.036 requires that project guidelines establish the project site for each resource or group of resources.

To implement the Mare Island Amendment, the Historic Guidelines "define the area in which physical changes to the environment can reasonably be expected to have an impact on an individual resource in a manner that could adversely affect its historic character."<sup>28</sup> Definition of "Project Site" in the Historic Guidelines is also intended to allow consideration of site features that are important in defining the overall historic character of the property. The Project Site for each Contributing Resource is "that area containing structures or other features which were functionally related to the individual resource during the period of significance for the National Register Historic District, i.e. between 1854 and 1945.

The Historic Guidelines provide for administrative determination of Project Sites by the Planning Manager for each Contributing Resource. Until Project Sites are administratively determined, the Planning Manager will review all proposals for new construction or modification of an existing structure to determine whether it is within the Project Site of the Contributing Resource. If the Planning Manager determines that the proposal is within the Project Site of a Contributing Resource, a Certificate of Appropriateness will be required.<sup>29</sup>

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<sup>25</sup> Historic Guidelines Chapter 4.7.

<sup>26</sup> Historic Guidelines Chapter 5.0.

<sup>27</sup> Vallejo Zoning Ordinance Section 16.38.036.

<sup>28</sup> Historic Guidelines Chapter 5.2.

<sup>29</sup> Historic Guidelines Chapter 5.2.

#### Treatment Standards for Retained Contributing Resources

The Historic Guidelines require that all Contributing Resources retained on site comply with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (the "Secretary's Standards").<sup>30</sup> The Secretary's Standards describe four treatments for historic resources:

Preservation, Rehabilitation, Restoration, and Reconstruction. However, given the need to find new and economically viable uses for the former Naval base, the relevant treatment and applicable standards for review of proposals will generally be that of "Rehabilitation."

Rehabilitation is defined as "the process of returning a property to a state of utility, through repair or alteration, which makes possible an efficient contemporary use while preserving those portions and features of the property which are significant to its historic, architectural, and cultural values."<sup>31</sup> The Historic Guidelines also provide guidance on the treatment of relocated resources.<sup>32</sup>

#### Design Standards for New Construction

The Historic Guidelines<sup>33</sup> require that all new construction within the Historic District comply with the Secretary's Standards<sup>34</sup> and the Mare Island Specific Plan Urban Design Guidelines.<sup>35</sup>

#### Additional Design Guidance

The Mare Island Specific Plan would be supplemented with *Preservation Design Guidelines*, which would be adopted concurrently with the Mare Island Specific Plan as an implementation tool. The *Preservation Design Guidelines* would provide additional, more specific illustrated guidance in the treatment of retained Contributing Resources in conformity with the *Secretary's Standards*, and for new infill construction within the Historic District.<sup>36</sup> The Design Guidelines would inform decisionmakers, City staff, property owners and the public on the appropriateness of proposed work within the Mare Island Historic District. The Guidelines would also provide criteria that would assist in defining, for review purposes, the "Project Site."

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<sup>30</sup> Historic Guidelines Chapter 5.3.1; Code of Federal Regulations, 36 CFR 67.

<sup>31</sup> U.S. Department of the Interior, *The Secretary of the Interior's Standards for Rehabilitation & Illustrated Guidelines for Rehabilitating Historic Buildings*.

<sup>32</sup> Historic Guidelines Chapter 5.3.2.

<sup>33</sup> Historic Guidelines Chapter 5.4.

<sup>34</sup> U.S. Department of the Interior, *The Secretary of the Interiors Standards for Rehabilitation & Illustrated Guidelines for Rehabilitating Historic Buildings*.

<sup>35</sup> Mare Island Specific Plan, Chapter 4.0.

<sup>36</sup> Winter and Company, *Mare Island Historic District Design Guidelines*, June 2005.

## **Demolition Criteria**

The Historic Guidelines would establish new criteria for evaluating demolition proposals, applied at three levels: District-Level criteria; Area-Level criteria; and Individual Resource-Level criteria.<sup>37</sup>

### District-Level Demolition Criteria

The Historic Guidelines Chapter 6.1 would establish District-Level criteria for reviewing proposals for demolition of Contributing Resources, as follows:<sup>38</sup>

1. All Landmarks will be retained unless the City makes a finding that the resource is in such condition that it is not “feasible” to preserve or restore it.
2. All Notable Resources will be retained, unless the City makes a finding that retention of the resource would be a “deterrent” to the successful reuse of Mare Island.
3. Demolition of a Component Resource is allowed upon a finding that the proposed demolition is reasonably necessary to implement the proposed Development Plan, including the provision of new infrastructure, additional surface parking, and roadways.
4. The Historic District must retain a mix of building eras, materials and architectural styles which reflect the existing multi-layered historic environment.
5. All retained Contributing Resources must be retained in a manner that protects their integrity through conformance with the Secretary’s Standards.

### Area-Level Demolition Criteria

The Historic Guidelines would establish standards for evaluating proposals for demolition for each Reuse Area.<sup>39</sup>

### Individual Resource-Level Demolition Criteria

Under the Historic Guidelines, the level of review and the stringency of the applicable review criteria for demolition would depend on the historic significance classification of the affected structures (as such classifications are established in Historic Guidelines 4.3.2), as follows:<sup>40</sup>

#### *Landmarks – Hardship Test*

Demolition of any individually-designated City Landmark is prohibited, unless the City makes a finding that the resource is in such condition that it is not “feasible to preserve or restore it.” This standard is intended to incorporate the exacting hardship test applied to constitutional violations under the Fifth

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<sup>37</sup> Historic Guidelines Chapter 6.0.

<sup>38</sup> Historic Guidelines Chapter 6.1.

<sup>39</sup> Historic Guidelines Chapter 6.2.

<sup>40</sup> Historic Guidelines Chapter 6.3.



Amendment, which requires a showing that denial of demolition permit would leave the property owner with no beneficial economic use of the Landmark property. By implication, this standard also requires the property owner to show that there are no “feasible” alternatives to demolition of the Landmark resource. No demolitions of Landmarks are proposed as part of the Development Plan.

*Notable Resources – Deterrence Analysis*

Demolition of any Notable Resource is prohibited, unless the City makes a finding that retention of the resource would be a “deterrent” to the successful implementation of the Mare Island Reuse Plan. This situation is expected to occur occasionally on Mare Island due to the need to upgrade infrastructure to civilian standards and functional obsolescence of a limited number of structures. This standard is intended to be less exacting than the “hardship” test applicable to Landmarks, but more rigorous than the “Reasonable Necessity Finding” applicable to Components.

*Component Resources – “Reasonable Necessity” Finding*

Demolition of a Component Resource is allowed upon a finding the proposed demolition is reasonably necessary to implement the proposed Development Plan, including the provision of new infrastructure, additional surface parking, and roadways. This less rigorous standard is appropriate because demolition of Component Resources will not result in the loss of any individually significant historic resources.

## **REVIEW PROCEDURES**

Chapter 8 of the Historic Guidelines sets forth the procedures for review of proposals for new construction, rehabilitation, relocation, and demolition of resources within the Historic District. Such proposals would be subject to review by either the City of Vallejo or the National Park Service (NPS).<sup>41</sup> The factor that would determine whether review would be conducted by the City or NPS is whether a federal tax credit application has been submitted for the resource in question.

### **Review of Certificates of Appropriateness**

#### Requirement

Where no federal tax credits are sought for the resource(s) in question, review of actions affecting the resource would be conducted by the City pursuant to the Certificate of Appropriateness procedures of the Mare Island Amendment.<sup>42</sup> The Mare Island Amendment requires a Certificate of Appropriateness for the following types of projects within the Project Site (as defined by the Historic Guidelines) of a Contributing Resource: new construction or addition to an existing building or structure; alterations affecting the exterior architectural appearance of a building or

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<sup>41</sup> Historic Guidelines Chapter 8.1.

<sup>42</sup> Historic Guidelines Chapter 8.2.1; Vallejo Zoning Ordinance 16.38.036(A).

structure; landscape alterations; interior alterations to a Landmark; or relocation of a Contributing Resource.<sup>43</sup>

#### Architectural Heritage and Landmarks Commission Review

Certificates of Appropriateness for the following types of projects would be acted upon by the Architectural Heritage and Landmarks Commission (“Landmarks Commission”): relocation of any Landmarks or other Contributing Resources; alterations or new construction affecting a Landmark or its Project Site; appeals of an administrative decision; and referrals from the Planning Manager.<sup>44</sup>

#### Planning Manager Administrative Review

All other Certificates of Appropriateness may be acted upon administratively by the Planning Manager.<sup>45</sup> In general, this would include all alterations or new construction affecting a Contributing Resource which is not a Landmark.

#### Appeals

All decisions on Certificates of Appropriateness by the Landmarks Commission may be appealed to the City Council. Decisions by the Planning Manager may be appealed to the Landmarks Commission.

### **Review of Demolition Permits**

#### Requirement

Under the Mare Island Amendment, all demolition permits for non-certified historic projects must be reviewed by the Landmarks Commission for compliance with the Historic Guidelines.<sup>46</sup> Issuance of a demolition permit is mandatory for a Contributing Resource if the following criteria are substantially met:<sup>47</sup>

1. The Contributing Resource does not meet the National Register aspects of integrity.
2. The Contributing Resource has not been willfully neglected by the non-federal owner so as to result in its deterioration or abandonment.
3. The proposed project is consistent with the goals and policies of the Mare Island Specific Plan and complies with Project Guidelines. . .

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<sup>43</sup> Vallejo Zoning Ordinance 16.38.036(A).

<sup>44</sup> Historic Guidelines Chapter 8.2.1.

<sup>45</sup> Historic Guidelines Chapter 8.2.1.

<sup>46</sup> Vallejo Zoning Ordinance, 16.38.41.

<sup>47</sup> Vallejo Zoning Ordinance 16.38.043.

4. The demolition would not cause a substantial adverse change in the National Register of Historic Places and/or the California Register of Historical Resources eligibility of the Mare Island District.

Failure to meet the requirements for mandatory issuance would subject a proposed demolition to discretionary review by the Landmarks Commission. As discussed above, the standards for issuance of a demolition permit would differ depending on the classification of the Contributing Resource (i.e., Landmark, Notable Resource, Component Resource).

### **Federal Review of Certified Rehabilitation Projects**

Under the Mare Island Amendment, National Park Service-approved Certified Historic Preservation Projects are exempt from the requirement for a Certificate of Appropriateness.<sup>48</sup> Rehabilitation, relocation, new construction, or demolition activities affecting a certified historic structure with a pending tax credit application are automatically subject to comprehensive review by the National Park Service.<sup>49</sup> The tax credit review process by the NPS would include the following: a determination as to whether structures within the Historic District form “functional groupings” and are therefore required to be treated as a single project for tax credit purposes; a determination as to which resources are “certified historic structures” under the Internal Revenue Code, and which are not; and a review of proposed rehabilitations, relocations, demolition, and new construction for consistency with the Secretary’s Standards. Under the Historic Guidelines, issuance of demolition permits is mandatory for any demolition approved by the National Park Service as part of a certified tax credit project.<sup>50</sup> The Landmarks Commission must be notified and given the opportunity to comment on all tax credit projects.<sup>51</sup>

### **LENNAR DEVELOPMENT PLAN**

In partial implementation of the Mare Island Specific Plan’s Land Use Program, the proposed project also includes a Preliminary Master Development Plan (the “Lennar Development Plan,” Appendix E to the Mare Island Specific Plan, and reproduced herein as Appendix B to this Subsequent EIR). As discussed in Chapter II, Project Description, of this Subsequent EIR, the Lennar Development Plan calls for retention and reuse of existing Contributing Resources, new construction, and demolition of Contributing Resources within the Historic District.

**Table III.A-1: Proposed Disposition of Contributing Resources by Reuse Area and by Specific Plan Classification** summarizes the proposed disposition (i.e., retention or demolition) of National Register Contributing Resources on Mare Island, by Reuse Area, and by proposed Specific Plan significance classification.

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<sup>48</sup> Historic Guidelines Chapter 8.2.2; Vallejo Zoning Ordinance 16.38.039.C.5.

<sup>49</sup> Historic Guidelines Chapter 8.3.

<sup>50</sup> Historic Guidelines Chapter 8.2.2.

<sup>51</sup> Historic Guidelines Chapter 8.2.2.

III. Environmental Setting, Impacts and Mitigation  
A. Historical Resources

**Table III.A-1: Proposed Disposition of Contributing Resources by Reuse Area and by Specific Plan Classification**

	1A	2A	2B	3A	3B	4	5	6	8	9 (a)	10A	Other Areas (b)	PLAN AREA
<b>TOTAL NATIONAL REGISTER CONTRIBUTING RESOURCES</b>													
Sum	1	9	4	15	65	87	54	81	25	20	29	112	502
Retain	1	3	0	4	34	57	21	28	14	17	28	112	319
Demolish	0	6	4	11	31	30	33	53	11	3	1	0	183
<b>Landmarks</b>													
Sum	0	0	0	0	14	17	1	4	5	1	0	0	42
Retain	0	0	0	0	14	17	1	4	5	1	0	0	42
Demolish	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Notable Resources</b>													
Sum	1	4	1	5	25	40	23	27	10	14	15	0	165
Retain	1	3	0	4	18	31	19	22	9	14	15	0	136
Demolish	0	1	1	1	7	9	4	5	1	0	0	0	29
<b>Component Resources</b>													
Sum	0	5	3	10	26	30	30	50	10	5	14	2 (c)	185
Retain	0	0	0	0	2	9	1	2	0	2	13	2	31
Demolish	0	5	3	10	24	21	29	48	10	3	1	0	154
<b>Unclassified National Register Contributing Resources (d)</b>													
Sum	0	0	0	0	0	0	0	0	0	0	0	110	110
Retain	0	0	0	0	0	0	0	0	0	0	0	110	110
Demolish	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Notes:</i>													
(a) Area 9 includes the Touro University Campus. No demolition of Contributing Resources is contemplated on the Touro Campus under the Mare Island Specific Plan. However, anticipated future demolition of Contributing Resources on the Touro Campus is considered under the analysis of cumulative impacts in this Subsequent EIR under Impact A.7.													
(b) "Other Areas" include areas of Mare Island that contain no Contributing Resources (i.e., Reuse Areas 1B, 7, 13, Dredge Ponds and Wetlands); as well as areas containing Contributing Resources that are not classified under the proposed Mare Island Specific Plan, and for which no changes involving Contributing Resources are contemplated under the proposed project (i.e., Reuse Areas 10B, 11, 12).													
(c) Area 10B (Army Reserve) contains two National Register Contributing Buildings that are classified under the proposed Amended and Specific Plan (Buildings A 272 and A 279). All other National Register Contributing Resources in Area 10 B are not classified under the proposed Mare Island Specific Plan.													
(d) "Other National Register Contributing Resources" are those National Register contributing resources that are not classified under the proposed Mare Island Specific Plan. No demolition is proposed for these under the proposed Mare Island Specific Plan.													
<i>Source:</i> City of Vallejo and Turnstone Consulting													

**Table III.A.-2: List of Contributing Resources Proposed for Demolition** identifies each Contributing Resource proposed for demolition under the Lennar Development Plan.

## IMPACTS AND MITIGATION

The assessment of project impacts under CEQA is a two-step process: (1) identify historical resources that may be affected; and (2) analyze project impacts on identified Historical Resources.

### IDENTIFICATION OF HISTORICAL RESOURCES ON MARE ISLAND

This subsection applies CEQA criteria to identify those resources that are, and are not, to be considered historical resources for the purposes of CEQA and this Subsequent EIR.

#### Historical Resources Defined Under CEQA

Under *CEQA Guidelines*, Section 15064.5(a), the term “historical resources,” for the purposes of CEQA, includes the following:

- (1) A resource listed in, or determined eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources . . .
- (2) A resource included in a local register of historical resources . . . shall be presumed to be historically or culturally significant . . . unless a preponderance of evidence demonstrates that it is not historically or culturally significant.
- (3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant . . . provided that the lead agency’s determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing on the California Register of Historical Resources . . .
- (4) The fact that a resource is not listed in, or determined eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources . . . , or identified in an historical resources survey . . . does not preclude a lead agency from determining that the resource may be an historical resource . . .

#### The National Register Historic District

The California Register includes properties formally determined eligible for, or listed in the National Register of Historic Places.<sup>52</sup> As a listed National Register Historic District, the Mare

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<sup>52</sup> *Public Resources Code* Section 5024.1(d)(1).

III. Environmental Setting, Impacts and Mitigation  
A. Historical Resources

**Table III.A-2: List of Contributing Resources Proposed for Demolition**

Area	Building Number	Function	Historic Classification
2A	527	Warehouse	Notable
	559	Hobby Shop	Component
	657	Submar. Att. Teaching	Component
	759	Post Office	Component
	761	Stores	Component
	789	Electrical Distribution	Component
2B	535	Public Wrks Shops	Notable
	409	Scrap Metal Warehouse	Component
	455	Storage	Component
	489	Warehouse	Component
3A	599	Metal Storehouse	Notable
	461	Battery Repair Shop	Component
	471	Diesel Fuel Storage	Component
	515	Submar. Servc. Bldg	Component
	541	Electrical Substation	Component
	689	Submarine Repair Bldg	Component
	693	Fuel Oil Pumphouse	Component
	757	Torpedo Storehouse	Component
	845	Diesel Oil Pumphouse	Component
	S11-01	Bomb Shelter	Component
	S11-04	Bomb shelter	Component
3B	215	Storage	Notable
	227	Storage	Notable
	227a	Shops Stores	Notable
	237	Storage	Notable
	257	Storage	Notable
	417	Medical Supply Dep.	Notable
	569	Police Stat.	Notable
	77a	Latrine	Component
	98	Timber Shed	Component
	100	Lumber Shed	Component
	100a	Shed	Component
	102	Lumber Shed	Component
	115	Electric Shop	Component
	125	Admin Bldg	Component
	213	Storage	Component
	225	Plating & Finish.	Component
	239	Storage Supp. Dep	Component
	251	Shop	Component
	259	Storage	Component
	261	Latrine	Component
	373	Storage	Component
	387	Storage/Off.	Component
	469	Paint Storage	Component
	493	Electrical Substation	Component

III. Environmental Setting, Impacts and Mitigation  
A. Historical Resources

Area	Building Number	Function	Historic Classification
	507	Lumber Storage	Component
	603	Latrine	Component
	607	Storage	Component
	631	Disbursing Office	Component
	801	Electric Substation	Component
	855	Electric Shop	Component
	S22-01		Component
4			
	108	Storage	Notable
	116	Shop	Notable
	334	Offices	Notable
	C-J	Garage	Notable
	D-G	Garage	Notable
	G-B	Garage	Notable
	H-C	Garage	Notable
	H-D	Garage	Notable
	J-E	Garage	Notable
	516	Electrical Substation	Component
	632	Weld. Mat'l Issue Station	Component
	834	Electrical Distribution	Component
	S23-01	Bomb Shelter	Component
	S23-02	Bomb Shelter	Component
	S33-11	Bomb Shelter	Component
	S33-12	Bomb Shelter	Component
	S33-14	Bomb Shelter	Component
	S33-16	Bomb Shelter	Component
	S33-18	Bomb Shelter	Component
	S33-19	Bomb Shelter	Component
	S33-21	Bomb Shelter	Component
	S33-22	Bomb Shelter	Component
	S33-23	Bomb Shelter	Component
	S33-24	Bomb Shelter	Component
	S33-25	Bomb Shelter	Component
	S33-26	Bomb Shelter	Component
	S33-27	Bomb Shelter	Component
	S33-28	Bomb Shelter	Component
S33-29	Bomb Shelter	Component	
S33-30	Bomb Shelter	Component	
5			
	113	Storage	Notable
	206	Rodman Annex Rec.	Notable
	208	School for Apprentices	Notable
	742	Ord. Mach. Shop	Notable
	109	Pumphouse #2	Component
	180	Scrap Brass Bins	Component
	302	Offices	Component
	390a	Women's Latrine	Component
	592	Transformer House	Component
	702	Pig Metal Storage	Component
	720	Finger Piers Service Bldg	Component

III. Environmental Setting, Impacts and Mitigation  
A. Historical Resources

Area	Building Number	Function	Historic Classification
	728	Electrical Distribution	Component
	728a	Storage	Component
	730	Electrical Distribution	Component
	732	Electric Distr. Center	Component
	738	Propeller Shop	Component
	742a	Ordinance Mach. Shop	Component
	766	Office/Latrine	Component
	788	Storage	Component
	804	Wire and Fuel Testing	Component
	810	Paint/ Rubber Fac.	Component
	822	Power Station	Component
	828	Power Station	Component
	830	Electrical Substation	Component
	858	Latrine	Component
	BS3	Bus Shelter	Component
	FA-04	First Aid Station	Component
	S32-05	Bomb Shelter	Component
	S32-06	Bomb Shelter	Component
	S33-06	Bomb Shelter	Component
	S33-07	Bomb Shelter	Component
	S34-02	Bomb Shelter	Component
<b>6</b>	131	Civilian Quarters	Notable
	231	Train Maint. Shed	Notable
	431	Quarters	Notable
	637	Transport. Repair Fac.	Notable
	R	Officer's Quarters	Notable
	6D	Garage	Component
	6E	Garage	Component
	17C	Garage	Component
	17C	Garage	Component
	19A	Garage	Component
	29A	Garage	Component
	29G	Garage	Component
	131A	Garage	Component
	133B	Garage	Component
	160	Quarters	Component
	160A	Garage	Component
	376	Dispen/ Barracks	Component
	376A	Enlisted Quarters	Component
	429A	Garage	Component
	435	Garage	Component
	475	Concrete Mix. Plant	Component
	511	Garage	Component
	529	Motor Veh. Storage	Component
	531	Vehicle Repair	Component
	563	Radio Sta. Supp. Quart.	Component
	645	Undergrd Fresh Water Tanks	Component
	671	Electrical Substation	Component



III. Environmental Setting, Impacts and Mitigation  
A. Historical Resources

Area	Building Number	Function	Historic Classification
	781	Transformer Station	Component
	803	Storage	Component
	811	Locomotive Maintain.	Component
	L-F	Garage	Component
	M-7A	Garage	Component
	M-D	Garage	Component
	N-H	Garage/ Quarters	Component
	O-B	Servant's Quarters	Component
	O-F	Garage	Component
	P-D	Garage	Component
	QA ½ -QA 19/20	Garage/ Duplex	Component
	S24-04	Bomb Shelter	Component
	S-B	Garage	Component
	T-A	Garage	Component
	U-B	Garage	Component
U-D	Garage	Component	
<b>8</b>	764	Dental Clinic	Component
	FA-3	First Aid Station	Component
	M-1A	Servant's Quarters	Component
	M-1C	Garage	Component
	898	Electrical Substation	Component
	M-31	Bakery	Component
	M-60	Bakery	Component
	M-63	Garage	Component
	M-125	Garage	Component
	M-126	Garage	Component
<b>9<sup>(a)</sup></b>	H-21	Paint Locker	Component
	H-66	Aux. Pumphouse	Component
	H-75	Electrical Distribution	Component
<b>10A</b>	A192	Electrical Distribution	Component

*Notes:*

(a) Area 9 includes the Touro University Campus. No demolition of Contributing Resources is contemplated on the Touro Campus under the Mare Island Specific Plan. However, anticipated future demolition of Contributing Resources on the Touro Campus is considered under the analysis of cumulative impacts in this Subsequent EIR under Impact A.7.

III. Environmental Setting, Impacts and Mitigation  
A. Historical Resources

Island National Register Historic District is included in the California Register. As a resource included in the California Register, the Mare Island National Register Historic District is an historical resource for the purpose of CEQA, under *CEQA Guidelines* 15064.5(a)(1).<sup>53</sup>

**Individual Resources**

In addition to the Historic District as a whole, individual resources within the District may also be considered historical resources, *in themselves*, for the purposes of CEQA, as resources individually included in, or eligible for, the California Register.<sup>54</sup>

The California Office of Historic Preservation assigns a California Historical Resource Status Code of “ID” to Contributing Resources in a listed National Register Historic District. The California State Office of Historic Preservation, however, provides guidance in the use of the status codes in evaluating the significance of properties under California Register criteria.<sup>55</sup>

*Users of the California Historic Resource Status Codes should keep in mind that the status codes are broad indicators which in most cases, serve as a starting place for further consideration and evaluations. [emphasis in original] Because the assigned status code reflects an opinion or action taken at a specific point in time, the assigned status code may not accurately reflect the resource’s eligibility for the ... California Register... Individuals and agencies attempting to identify and evaluate historical resources need to consider the basis for evaluation upon which a particular code was assigned, i.e., date of evaluation, the reason and criteria applied for evaluation, the age of the resource at the time of evaluation, and any changes that may have been made to the resource that would impact its integrity. Keep on mind that: . . . Identification and evaluation of resources in compliance with Section 106 does not involve evaluations for the California Register . . . Because the California Register was not implemented before 1999, relatively few resources on the HRI [Historic Resources Inventory] have been evaluated for eligibility for the California Register.*

Thus, the assigned status codes, in themselves, are not always conclusive of the resource’s eligibility for the California Register, or determinative of the resource’s status as an “historical resource” under CEQA. Although listed in the California Register, ID resources are not included

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<sup>53</sup> As a resource included in a local register of historical resources, the City of Vallejo Mare Island Historic District is also presumed to be an historical resource for the purposes of CEQA, under *CEQA Guidelines* Section 15064.5(a)(2). This presumption may be rebutted by evidence that the resource is not significant. However, this issue need not be reached since the district is an historical resource *per se*, by virtue of its listing in the National Register.

<sup>54</sup> *California Code of Regulations*, 14 CCR. 4852(a)(5). See also *California Office of Historic Preservation, Technical Assistance Series #1 – California Environmental Quality Act (CEQA) and Historical Resources*, which states “Resources that are listed automatically in the California Register include [r]esources listed in the National Register (this includes individual properties as well as historic districts and properties that contribute to the significance of an historic district),” p. 27.

<sup>55</sup> California State Office of Historic Preservation, *Technical Assistance Bulletin #8, Users Guide to the California Historical Resource Status Codes & Historic Resources Inventory Directory*, November 2004.

in the California Register as historical resources, *in themselves*.<sup>56</sup> However, the City may still determine that a 1D resource has sufficient individual historic significance for the purposes of CEQA to be considered an historic resource in itself. Under *CEQA Guidelines* 15064.5(a)(3 & 4), an historical resource may be any resource which a lead agency determines to be historically significant, provided that the lead agency's determination is supported by substantial evidence in light of the whole record. 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 of Historical Resources.

The proposed Mare Island Specific Plan classifies each National Register Contributing Resource within the Master Developer areas (Reuse Areas 1A-10A) under one of three categories (Landmarks, Notable Resources, Component Resources). National Register Contributing Resources, located outside of Reuse Areas 1A-10B, are not classified under the proposed Mare Island Specific Plan (Unclassified Resources). Other potential resources on Mare Island are those resources found not to contribute to the National Register Historic District (Non-Contributing Resources).

#### Landmarks

As resources included in a local register of historical resource, the 42 extant, individually designated local Landmarks are each presumed to be historical resources *in themselves*, under *CEQA Guidelines* 15064.5(a)(2).

#### Notable Resources

Substantial evidence supports a lead agency determination that the 165 National Register Contributing Resources, classified as Notable Resources under the proposed Mare Island Specific Plan, would individually meet California Register criteria to qualify as historical resources, *in themselves*, under *CEQA Guidelines* 15064.5(a)(3). These resources were individually surveyed and studied by Chattel and Associates, an historic preservation consultant, and reviewed by the City of Vallejo Development Services Department, with the concurrence of the Landmarks Commission. The resources were found to be of noteworthy individual historical and architectural significance.

#### Component Resources

Component Resources are defined as those structures that are not listed as City Landmarks and that lack individual historical, engineering or architectural significance; that are small secondary structures; or that lack overall integrity due to alteration or deterioration. These resources

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<sup>56</sup> Frederic Knapp, Principal, Page & Turnbull, memorandum dated December 8, 2003, regarding telephone conversation with Cindy Woodward, California Office of Historic Preservation.

### III. Environmental Setting, Impacts and Mitigation

#### A. Historical Resources

typically possess a lower level of integrity and have significantly changed over the lifetime of the Historic District. In essence, Component Resources comprise a portion of the District's "diverse building stock" and therefore comprise a *portion* of an essential physical feature of the Historic District. Furthermore, the presence of Component buildings aids in the overall spatial distinctiveness and, hence, character of the Historic District. Although they do not have individual significance, Component Resources collectively contribute to the District's integrity as well as its ability to convey its historical and architectural significance.

As noted previously, the District contains a large number of Component Resources, which include many repetitive resources. Currently, the District contains a total of 185 Component Resources, which accounts for 47 percent of the District's total 392 resources (studied in the Specific Plan). In spite of the importance of "utilitarian" structures to the historic character of the Shipyard, the Component buildings often lack architectural distinction, integrity, or in some cases even association with other buildings. Many of the Component buildings exist in areas that already possess *diminished* integrity of design and feeling and no longer best convey the character of the Historic District.

Substantial evidence does not support a lead agency determination that the 185 National Register Contributing Resources classified as Component Resources under the proposed Mare Island Specific Plan would individually meet California Register criteria to qualify as historical resources, *in themselves*, under *CEQA Guidelines* 15064.5(a)(3). These resources were individually surveyed and studied by Chattel and Associates and reviewed by the City of Vallejo Development Services Department, with the concurrence of the Landmarks Commission. The resources were found not to possess noteworthy individual historical and architectural significance.

#### Unclassified Contributing Resources

The 110 National Register Contributing Resources located outside of the Master Developer areas (Reuse Area 1A-10A) are not studied under the Mare Island Specific Plan. Resources within National Historic Landmark Area B (in Reuse Area 12) are designated as local Landmarks. As such, these would be presumed to be historical resources under *CEQA Guidelines* 15064.5(a)(2). The status of other Unclassified Contributing Resources outside of National Landmark Area B is inconclusive. However, this question need not be reached in this Subsequent EIR, since no proposal for reuse or demolition of these buildings is part of the proposed project. Future proposals for the disposition of these buildings will require separate consideration of impacts to historical resources under CEQA.

### Non-Contributing Resources

No substantial evidence currently exists in the record to support a lead agency determination that any Non-Contributing Resource is a historical resource for the purposes of CEQA. In evaluating resources in the Historic District, the California Historical Resources Commission and the National Parks Service determined that Non-Contributing Resources were not historically significant under the criteria set forth in the Mare Island NRHP Registration Form. Therefore, the discussion of Impacts that follows will not discuss impacts to Non-Contributing Resources.

### Unidentified Resources

This analysis assumes that the Mare Island NRHP Registration Form and the Mare Island Historic Guidelines, which outline the Historic District and 50 individual landmarks, are the complete record of historical resources on Mare Island. Although the existence of yet unidentified historical resources cannot be conclusively ruled out, substantial evidence in the record does not support a lead agency determination that any resource, not already identified in the Mare Island NRHP Registration Form or in the Historic Guidelines, is a historical resource under CEQA. Therefore, the discussion of Impacts that follows will not discuss impacts to any resources not already identified as Contributing Resources.

## **PROJECT IMPACTS AND MITIGATION**

### **Significance Criteria for Impacts on Historical Resources Defined under CEQA**

*CEQA Guidelines* establish criteria for assessing the significance of impacts on historical resources.<sup>57</sup> They state, “[a] project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.” *CEQA Guidelines* define a “substantial adverse change” as a “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.” The significance of an historical resource is considered to be “materially impaired” when a project demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources.”

The *Secretary of the Interior’s Standards for Rehabilitation* (the “Standards”) provide guidance for review of proposed changes to historic properties. The *CEQA Guidelines* provide that a project conforming to the Standards would generally be considered to have a less-than-significant

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<sup>57</sup> *CEQA Guidelines* Section 15064.5.

impact on an historical resource under CEQA.<sup>58</sup> The Standards were developed by the National Park Service to determine the eligibility of work on registered historic properties for federal historic preservation grant and tax credit programs. The Standards have also been adopted by local government bodies across the country as an analytic framework for review of proposed work to historic properties under local ordinances.

### **Project Impacts**

#### **Impact A.1 The proposed demolition of Contributing Resources would diminish the integrity of the Mare Island Historic District. (Significant and Unavoidable)**

*CEQA Guidelines* define the threshold for a significant impact to historical resources under CEQA. A project would have a significant impact on an historical resource (here the District) under CEQA if it “materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance *and* that justify its inclusion in, or eligibility for inclusion, in the California Register of Historical Resources (*emphasis added*).” Thus, CEQA’s threshold of significance for impacts to historical resources is one of both manner and degree: whether the proposed project would adversely alter the characteristics of the resource that convey its historical significance (i.e., its integrity); and whether such an impact on integrity is of such degree that inclusion of the historical resource in the California Register would no longer be justified.

The proposed demolition of Contributing Resources would alter, in an adverse manner, characteristics of the District resource that contribute to the District’s historical significance. This impact is of a degree to which the boundaries of the National Register Historic District, as designated, would no longer be justified. The National Park Service’s “National Register Bulletin - Defining Boundaries for National Register Properties” provides guidance to preparers of National Register nominations in determining the boundaries of an historic district.<sup>59</sup> It offers considerations for inclusion in, or exclusion from, historic district boundaries. As such, it also offers relevant guidance in assessing project impacts to the integrity of the District, after implementation of the project. The bulletin calls for tightly drawn historic district boundaries to encompass Contributing Resources. It instructs,

Select boundaries that define the limits of the eligible resources. Such resources usually include the immediate surroundings and encompass the appropriate setting. However, exclude additional, peripheral areas that do not directly contribute to the property’s significance as buffer or as open space to separate the property from surrounding areas. Areas that have lost integrity because of

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<sup>58</sup> *CEQA Guidelines* Section 15064.5 (b) (3).

<sup>59</sup> National Park Service, *National Register Bulletin – Defining Boundaries for National Register Properties*, “Deciding What to Include.”

changes in cultural features or setting should be excluded when they are at the periphery of the eligible resources.

To this end, the bulletin also calls for discontinuous historic district boundaries where large areas that do not contribute to the significance of the district intervene between eligible areas.

The boundaries of the Mare Island Historic District were chosen in order to include all buildings, structures, and sites that contributed to the significance of the Historic District.<sup>60</sup> The District's boundaries include the bulk of the Mare Island Shipyard, as well as portions of northern end of Mare Island and the golf course. The current boundaries maintain a high ratio of contributing properties. These boundaries are based upon a concentration of buildings, structures, and sites that contribute to the District's significance and integrity.

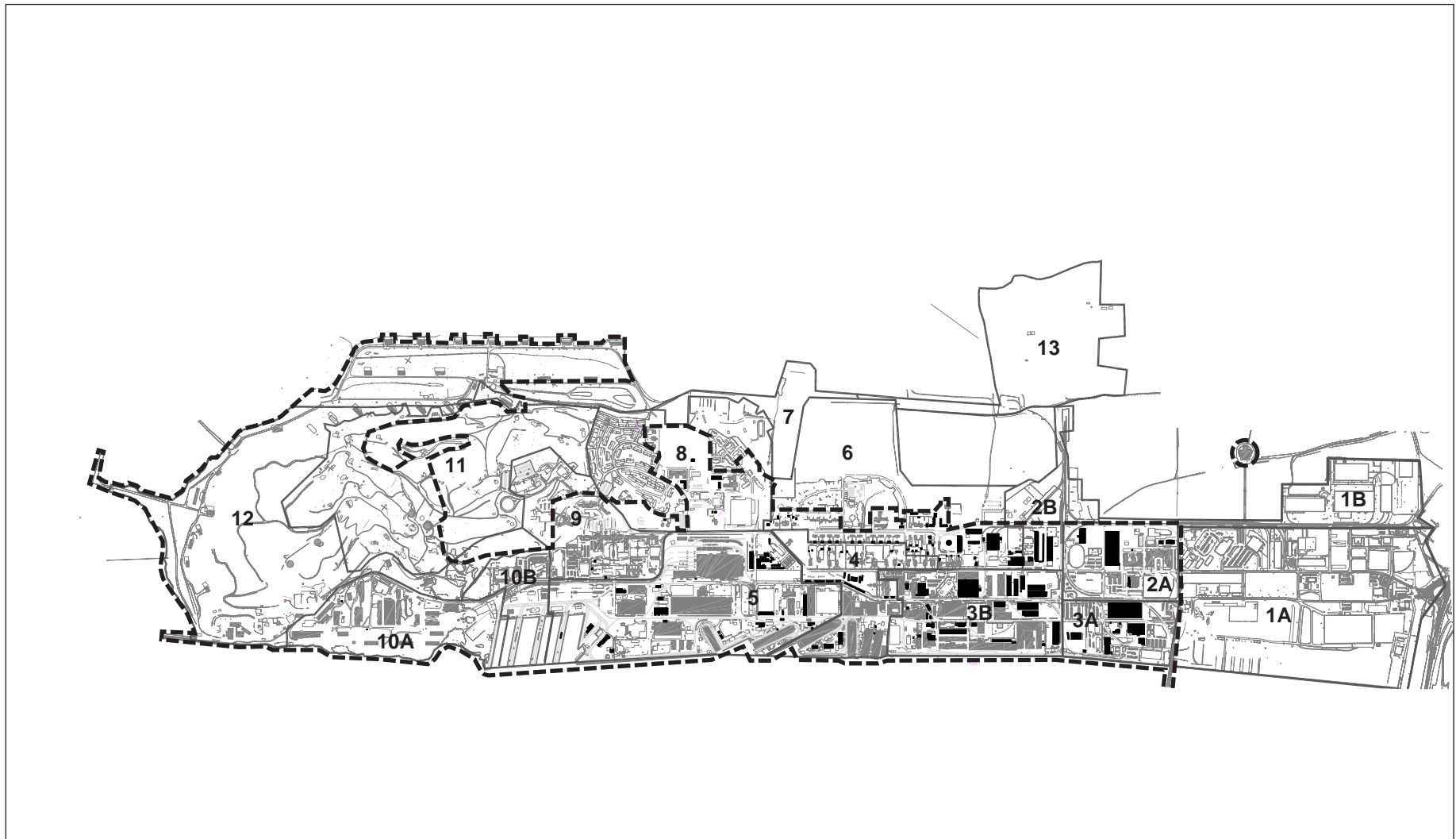
The proposed demolition would create large areas at the perimeter of the District that would contain no Contributing Resources after demolition. See **Figure III.A-4: Proposed Demolition of Contributing Resources** which illustrates the location of Contributing Resources proposed for demolition under the proposed Lennar Development Plan, in relation to those that would be retained. In particular, the proposed demolition would affect the northern end of the Historic District, specifically in Reuse Areas 2A, 2B, and 3A. See **Figure III.A-5a: Proposed Demolition of Contributing Resources - Area 2A Detail**; **Figure III.A-5b: Proposed Demolition of Contributing Resources - Area 2B Detail**; and **Figure III.A-5c: Proposed Demolition of Contributing Resources - Area 3A Detail**. Within those areas, the proposed demolition of a large proportion of Contributing Resources would remove the justification for inclusion of these areas within the boundaries of the National Register Historic District. The demolition of these Contributing Resources would disrupt the continuity between the remaining Contributing Resources and the current boundary of the Historic District. Although some Contributing Resources would remain in these areas, these areas would not retain sufficient integrity to justify their inclusion in the District.

While the proposed demolition would significantly impact portions of the District, *as designated*, the essential integrity of the historic core of the District would continue to retain sufficient integrity to justify its inclusion in the California and National Registers. Integrity is defined as "the authenticity of an historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance."<sup>61</sup> A property is examined for seven variables or aspects: location, design, setting, materials, workmanship, feeling, and association. According to the *National Register Bulletin: How to Apply the National Register Criteria for Evaluation*, these seven characteristics are defined as follows:

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<sup>60</sup> For detailed information on the District's boundaries, see Stephen D. Mikesell, Stephen R. Wee, David S. Byrd, and Mary Maniery, *National Register of Historic Places Registration Form for Mare Island Historic District, Vallejo, California* (January 22, 1996) Section 10, pp. 1-2.

<sup>61</sup> California Code of Regulations Title 14, Chapter 11.5.

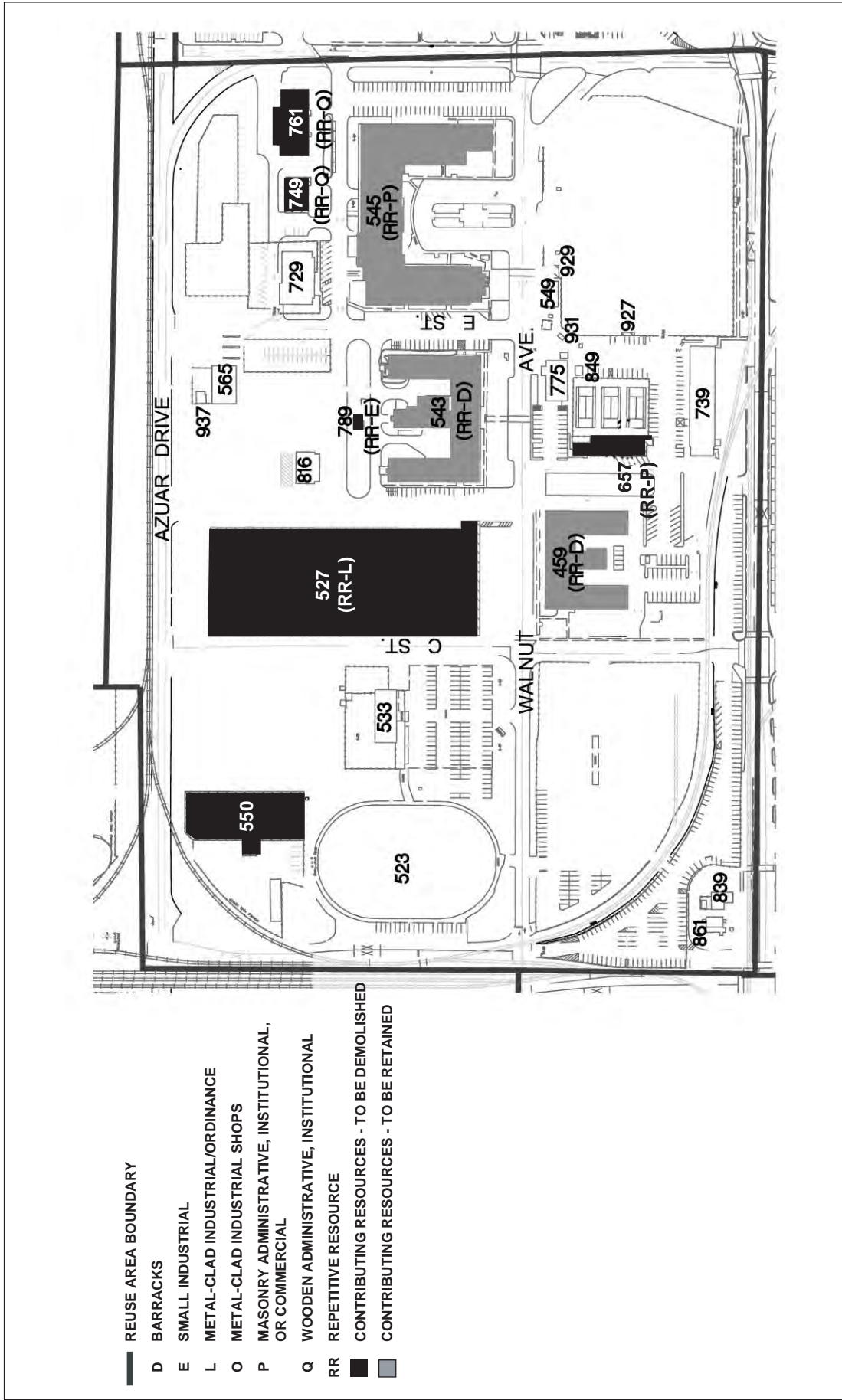


SOURCE: Chaudhary & Associates

- Contributing Resources - to be Demolished
- Contributing Resources - to be Retained
- - - Historic Distinct Boundary
- Reuse Area Boundary
- 10A** Reuse Area Designation







SOURCE: SWA

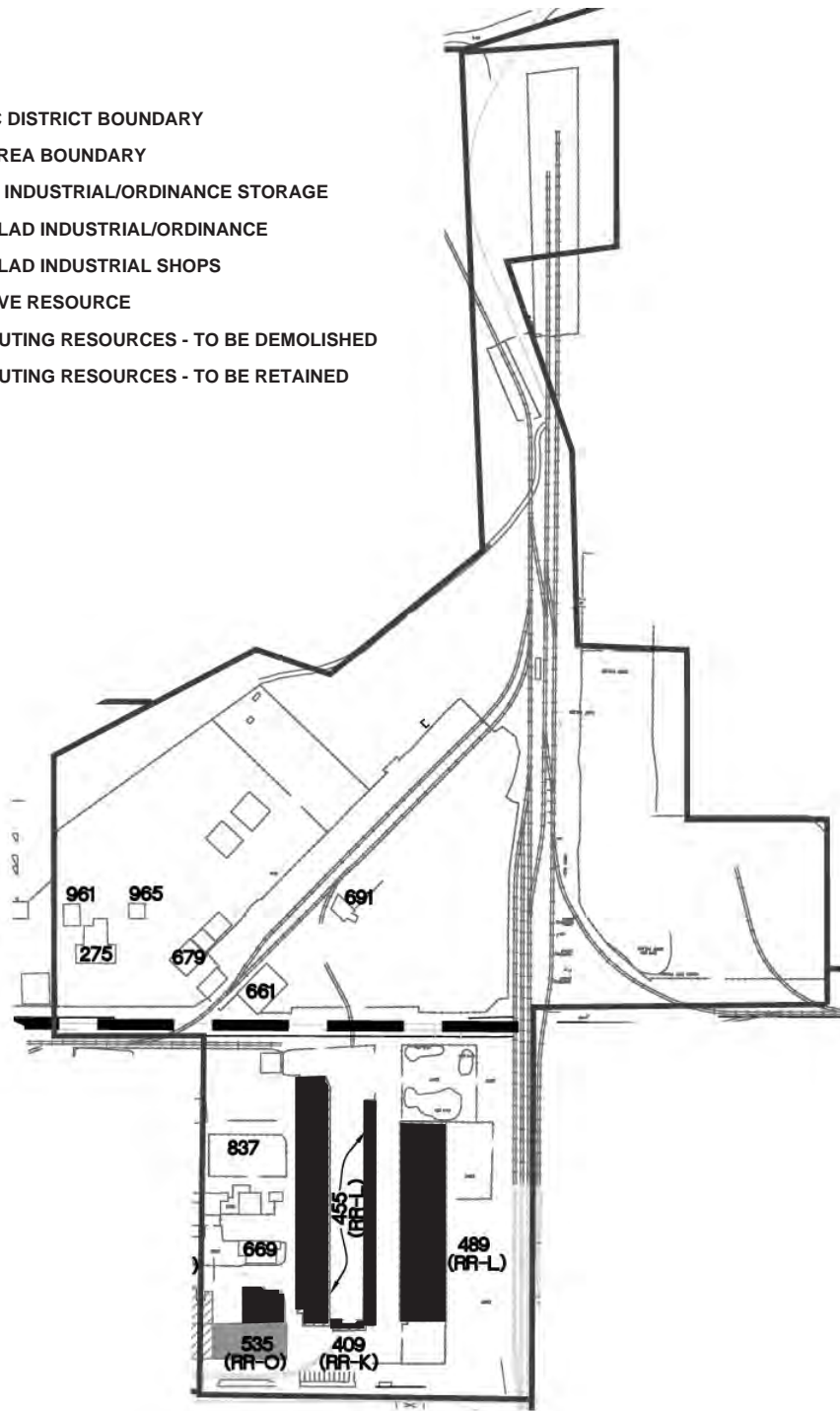


NOT TO SCALE

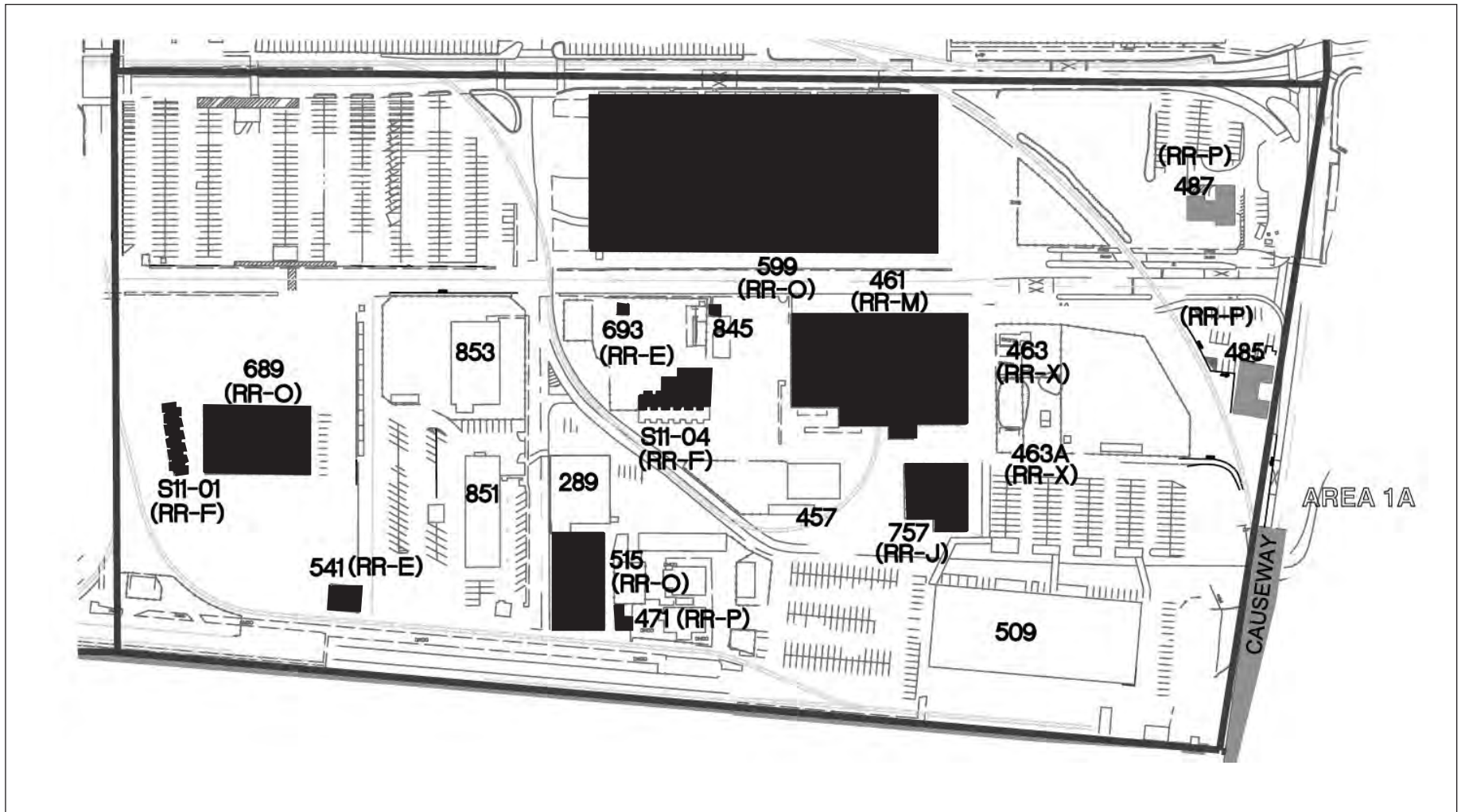
TURNSTONE CONSULTING

MARE ISLAND AMENDED AND RESTATED SPECIFIC PLAN  
**FIGURE III.A-5a: PROPOSED DEMOLITION OF CONTRIBUTING RESOURCES-  
 AREA 2A DETAIL**

- HISTORIC DISTRICT BOUNDARY
- REUSE AREA BOUNDARY
- K WOODEN INDUSTRIAL/ORDINANCE STORAGE
- L METAL-CLAD INDUSTRIAL/ORDINANCE
- O METAL-CLAD INDUSTRIAL SHOPS
- RR REPETITIVE RESOURCE
- CONTRIBUTING RESOURCES - TO BE DEMOLISHED
- CONTRIBUTING RESOURCES - TO BE RETAINED



SOURCE: SWA



SOURCE: SWA

- |   |  |
|---|--|
| — REUSE AREA BOUNDARY                               | P MASONRY ADMINISTRATIVE, INSTITUTIONAL, OR COMMERCIAL |
| E SMALL INDUSTRIAL GARAGE/SHED/PUMPHOUSE/ELECTRICAL | RR REPETITIVE RESOURCE                                 |
| F BOMB SHELTER                                      | S BERTHS/QUAYS/CAUSEWAYS                               |
| J MASONRY INDUSTRIAL/ORDINANCE STORAGE              | X NOT EXTANT   |
| M MASONRY INDUSTRIAL SHOPS                          | ■ CONTRIBUTING RESOURCES - TO BE DEMOLISHED            |
| O METAL-CLAD INDUSTRIAL SHOPS                       | ■ CONTRIBUTING RESOURCES - TO BE RETAINED              |



NOT TO SCALE

FIGURE III.A-5c: PROPOSED DEMOLITION OF CONTRIBUTING RESOURCES- AREA 3A DETAIL

### III. Environmental Setting, Impacts and Mitigation

#### A. Historical Resources

- Location is the place where the historic property was constructed or the place where the historic event occurred.
- Design is the combination of elements that create the form, plans, space, structure and style of the property.
- Setting addresses the physical environment of the historic property inclusive of the vegetation, landscape, topography and spatial relationships of the building/s.
- Materials refers to the physical elements that were combined or deposited during a particular period of time and in a particular pattern of configuration to form the historic property.
- Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history.
- Feeling is the property's expression of the aesthetic or historic sense of a particular period of time.
- Association is the direct link between an important historic event or person and a historic property.

National Register guidance states that “for a *district* to retain integrity, the majority of the components that make up the district’s character must possess historic integrity even if they are individually undistinguished.”<sup>62</sup> Applying this general guidance to the Mare Island Historic District, the District would need to retain a majority of its Contributing Resources that constitute the primary functions, property types, and eras that convey the District’s significance. All City Landmarks and Notable Resources, along with representative examples of Component Resources, would best express the essential physical features and historical and architectural significance.

The Mare Island National Register Historic District is comprised of 502 Contributing Resources that are representative of over 100 years of development of the oldest Naval shipyard on the West Coast. Buildings represent a wide variety of styles, property types, and construction dates and include residential, barracks, industrial shops, warehouses, and administrative buildings. The installation is strongly characterized by groupings of buildings related by function and operational needs. The District is made up of various precincts including an industrial shipyard (north and south), a residential and administrative area, a Marine Corps area, a hospital, and an ammunition depot. Physical attributes of these areas vary from uniform landscaped streetscapes as in the residential areas, to seemingly ad hoc groupings of industrial shops surrounded by asphalt parking lots, rail lines, and a wharf. Due to the continuously evolving nature of the Mare Island Naval Shipyard, the presence of significantly altered buildings and empty lots from demolished buildings is prevalent throughout the landscape.

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<sup>62</sup> National Park Service, *National Register Bulletin: How to Apply the National Register Criteria for Evaluation* (1997), p. 46.

### III. Environmental Setting, Impacts and Mitigation

#### A. Historical Resources

Essential physical features of the Historic District include spatial characteristics such as the general spatial orientation towards the waterfront; largely random and functional setbacks, spacing, and siting of buildings; diverse building massings and sizes; isolated uniform streetscapes in the residential areas and waterfront; the presence of a large and diverse stock (styles, time period, and construction type) of military industrial, administrative, domestic, and support buildings and structures, dominated by repetitive building types; distinctive operational precincts with mixed uses of buildings; a functional circulation system oriented towards the water and wharf that is characterized by the street grid and rail system; an operational shipyard with berths; dry docks, cranes, and rail support; paved loading, laydown, and parking areas; and distinctive ornamental, parade, and recreational landscaped areas.

As identified in Section 4.3 of the Historic Guidelines, the District's character is described by "constant change, reuse, and replacement of resources." The following characteristics and patterns of development were identified as important features of the historic environment of the Historic District:

- The relationships between Contributing Resources were "ad hoc and functional" and reflected the operational needs of the military.
- The District contains a number of repetitive resources that generally lack individual significance, although they may gain significance as a grouping. Because there are a number of similar examples of repetitive property types within the District, repetitive resources are generally the least individually important of the resources in the District.
- The District is strongly characterized by a mix of periods, materials and architectural styles. The District as a whole is not visually cohesive in the manner of historic areas constructed over a shorter period of time or pursuant to a single plan, although there are areas of consistent development.
- The District is strongly characterized by a mix of uses, including clearly identifiable industrial, administrative (i.e. office), and residential uses.
- The District as a whole is strongly characterized by a mix of eras, although the mix varies within areas.
- Residential uses are often located in close visual proximity to non-residential uses, including industrial buildings. Although residential areas are clearly identifiable, separation of uses is much weaker than in typical civilian developments.
- Setbacks for industrial and administrative buildings largely appear to be random with many buildings not oriented towards the street, thus adding to the District's ad hoc and unplanned character.
- Differences between uses are often highlighted by landscaping.
- Outside the Historic Core (Sub-Area 4), industrial buildings are often widely spaced with paved laydown areas between structures.
- Structures along the waterfront are often strongly oriented towards the water, underscoring their shipyard function, with a strong visual presence from the mainland.

### III. Environmental Setting, Impacts and Mitigation

#### A. Historical Resources

- District boundaries or edges are not strongly defined and the casual visitor may not be conscious of entering an historic environment.
- In Areas 3B and 4, major building clusters form a street wall that is essential to the establishment of the historic character.

The proposed demolition of Contributing Resources anticipated by the Historic Guidelines would primarily impact two essential physical features of the Historic District: the diverse character of building stock and the spatial orientation. Potential empty spaces left by the demolished buildings would alter the spatial orientation of precincts within the Historic District. While the reduction of building stock and the impact to certain areas suggests that the historic environment would be impacted unevenly, the Historic District would still be eligible for the National and California Registers. That is, areas such as the “Historic Core” or Area 4, which happens to contain the most important historic buildings, would remain almost entirely intact. Other areas, most notably 2A, 3A and 3B, may leave new gaps in an already altered patchwork of buildings.

A majority of the essential physical features would remain intact, including spatial characteristics (such as the orientation towards the eastern waterfront); largely random and functional setbacks; spacing and siting of buildings; diverse building massing size; isolated uniform streetscapes in the residential areas and waterfront; a large and diverse stock; distinctive operational precincts with mixed uses of buildings; a functional circulation system oriented towards the water and wharf that is characterized by a street grid and rail system; an operational shipyard with berths, dry docks, cranes, and rail support; paved loading, laydown, and parking areas; and distinctive ornamental, parade, and recreational landscaped areas. With a majority of essential physical features intact, the Historic District would maintain integrity of location, design (in certain areas), setting, materials, workmanship, and association. However, the Historic District may suffer a further diminished sense of design and feeling.

In analyzing the impact of demolishing a total of 183 Contributing Resources (in Reuse Areas 1A-10A), the location, property type, style, and date of construction of the Contributing Resources must be examined to ensure that the Historic District’s functional and stylistic diversity is maintained. As noted in the Historic Guidelines, the Mare Island National Register Historic District is first and foremost known for its large and diverse stock of industrial and military architecture with examples from the Civil War, Spanish-American War, World War I, and World War II. The Historic District was nominated under the areas of significance of military, architecture, engineering, and archaeology (historic, non-aboriginal) for the period of significance spanning from 1854 to 1945. According to the Historic Guidelines, 19 major property types were identified, which were further subdivided into five eras.

The proposed demolition of Contributing Resources within the Mare Island Historic District would impact portions of the district unevenly. A significant adverse impact to the northern end

of the District would occur, where demolition of a large proportion of Contributing Resources would remove the justification for inclusion of these portions of the District. Although the core of the Historic District would continue to retain its essential ability to convey the significance for which the Mare Island Naval Base was included in the National Register of Historic Places and California Register of Historical Resources, the proposed demolitions would result in a significant impact to the District, as designated.

**Mitigation A.1a:** Retain all Contributing Resources at the Northern End of the Historic District.

All Contributing Resources within Reuse Areas 2A, 2B, 3A, and 6 north of 5<sup>th</sup> Street shall be retained. Retention of the resources would maintain the justification for the Mare Island Historic District boundaries in the northern portion of the District, and thereby reduce Impact A.1 to a less-than-significant level.

**Mitigation A.1b:** Landmarks Commission Review of Demolition or Relocation of Contributing Resources at the Northern End of the Historic District.

All Contributing Resources within Reuse Areas 2A, 2B, 3A and 6, north of 5<sup>th</sup> Street shall be retained, except that Contributing Resources may be demolished or relocated subject to Landmarks Commission review and approval, on a case-by-case basis, based on a report by a qualified historic preservation professional, upon the following findings: that such a demolition meets the applicable District-Level Demolition Criteria in Historic Guidelines Section 6.1; that such a relocation meets the applicable criteria for Relocated Resources in Historic Guidelines Section 5.3.2; that the Historic District boundaries would continue to be justified after such demolition or relocation.

Implementation of this measure would reduce Impact A.1 to a less-than-significant level. If it cannot be found that the boundaries of the Historic District would continue to be justified after demolition or relocation of a Contributing Resource, such demolition or relocation would result in a significant unavoidable impact on the integrity of the Mare Island Historic District.

**Mitigation A.1c:** Implement the Interpretive Program.

Implementation of an Interpretive Program as described in the Mare Island Specific Plan Section 8.4.1 at the conceptual level, could partially mitigate the significant adverse impact of demolition on the integrity of the Mare Island Historic District. However, an interpretive program would not reduce significant impacts to a less-than-significant level.

**Impact A.2 The proposed demolition of Notable Resources would impact each of these Contributing Resources at the level of the individual resource. (Significant and Unavoidable)**

While the impact of the proposed demolition on the District is assessed under Impact A.1 above, the proposed demolitions would also have impacts at the individual resource level. The proposed implementation of the Mare Island Specific Plan would call for demolition of 29 Notable Resources. These resources are identified above as historical resources, *in themselves*. As such, demolition of each of these resources would, in itself, result in a substantial adverse change to the significance of an historical resource under CEQA. (See *League for Protection*, 52 Cal.App 4<sup>th</sup> at p. 909, holding that demolition of an historical resource is a substantial adverse change to an historical resource, *per se*.)

Although the proposed Mare Island Specific Plan provides standards by which Landmarks may be demolished upon a finding of “Hardship,” no demolition of any Landmark is proposed under the project, nor is any such demolition currently anticipated. Any future request for relief on the grounds of Hardship would be a significant impact under CEQA. As it would not be covered in this Subsequent EIR, it would require separate environmental review, in its own EIR.

**Mitigation Measure A.2:** Require Relocation Rather Than Demolition of Notable Resources Where Appropriate.

In order to mitigate the effects of demolishing Notable Resources in the Historic District, the criteria for allowing demolition of Notable Resources could include the following finding: “Relocation of the Notable Resource consistent with both the Secretary’s Standards and the technical preservation report entitled “*Moving Historic Buildings*” is not reasonably feasible.”

Relocation of a Notable Resource consistent with both the Secretary’s Standards and the technical preservation report entitled “*Moving Historic Buildings*” by John Obed Curtis (1978) would reduce this impact to a less-than-significant level in those instances where this was feasible. Where not feasible, demolition of a Notable Resource would be permitted and would have a significant and unavoidable impact on an historical resource.

**Impact A.3 The proposed demolition of Component Resources could impact each of these Contributing Resources at the level of individual resource. (Less than Significant)**

While the impact of the proposed demolition on the District is assessed under Impact A.1 above, the proposed demolitions could also have impacts at the individual resource level. The proposed implementation of the Mare Island Specific Plan would call for demolition of Component Resources. According to Section 6.1 of the Historic Guidelines, Component Resources may be



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demolished upon a finding that the proposed demolition is “reasonably necessary” to implement the proposed Development Plan, including provision of new infrastructure, additional surface parking, and roadways. The review and approval process for demolishing Component Resources will happen at the administrative level, and will not require review by the Landmarks Commission. The City of Vallejo’s Planning Manager may administratively approve the demolition permit for any Component Resource that is found to be “reasonably necessary” to the implementation of the proposed Development Plan.

As discussed above, Component Resources would not be considered historical resources, in themselves. Their historical significance is based on their collective contribution to the character and integrity of the Historic District. As such, demolition of a Component Contributor would not, in itself, result in a significant impact to an historical resource at the level of individual resource.

As Component Resources, bomb shelters within the Historic District are not considered individually significant. However, in Alden Park they occur in a cluster, visually related to each other as an ensemble, and functionally related to the Landmark Officers’ Quarters across Walnut Avenue. As such, the historic significance of this grouping may be considered elevated to that of Notable Resource. The proposed project would retain a prominent and representative cluster of five bomb shelters along Walnut Avenue, within Alden Park. These would continue to convey their historic significance arising from the World War II era.

**Mitigation:** No mitigation necessary.

#### **Impact A.4 Proposed new infill construction would impact remaining historical resources. (Less than Significant with Mitigation)**

The impact of the proposed demolitions on the integrity of the District is discussed under Impact A.1. This discussion analyzes the impact of the proposed new infill construction on the remaining historical resources of Mare Island.

The proposed project would call for a large amount of new construction within the Historic District (see Figure II-5). New infill construction has the potential to affect the integrity of the Historic District by altering its design, setting, and feeling. For a district to retain integrity, as a whole, the majority of its components must possess integrity and the relationship between those components must be substantially unchanged since the period of significance.<sup>63</sup> A district is not eligible if it contains so many alterations or new intrusions that it no longer conveys the sense of a historic environment. Thus, new infill construction must be compatible with the Historic District

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<sup>63</sup> National Park Service, *National Register Bulletin: How to Apply the National Register Criteria for Evaluation* (1997), p. 46.

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and must be respectful of its existing significance and relationships. The new construction should not be out of scale or character with the Historic District, nor should it alter existing spatial relationships or introduce new design elements that are not compatible with the Historic District.

According to Section 5.4 of the Historic Guidelines, new construction in the Historic District must comply with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. The following provisions for new construction have been included, as they apply to the District as a whole, rather than at the individual building level:

- “New Additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and environment.” (*Secretary of the Interior's Standards for Rehabilitation #9*)
- “New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.” (*Secretary of the Interior's Standards for Rehabilitation #10*)
- Recommended: “Designing a new addition in a manner that makes clear what is historic and what is new.”
- Not Recommended: “Duplicating the exact form, materials, style, and detailing of the historic building in a new addition so that the new work appears to be part of the historic building.”
- Not Recommended: “Imitating a historic style or period of architecture in a new addition.”

Compliance with the Secretary of the Interior's Standards would reduce the impact of new construction on remaining historic resources to a less-than-significant level. However, members of the Architectural Heritage and Landmarks Commission have expressed concern that the proposed Historic Guidelines would not provide sufficient direction to the public, property owners, City staff, and decision-makers on applying the Secretary of the Interior's Standards to the Mare Island Historic District. Commission members have requested that specific design guidelines be prepared for the Historic District. The *Mare Island Historic District Design Guidelines* have been prepared by Winter & Company (Historic District Design Guidelines) and are included as part of the proposed project.<sup>64</sup>

**Mitigation A.4:** Implement the *Mare Island Historic District Design Guidelines* by requiring that all new construction or alterations within the Historic District comply with the Historic District Design Guidelines.

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<sup>64</sup> Winter and Company, *Mare Island Historic District Design Guidelines*, June 2005.

The Historic District Design Guidelines describe and illustrate how to apply the Secretary of the Interior's Standards to the specific conditions of Mare Island Historic District. The Historic District Design Guidelines describe the design character of the Historic District, provide illustrative guidelines for the treatment of Mare Island's Contributing Resources under the Secretary of the Interiors Standards, and provide design guidelines for new construction. The Historic District Design Guidelines would be used by City staff and the Architectural Heritage and Landmarks Commission to evaluate the appropriateness of work proposed within the Mare Island Historic District. Implementation of the *Mare Island Historic District Design Guidelines* would mitigate impacts of new infill construction on remaining historic resources. Note, however, that they would not mitigate impacts of demolition of Contributing Resources that would precede new construction.

**Impact A.5 The proposed reuse of retained Contributing Resources would require alterations to retained Contributing Resources. (Less than Significant with Mitigation)**

Reuse of retained Contributing Resources would require alterations to adapt these buildings to new civilian uses. Alteration of an historical resource could have potentially significant impacts on individual historical resources and collectively on the Historic District.

Compliance with the Secretary's Standards would mitigate the impact of alteration of Contributing Resources, on individual historical resources and on the District, to a less than significant level, under CEQA.<sup>65</sup>

As noted in Section 5.3.1 of the Historic Guidelines, all redevelopment proposals for Contributing Resources (whether reviewed by the National Park Service as a Certified Historic Project, or locally under the Certificate of Appropriateness process) must comply with the Secretary of the Interior's Standards for the Treatment of Historic Properties. The Secretary's Standards entail four treatments for historic properties:

- Preservation – is defined as the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property.
- Rehabilitation – is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features, which convey its historical, cultural, or architectural values.
- Restoration – is defined as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period.

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<sup>65</sup> 14 CCR § 15126.4 (b)(1) and 14 CCR § 15331.

### III. Environmental Setting, Impacts and Mitigation

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- Reconstruction – is defined as the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location.

Most often, rehabilitation will be utilized in the alteration of an individual Contributing Resource.

Implementation of the *Mare Island Historic District Design Guidelines* would provide guidance in the application of the Secretary’s Standards to the specific conditions of the Mare Island Historic District and would mitigate potentially significant impacts of alteration of Contributing Resources on historical resources to a less-than-significant level.

**Mitigation Measure A.5:** Same as Mitigation Measure A.4. Implement the *Mare Island Historic District Design Guidelines* by requiring that all new construction or alterations within the Historic District comply with the Historic District Design Guidelines.

**Impact A.6     The proposed project would result in the modification of streets, sidewalks, landscaping and infrastructure within the District, potentially affecting the District’s integrity of setting. (Less than Significant with Mitigation)**

As part of the Development Plan for the reuse of Mare Island, the landscaping and infrastructure within the Historic District will be altered to meet the new uses of the site. In order to guide these alterations, the Specific Plan includes the *Urban Design Guidelines* (Chapter 4.0, Urban Design) to dictate new roads, site design, landscapes, architecture, site furnishings, and signage. So as to not cause a substantial adverse change to the District, the *Urban Design Guidelines* are compatible with aspects of the Secretary’s Standards.

Implicitly, the *Urban Design Guidelines* are designed to preserve the historic character of the District while providing for new development. The *Urban Design Guidelines* provide policies that recommend the preservation of island entrances, street grid, street widths, view corridors, mixed uses, historic building clusters, waterfront orientation, open spaces, and existing building setback. These policies also recommend alternative design standards for island infrastructure to maintain the historic character; establish Walnut Avenue as a “Main Street” spine; reduce parking needs by shared and off-site parking; and use alleys for parking and utility hook-ups. Overall, these policies encourage design that would require minimal changes to distinctive materials, features, spaces, and spatial relationships (Secretary of the Interior’s *Standards for Rehabilitation #1*) and retain the historic character of the property (Secretary of the Interior’s *Standards for Rehabilitation #2*).

The *Urban Design Guidelines* are subdivided into chapters, which outline the main concepts and features of the District’s landscape and infrastructure. These chapters are described below.

Setting and Site Design

The site design criteria for reuse and/or infill development projects will include, but not be limited to the following:

- Compatibility with existing development on and adjacent to the project site;
- Provision for landscaped areas designed to be compatible with the existing setting and for adequate parking areas, either on-site or off-site, that do not compromise the integrity of the historic setting;
- Provision of adequate physical and/or visual buffering between land uses; and
- Use of innovative design for reuse and/or new infill development that is responsive to the historic setting.

These criteria encourage design that would retain the historic character of the property (Secretary of the Interior's *Standards for Rehabilitation* #2), not destroy historic materials, features and spatial relationships that characterize the property; and would be differentiated from the old and be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property (Secretary of the Interior's *Standards for Rehabilitation* #9).

Landscape Design Guidelines and Standards; Existing Landscape; and New Landscape

These chapters focus on the natural and designed vegetation on Mare Island and include policies and regulation regarding the preservation, reuse, and development of landscaped areas. In summary, the landscape design guidelines and standards recommend that existing healthy, mature landscapes be preserved, where practicable, and that infill planting within existing landscaped areas respect the existing landscape character, especially the historic landscape. New plantings should reflect and reinforce the existing setting and character of the designed landscape by using similar or compatible species and similar patterns. All new work would be subject to consistency with the existing historic character.

These policies and concepts encourage design that would retain the historic character of the property (Secretary of the Interior's *Standards for Rehabilitation* #2); would not destroy historic materials, features, and spatial relationships that characterize the property; and would be differentiated from the old and be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property (Secretary of the Interior's *Standards for Rehabilitation* #9).

The Secretary's Guidelines for Cultural Landscapes organize landscape elements and features into the following categories: spatial organization and land patterns, topography, vegetation, circulation, water features, and structures, site furnishings and objects. Guidelines are provided for each of the four treatments (preservation, rehabilitation, restoration and reconstruction)

outlined in the Secretary's Standards. By conforming to the Secretary's Guidelines for Cultural Landscapes, the District's setting can be retained and reutilized in a manner that preserves the Historic District's character and eligibility for the National and California Registers.

The *Urban Design Guidelines* state that all existing and new landscapes should be maintained in a neat, clean and healthy condition. Also, the *Urban Design Guidelines* state that the historic landscape should be managed and maintained in conformance with the standards discussed in the Secretary of the Interior's *Preservation Brief 36: Protecting Cultural Landscapes: Planning, Treatment and Management of Historic Landscapes*.

#### Architectural Design Guidelines and Standards

The architectural design guidelines require that additions and alterations to existing contributing resources comply with the Historic Guidelines, and the Secretary's Standards. All other additions or alterations should be compatible with the mass, scale, architectural style, materials and details of the existing structure and should not detract from the character of any adjacent Contributing Resources. New work should be designed to be compatible with the historic character of the setting in terms of size, scale, materials, color, and texture.

These architectural guidelines encourage design that would require minimal changes to distinctive materials, features, spaces, and spatial relationships (Secretary of the Interior's *Standards for Rehabilitation #1*) and retain the historic character of the property (Secretary of the Interior's *Standards for Rehabilitation #2*). In addition, these guidelines require new work to be differentiated from the old and to be compatible with the historic materials, features, size, scale and proportion, and massing of the Contributing Resources, in order to protect the integrity of the property and District (Secretary of the Interior's *Standards for Rehabilitation #9*).

#### Site Furnishings Guidelines

In summary, the site furnishing guidelines recommend that furnishings (such as walls and fences, streetlights, utility poles, transit shelters, benches, bicycle racks, parking meters, trash receptacles, drinking fountains, phone booths, planters, street signs, newspaper racks, and public art), at minimum, meet the City of Vallejo's design criteria and regulations. Existing elements that are a significant part of the setting should be retained. New lighting, street furniture, and public art should not destroy historic materials and should be contemporary and compatible with the overall historic character of the Reuse area.

These guidelines encourage design that would require minimal changes to distinctive materials, features, spaces, and spatial relationships (Secretary of the Interior's *Standards for Rehabilitation #1*) and retain the historic character of the property (Secretary of the Interior's *Standards for Rehabilitation #2*). The guidelines require the new work that would be differentiated from the old

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and are compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property (Secretary of the Interior's *Standards for Rehabilitation* #9).

While the guidelines recommend that new types of screening (fences) not conflict with the historic character, screening may not be appropriate in many areas of the Historic District. By nature, the Shipyard was an exclusive and secure environment, and with a few exceptions mostly for security (ammunition depot, motor pools, supply areas), fencing or noise screening separating uses was not necessary. In some cases, this recommendation may violate Secretary of the Interior's *Standards for Rehabilitation* #9 that prohibits new additions, exterior alteration, or related new construction from destroying historic materials, features, and spatial relationships that characterize a property.

#### Signage

Signage guidelines recommend that existing signs be removed only if the sign does not contribute to the historic character of the building or the area. New public sector signage would include directional signs, street signs, and historic informational signs. New private sector signage (corporate logos, office building etc.) would be permitted in areas for commercial use and would be compatible with the Mare Island sign program design standards.

These guidelines would encourage design that would require minimal changes to distinctive materials, features, spaces, and spatial relationships (Secretary of the Interior's *Standards for Rehabilitation* #1) and retain the historic character of the property (Secretary of the Interior's *Standards for Rehabilitation* #2). The *Mare Island Sign Program* (Appendix C to the Mare Island Specific Plan) has been prepared. Its intent is to provide for new signage that is compatible with the historic character of the Historic District.

#### Conclusion

The *Urban Design Guidelines* echo the *Secretary's Standards*. Specific *Standards* (such as Secretary of the Interior's *Standards for Rehabilitation* #1, #3, and #9) have been adopted or incorporated into *Urban Design Guidelines* for each urban element. There appears to be built-in compatibility of the *Urban Design Guidelines* with the *Secretary's Standards* and therefore the *Guidelines* would not rise to the level of a significant adverse change.

Some design guidelines, depending on the location and specific design of new work, may encourage fences/screening and signage that would not be compatible with the historic character of a site or building. However, it is unlikely that any such work would amount to a significant adverse change of an individual resource or the District. Finally, as with the Secretary's *Standards*, issues regarding the "compatibility" of new construction will often be challenging and

open to interpretation. The evaluation and compatibility of such projects would be left to City review and policies that dictate treatment on Mare Island.

**Mitigation Measure A.6a:** Same as Mitigation Measure A.4. Implement the *Mare Island Historic District Design Guidelines* by requiring that all new construction or alterations within the Historic District comply with the Historic District Design Guidelines.

**Mitigation Measure A.6b:** Cultural Landscape Evaluation.

In addition to utilizing the Secretary's *Guidelines for Cultural Landscapes*, a cultural landscape evaluation should be completed in order to document the existing landscape features, which are historically and architecturally significant to the Historic District. Along with the cultural landscape evaluation, a detailed map with the significant landscape features should be provided, in order to identify and preserve those features that are significant to the Historic District. Currently, the *Historic Guidelines* do not provide for any specific historic landscape features or area. Should this mitigation measure be pursued, a qualified consultant would be required to complete the cultural landscape evaluation.

**Impact A.7 The proposed project would contribute to cumulative impacts on Mare Island historical resources. (Significant and Unavoidable)**

Under *CEQA Guidelines* Section 15130, "a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts." A discussion of significant cumulative impacts may include a "list of past, present, and probable future projects producing related or cumulative impacts."

As discussed under Impacts A.1 and A.2 above, the proposed project would, considered by itself, result in a significant impact to the District and to individual historic resources. Presented below are other past, present, and probable future projects involving demolition of Contributing Resources to the Mare Island Historic District.

Pre-Transfer Demolition by Navy

Prior to the transfer of the property to the City, eight of the 50 buildings originally comprising the National Historic Landmark were demolished by the Navy, as part of the Navy's hazardous materials remediation efforts. Under the proposed Mare Island Specific Plan, buildings comprising the National Historic Landmark are considered individually significant as Landmarks.



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Each such demolition would constitute a significant impact in itself. The impact of demolition of a Landmark on the Historic District is not analyzed in this Subsequent EIR, since no demolition of any Landmark is proposed under the Mare Island Specific Plan.

##### Demolition Implementing the 1999 Specific Plan

Since adoption of the existing 1999 Specific Plan, the City has approved demolition of 15 Contributing Resources in Reuse Areas 6 and 8. These demolitions were part of residential development projects, and roadway improvement and construction projects that implemented the existing 1999 Specific Plan. These development projects were reviewed pursuant to *CEQA Guidelines* Section 15164, in Addenda to the 1999 CEQA Documents. The addenda individually assessed the historic significance of each Contributing Resource proposed for demolition under the 1999 Specific Plan, and found that impacts to individual historical resources and to the Historic District would be less than significant under CEQA. Although such Contributing Resources contribute to integrity of the District, they were found to be individually undistinguished under California Register criteria.

Although located at the western perimeter of the District, these buildings do not define the character of this area of the District and their demolition would leave distinguished Contributing Resources to continue to define the western edge of the District. Demolition of these buildings would not contribute to significant cumulative impacts identified in this Subsequent EIR.

##### Touro University Master Plan

The Touro University campus is within, and occupies most of, Reuse Area 9 (a portion of Reuse Area 9, along Railroad Avenue, is not within the Touro Campus and is part of the proposed Lennar Development Plan). The Touro Campus contains 17 Contributing Resources. The significance of each of these Contributing Resources has been evaluated and classified under the proposed Mare Island Specific Plan. The Touro University campus includes the following: 1 Landmark (Building H1-the Main Hospital Building); 14 Notable Resources (including 2 Contributing Landscapes); and 2 Component Resources.

Touro University submitted a Draft Master Plan (the “Touro Master Plan”) to the City of Vallejo in May 2003 for preliminary review. The Touro Master Plan proposes demolition of up to four Notable Resources (H70, H71, H73 and H79) and two Component Resources (Buildings H34 and 1278). As discussed under Impact A.2, Notable Resource are each considered individually significant historical resources, in themselves, under CEQA. As such, each demolition would, in itself, result in a significant impact to an historical resource. Additionally, a significant impact to the Mare Island Historic District could result under the Touro University Master Plan. Buildings H71 and H70 are Notable Contributing Resources at the perimeter of the Mare Island Historic

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District that define the character of this portion of the District. Demolition of these buildings would be the justification for inclusion of this portion of the District within the District's boundaries.

Implementation of the Touro Master Plan, currently under review by the City of Vallejo, would contribute to significant impacts identified for the proposed project.

**Mitigation:** No mitigation available.

## **B. TRANSPORTATION**

### **INTRODUCTION**

This section describes the potential transportation impacts of the proposed Mare Island Specific Plan. The section describes existing traffic conditions on highways and local roadways. The section also more generally discusses bicycle, pedestrian, parking, and transit impacts. The Setting describes existing traffic conditions both for Mare Island and at selected locations on the mainland, and summarizes applicable policies and ordinances. The Impacts and Mitigation section summarizes methodologies and assumptions used in the analyses, presents results of the impacts analyses, and identifies mitigation measures that would reduce or eliminate the impacts where feasible. An analysis of cumulative conditions for the year 2020 is also provided, based on the use of the updated City of Vallejo citywide travel model.

The transportation analysis presents entirely new information and is not merely an update of the transportation analysis presented in the 1999 CEQA Documents. This was done because after the EIS/EIR was completed and the 1999 Specific Plan was adopted, the City of Vallejo updated their forecasts of 2020 cumulative land use in association with an update of the citywide travel demand model. In addition, existing traffic volumes in 2003-2004 when counts were taken for this Subsequent EIR are substantially different from measurements made in 1993 for the EIS/EIR.

### **SETTING**

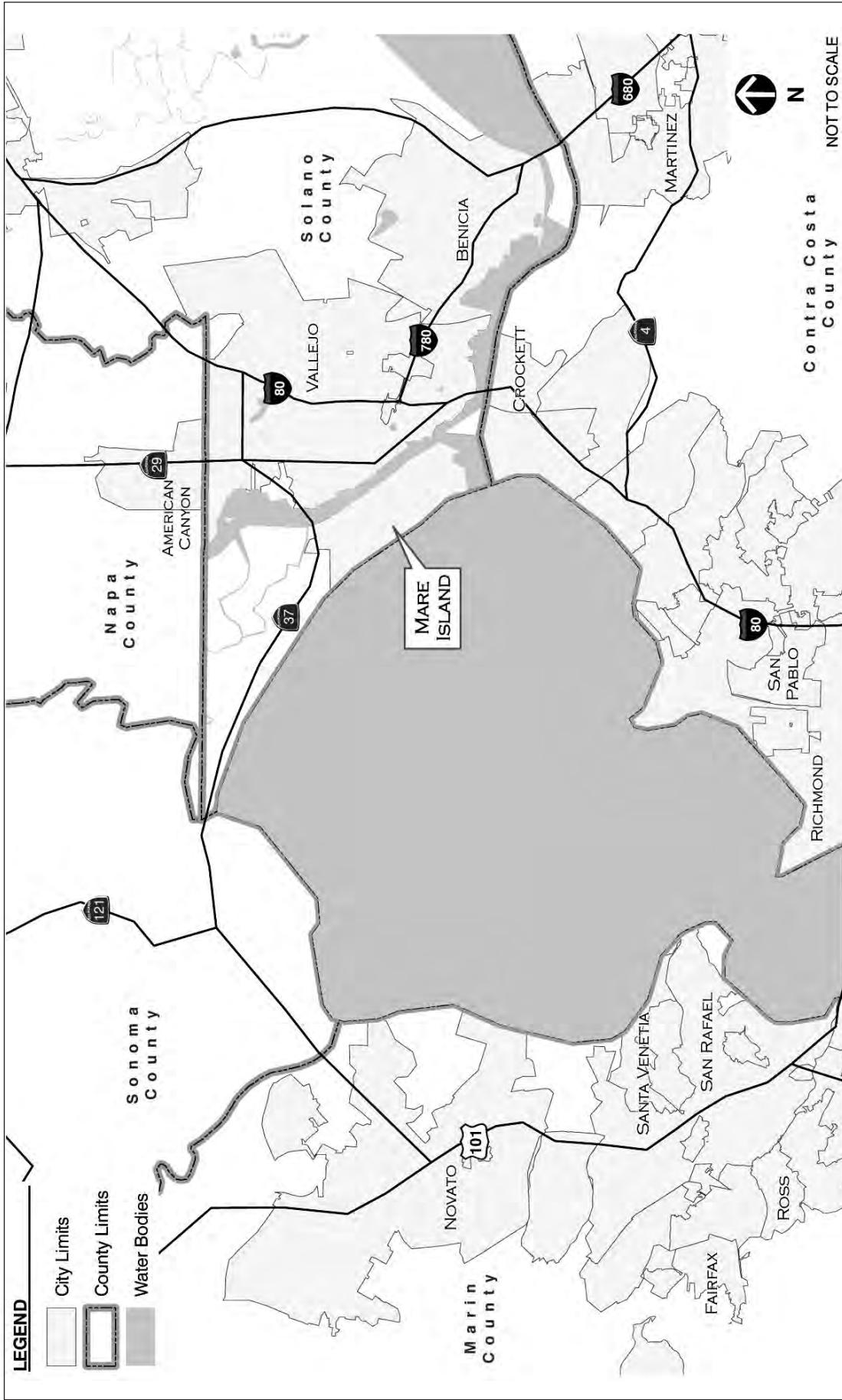
#### **EXISTING AREA ROADWAYS**

##### **Congestion Management Plan**

Solano County has established a Congestion Management Plan (CMP) that designates the roadway system for use in annual monitoring of level of service standards, identifies roadways and intersections to be evaluated in land use impact analyses, and identifies potential candidates for the capital improvement program. Study area facilities located within the City of Vallejo and on the CMP network include Interstate 80 and State Route 37; arterial streets Tennessee Street, Mare Island Way, and Curtola Parkway; and the intersections of Mare Island Way/Tennessee Street, Tennessee Street/Sonoma Boulevard, and Curtola Parkway/Sonoma Boulevard.

##### **Regional Roadways**

**Interstate 80 (I-80)**, as shown in **Figure III.B-1: Regional Transportation Setting**, is a major east-west freeway that connects the City of Vallejo with the San Francisco Bay Area to the west and the Sacramento Valley to the east. I-80 serves both interregional and commuter traffic. In



SOURCE: Fehr & Peers

FIGURE III.B-1: REGIONAL TRANSPORTATION SETTING

the City of Vallejo, I-80 has from three to five lanes in each direction.

**State Route 37 (SR 37 or Marine World Parkway)** is an east-west highway that extends from I-80 in Vallejo west to U.S. Highway 101 in Marin County (U.S. 101). East of I-80, SR 37 becomes Columbus Parkway. Between State Route 29 and I-80 in Vallejo, SR 37 is signed as the Marine World Parkway. SR 37 is a six-lane freeway between I-80 and Fairgrounds Drive. It is a four-lane divided highway between Fairgrounds Drive and Mini Drive. From Mini Drive to the Napa River Bridge, SR 37 is currently a two-lane to four-lane local roadway. Construction is currently underway to convert this section to a four-lane freeway.

**State Route 29 (SR 29 or Sonoma Boulevard)** is a north-south highway that extends from I-80 in Vallejo north through the Napa Valley. SR 29 is a four-lane arterial within the City of Vallejo.

**Curtola Parkway** is an east-west arterial that extends from Interstate 780 west to Mare Island Way. It is a four-lane arterial.

#### **Mare Island Roadways**

**Mare Island Causeway** is a three-lane roadway that crosses the Mare Island Straits connecting the mainland to Mare Island. It begins at the intersection of Mare Island Way, Wilson Avenue, and Tennessee Street, and ends at G Street on Mare Island. There are two lanes in the westbound direction and one lane in the eastbound direction. An active railroad track runs down the middle of the Causeway.

**Railroad Avenue** is a two-lane north-south roadway that connects to the SR 37 interchange at the north end of Mare Island and provides the main access to the eastern side of Mare Island.

**G Street** is a two-lane east-west roadway that provides the main access to the Causeway.

**Azuar Drive (formerly Cedar Drive)** is a two-lane north-south roadway that serves the western side of the developed portions of Mare Island.

#### **Local Off-Island Roadways**

**Mare Island Way** is a north-south roadway that extends from the Mare Island Causeway/Tennessee Street south to the Curtola Parkway/Sonoma Boulevard intersection. It is a four-lane arterial that is the primary access to the Vallejo waterfront and the Mare Island Causeway and provides access to the Vallejo-San Francisco ferry dock.

**Tennessee Street** is an east-west roadway that extends from Mare Island Way east to I-80. The four-lane arterial provides direct access to I-80 at a grade-separated interchange.

**Wilson Avenue** is a north-south roadway that extends from Tennessee Street and Mare Island Way north to SR 37. The two-lane arterial provides a secondary access from Mare Island to SR 37 via the Mare Island Causeway.

### **EXISTING TRAFFIC CONDITIONS**

The City of Vallejo has established 22 study intersections for this Subsequent EIR, five of which are on Mare Island (On-Island) and 17 of which are on the mainland (Off-Island). See Figures III.B-2a and III.B-2b. Peak hour traffic counts were taken in January 2003 at four of the On-Island intersections and 15 of the Off-Island intersections. More recent traffic counts were taken in February 2004 by Korve Engineering in support of the traffic studies for the Waterfront/Vallejo Station EIR, and these 2004 counts were substituted for the 2003 traffic counts at five intersections: Mare Island Way/Wilson Avenue, Mare Island Causeway/Tennessee Street, Sonoma Boulevard/Tennessee Street, Sonoma Boulevard/Curtola Parkway, and the new intersection of Mare Island Way and Georgia Street created after January 2003. Existing traffic counts were not taken at the On-Island intersection of Railroad Avenue and P Street, as this intersection is proposed to be completely reconfigured by the project sponsor and the existing traffic flows would not be relevant to the future conditions at this location. Existing through volumes at the new intersection of Mare Island Way and Capitol Street were estimated based on adjacent intersections. These counts were used to establish levels of service at the study locations.

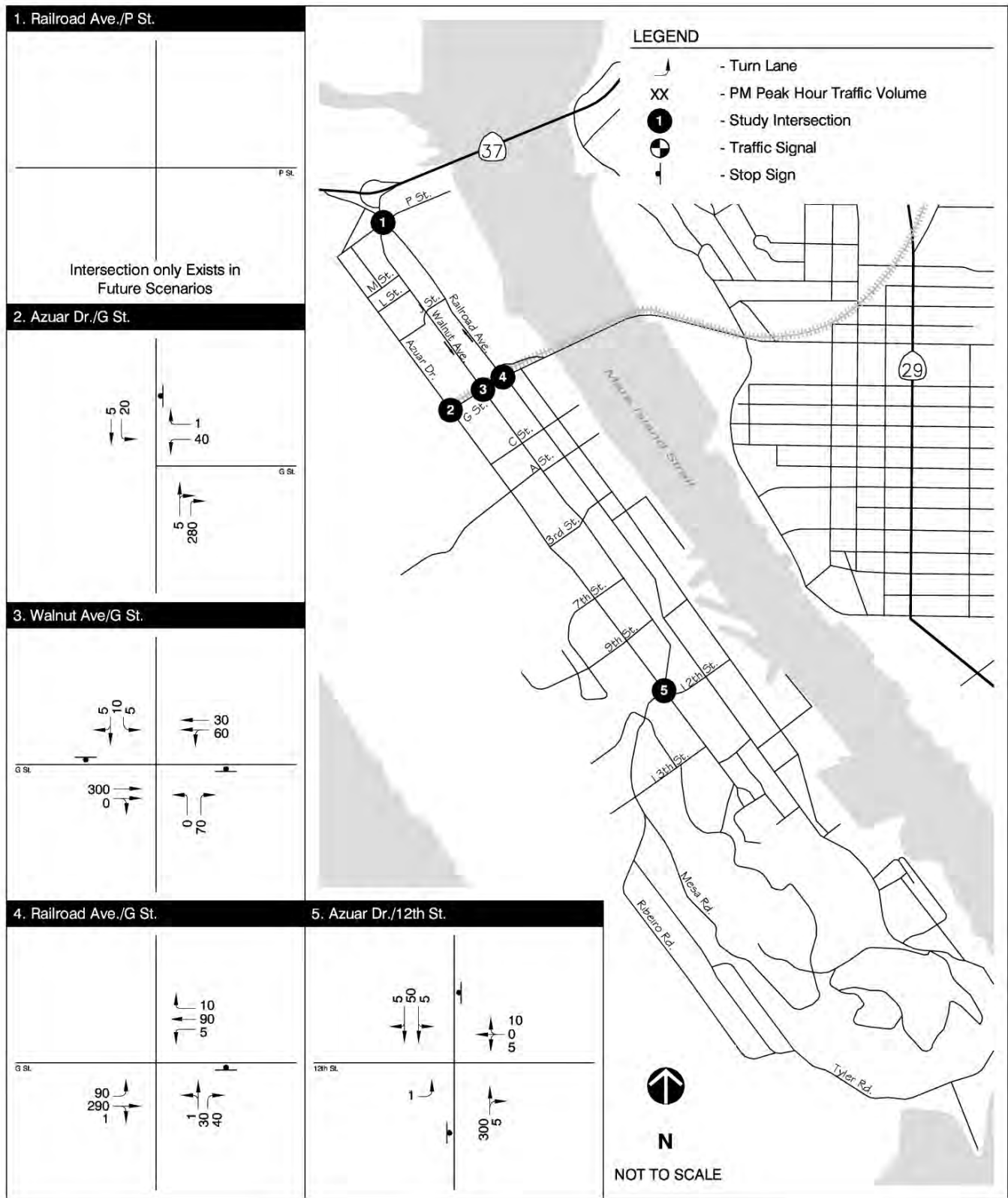
#### **Level of Service (LOS) Concept**

Transportation engineers and planners commonly use a grading system called level of service (LOS) to measure and describe conditions on roadway segments or at intersections controlled by traffic signals or stop signs. LOS is a description of a road segment or intersection's operation, ranging from LOS A (indicating little or no delay) to LOS F (representing significant delays and long queues). Definitions of level of service are provided in Appendix D to this Subsequent EIR.

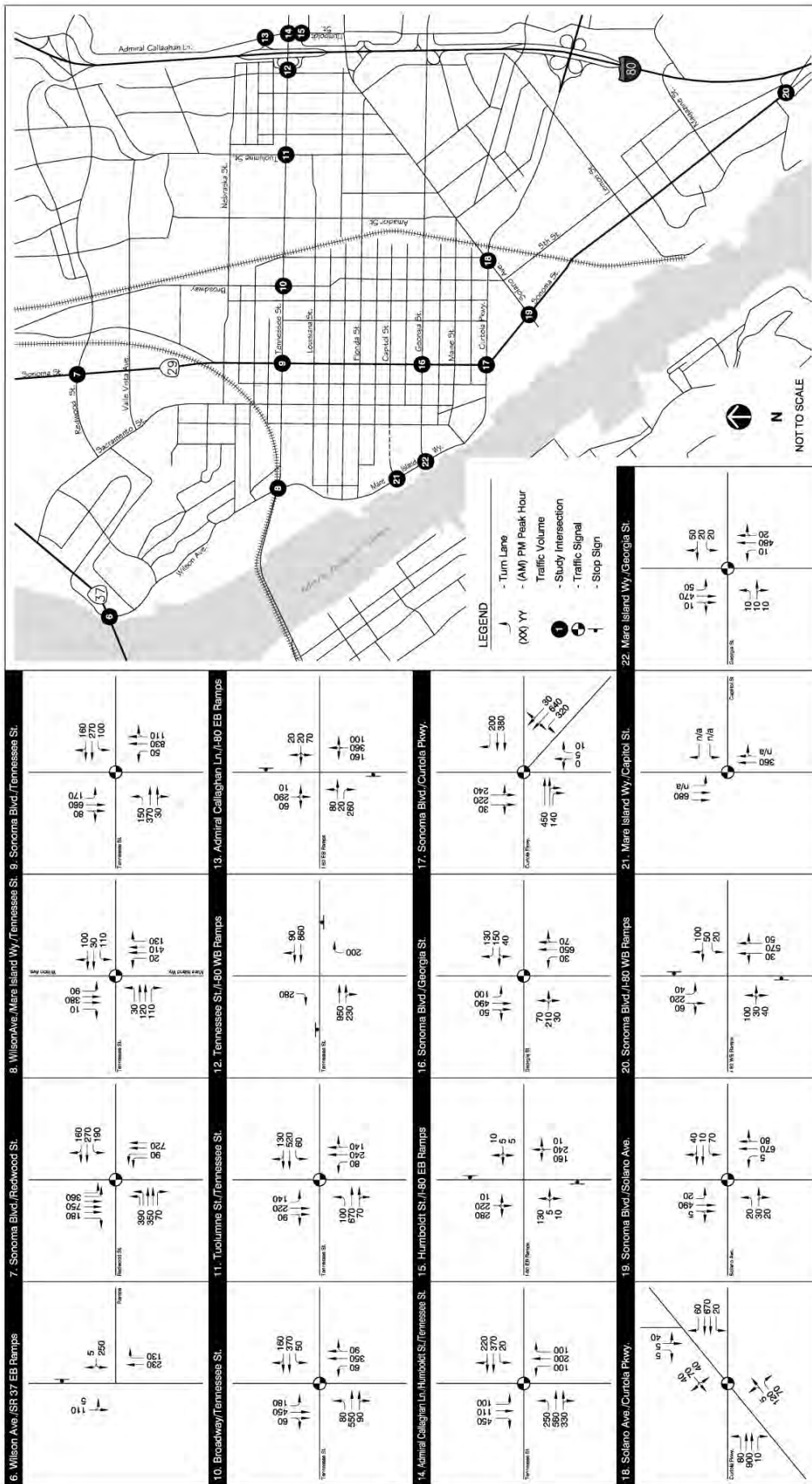
Conditions at intersections were determined through the application of methods described in the 2000 *Highway Capacity Manual* (HCM).<sup>1</sup> The 2000 HCM determines service levels for signalized intersections based on the average stopped delay for all movements. The 2000 HCM methodology determines service levels for unsignalized intersections based on the calculation of the control delay (measured in seconds) for each individual movement. Control delay is defined as the total elapsed time from the time a vehicle stops at the end of a queue to the time the vehicle departs from the stop line at an intersection. At side-street stop-controlled intersections, the LOS rating is based on the control delay for the "worst" minor street movement.

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<sup>1</sup> Transportation Research Board, *Highway Capacity Manual, Special Report No. 209*, 2000.



SOURCE: Fehr & Peers



SOURCE: Fehr & Peeters

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MARE ISLAND AMENDED AND RESTATED SPECIFIC PLAN

**FIGURE III.B-2b: EXISTING (2004) INTERSECTION PEAK HOUR VOLUMES & LANE CONFIGURATIONS- VALLEJO**



The intersection level of service analysis conducted for this Subsequent EIR is based on p.m. peak hour volumes at all study intersections and a.m. peak hour volumes at three intersections that are the most critical for morning peak hour operation.

The level of service for freeway segments was determined using the 2000 HCM methodology for basic freeway segments. The freeway segment level of service analysis is based on p.m. peak hour volumes. The level of service methodology for the Mare Island Causeway was determined based on the number of lanes provided in each direction. For one lane directional operation, the level of service was determined using the 2000 HCM methodology for two-lane rural highways, assuming no passing lanes. For two-lane directional operation, the 2000 HCM methodology for multi-lane rural highways was applied.

The level of service analysis for local roadway segments was determined using a methodology based on average default values for intersection analysis from the 2000 HCM as adapted by the Florida Department of Transportation. The local roadway segment level of service analysis is based on p.m. peak hour volumes.

#### **Existing Intersection Levels of Service**

All of the study intersections that are controlled by traffic signals operate at LOS C or better, as shown in Table III.B-1. One of the minor street movements at the intersections of Admiral Callaghan Ln./I-80 EB Ramps, Humboldt St./I-80 EB Ramps, and Sonoma Blvd./I-80 WB Ramps presently operates at service level E or F conditions. Therefore these stop-controlled intersections are shown in Table III.B-1 as LOS E or F.

#### **Existing Road Segment Levels of Service**

Levels of service were evaluated on freeways and local streets with existing (2003 and 2004) traffic volumes (Table III.B-2). Eastbound I-80 north of Tennessee Street currently operates at LOS E during the p.m. peak hour. All other road segments operate at LOS C or better.

### **OTHER MODES OF TRAVEL**

#### **Railroad**

There are approximately 22 miles of active rail spur lines on Mare Island that connect with the mainland via the Mare Island Causeway. The rail lines are concentrated on the eastern side of the island. The California Northern Railroad operated the tracks and provided service to the rail customers on Mare Island after the base closure. A 1997 survey by the railroad identified 84

**Table III.B-1: Existing Intersection Levels of Service**

Intersection	Traffic Control	AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
<b>On-Island:</b>					
1. Railroad Ave. & P St.	n/a	-	-	n/a	n/a
2. Cedar (Azuar) & G St.	1-way Stop	-	-	9	A
3. Walnut Ave. & G St.	2-way Stop	-	-	11	B
4. Railroad Ave. & G St.	1-way Stop	-	-	13	B
5. Cedar (Azuar) & 12th St.	2-way Stop	-	-	12	B
<b>Off-Island:</b>					
6. Wilson St. & SR 37 EB Ramps	1-way Stop	-	-	15	C
7. Sonoma Blvd. & Redwood St.	Signal	19	B	31	C
8. Mare Island Way & Tennessee St.	Signal	19	B	17	B
9. Sonoma Blvd. & Tennessee St.	Signal	-	-	32	C
10. Broadway & Tennessee St.	Signal	-	-	16	B
11. Tuolumne St. & Tennessee St.	Signal	-	-	16	B
12. Tennessee St. & I-80 WB Ramps	2-way Yield	-	-	22	C
13. Admiral Callaghan Ln. & I-80 EB Ramps	2-way Stop	-	-	374	<b>F</b>
14. Humboldt St. & Tennessee St.	Signal	-	-	40	D
15. Humboldt St. & I-80 EB Ramps	2-way Stop	-	-	73	<b>F</b>
16. Sonoma Blvd. & Georgia St.	Signal	-	-	25	C
17. Sonoma Blvd. & Curtola Parkway	Signal	20	C	22	C
18. Solano Ave. & Curtola Parkway	Signal	-	-	28	C
19. Sonoma Blvd. & Solano Ave.	Signal	-	-	13	B
20. Sonoma Blvd. & I-80 WB Ramps	2-way Stop	-	-	48	<b>E</b>
21. Mare Island Way & Capitol St.	Signal	-	-	n/a	n/a
22. Mare Island Way & Georgia St.	Signal	-	-	11	B

*Notes:*

LOS = Level of Service

Delay = average stopped delay at signalized intersections, in seconds per vehicle. For unsignalized intersections, the highest delay for an individual movement at the intersection is listed.

**Bold** = unacceptable LOS E or F.

n/a = intersection did not exist in 2004 when traffic counts were taken.

*Source:* Dowling Associates, Inc., 2005.

distinct items of concern at 35 locations that require safety improvements.<sup>2</sup> These locations were mainly along Railroad Avenue and Azuar Drive, both of which are shared by tracks for low-speed trains to access customers. Since the 84 deficiencies were identified, 26 have been removed or remedied, as of July 2005. A list of the items is provided in Table D-3, in Appendix D to this Subsequent EIR.

<sup>2</sup> Mare Island Specific Plan, Chapter 5, p. 133

**Table III.B-2: Existing P.M. Peak Hour Road Segment Levels of Service**

	Direction	Lanes	Volume	LOS
<b>Freeway Segments:</b>				
I-80 N. of Tennessee	EB	3	6,290	E <sup>1</sup>
	WB	3	4,970	D
SR 37 W. of Fairgrounds	EB	2	2,050	C
	WB	3	1,690	A
SR 37 W. of SR 29	EB	1	1,370	B
	WB	1	940	A
SR 37 E. of Mare Island	EB	2	1,440	B
	WB	2	850	A
<b>Local Street Segments:<sup>2</sup></b>				
Mare Island Causeway <sup>3</sup>	EB	2	260	A
	WB	1	60	A
Curtola Pkwy. W. of Lemon	EB	2DL	1,010	C
	WB	2DL	750	C
Wilson Ave. N. of Tennessee	NB	1U	540	D
	SB	1U	480	D
Mare Island Way W. of Marin	EB	2DL	580	C
	WB	2DL	730	C
Mare Island Way S. of Florida	NB	2DL	530	C
	SB	2DL	540	C
Tennessee St. W. of Tuolumne	EB	2DL	830	C
	WB	2DL	690	C
Railroad Ave. S. of G St.	NB	1U	70	C
	SB	1U	10	C
Azuar S. of 12th St.	NB	1U	310	C
	SB	1U	60	C

*Notes:*

- Lanes: 2DL = 2 lanes divided with left-turn lanes, 1U = one lane undivided without left-turn lanes.  
 Level of service calculated using HCM 2000 analysis for freeway segments.
1. Under Solano County's CMP, LOS E or better is considered acceptable for freeways.
  2. Level of service for all segments except Mare Island Causeway calculated using HCM 2000 planning analysis as documented by Florida Department of Transportation.
  3. Level of service calculated using HCM 2000 analysis for two-lane rural highways (one lane) or multi-lane rural highways (2 lane).

*Source:* Dowling Associates, Inc., 2005.

**Freight**

The City of Vallejo designates truck routes on the following roads:<sup>3</sup>

- Interstate 80
- Interstate 780
- State Route 37

<sup>3</sup> Korve Engineering, "Vallejo Transportation and Mare Island Access Study, Final Report," January 2001.

- Mare Island Way
- Sacramento Street between Tennessee Street and SR 37
- Sonoma Boulevard
- Broadway between Tennessee Street and SR 37
- Columbus Parkway
- Lemon Street southwest of Curtola Parkway
- Benicia Road
- Tennessee Street west of Admiral Callaghan Lane
- Railroad Avenue
- G Street
- Azuar (formerly Cedar) Street north of G Street

Following the base closure, trucks could access Mare Island either via the State Route 37 interchange or the Mare Island Causeway. Railroad Avenue is the primary truck route on the island. A policy is being implemented to prohibit trucks from using the Causeway concurrent with the development of new uses on Mare Island. The new truck route is planned to provide access from State Route 37 to Railroad Avenue.

### **Transit**

There is presently no local transit service for Mare Island. Private shuttle vans have operated for special events on a limited basis.

### **Bicycles and Pedestrians**

Pedestrian and bicycle access from the mainland to Mare Island is currently provided by a narrow sidewalk on the south side of the Mare Island Causeway. Sidewalks are provided on at least one side of all residential streets and on many of the central island streets like Walnut Avenue. Many roads in the industrial areas such as Railroad Avenue do not have sidewalks or provisions for bicycle travel.

## **REGULATORY FRAMEWORK**

### **City of Vallejo General Plan Policies**

The *City of Vallejo General Plan* Circulation Element provides goals related to maintaining and expanding the roadway network, providing adequate parking, and promoting the use of alternative modes. Policies furthering these goals that are relevant to Mare Island include the following:

- Mobility Policy 6: Prior to approval of a particular land use, it should be analyzed to determine its impact on the existing circulation system.
- Traffic Safety Policy 1: Reduce excessive speeds and amount of traffic in residential neighborhoods through a variety of design techniques, including narrowing of streets or intersections, landscaping, diversion of traffic and closing of streets. Innovative street design shall be encouraged as an incentive for greater use of the Planned Development approach to land development and neighborhood design.
- Transit Policy 1: Local and regional transit systems should be given a priority equal to that of the private automobile when developing the future street system and when reviewing specific development proposals.
- Transit Policy 2: Policies for the location of new bus stops should be adopted by the City; developers should be required to put in bus stops as part of large-scale developments.
- Non-Motorized Transportation Policy 1-1: As evidence of the community's desire to encourage healthy and safe alternative modes of travel replacing the auto, the City shall give high priority to implementing the Vallejo Bicycle Route Plan.
- Non-Motorized Transportation Policy 1-2: Provide off-street parking and locking facilities for bicycles in conjunction with automobile parking as well as near entrances to public facilities and in areas of high people use.
- Non-Motorized Transportation Policy 2-2: Provide safe pedestrian crossings, e.g., signalized crosswalks and pedestrian overpasses, on major streets where day-to-day activities warrant them. Pedestrian walkways should be provided between residential neighborhoods and high use areas such as schools, parks and commercial centers. The walkways should be safe for adjoining property owners and users.

### 1999 Specific Plan

The 1999 Specific Plan was adopted by the Vallejo City Council on March 30, 1999. The transportation section identifies a series of improvements for implementation.

Street system improvements identified in the Plan are summarized as follows:

- North Gate – reconfigure approach to include three inbound and outbound lanes.
- Causeway – retain reversible operation.
- Southern Crossing – construct four- to six-lane bridge over the Mare Island Strait towards the southern end of the island.
- Railroad, Walnut, and Cedar Avenues – widen, realign and/or upgrade in the developed portions of the island.
- New Parking Lots – construct approximately 3,300 new parking spaces.
- Local Service Roads – Construct about four miles of new collectors.

Transit improvements proposed in the 1999 Specific Plan include shuttle service via bus and/or ferry service between Mare Island and Vallejo, a transit center, and on-island transit service.

Bicycle and pedestrian improvements proposed in the 1999 Specific Plan include a waterfront promenade the entire length of the island along Mare Island Strait except where public access would conflict with industrial activities, a pedestrian-bicycle corridor along Walnut Avenue between G Street and Cedar Avenue, trails between the ferry terminus and on-island routes, pedestrian circulation along Railroad Avenue and the waterfront promenade, and links between trails in the future Regional Park and other areas on the island.

Rail improvements proposed in the 1999 Specific Plan include the installation of rail warning and safety devices at numerous street crossings.

### **Vallejo Zoning Ordinance Parking Requirements**

Chapter 16.62 of the Vallejo Zoning Ordinance addresses off-street parking and loading requirements and provides design standards for off-street parking. Section 16.62.120 establishes the number of off-street parking spaces required for various land uses.

Single-family dwelling units, condominiums and apartments require two spaces. Industrial and manufacturing uses typically require four spaces for the first 5,000 square feet of floor area and one space for each additional 2,000 square feet of floor area. Office uses typically require one space per 250 square feet of first floor area, plus one space per 350 square feet of other floors. Restaurants require one space for each three seats or one space for each 50 square feet of sitting area.

## **IMPACTS AND MITIGATION**

### **SIGNIFICANCE CRITERIA**

A project would normally have a significant effect on the environment if it would cause an increase in traffic which is substantial in relation to the existing or future baseline traffic load and capacity of the street system (i.e., result in a substantial increase in either the service levels on roads, or congestion at intersections), or change the condition of an existing street (i.e., through street closure, or change to direction of travel) in a manner that would substantially impede access or reduce capacity of the street system. Specifically, for the City of Vallejo, the following criteria are applied:

- At a study intersection, the project traffic would cause the intersection level of service (LOS) to deteriorate below LOS D.

- At a study intersection where the baseline level of service is worse than LOS D, the project would cause the total intersection delay to increase by five or more seconds.
- At a transportation facility on the Congestion Management Plan (CMP) roadway network, the project would cause the level of service to degrade below the adopted CMP standard. Under the CMP, LOS E or better is considered acceptable for freeways.
- The project would result in projected parking demand that would exceed the proposed parking supply.
- The project would result in potential conflicts for pedestrians or bicyclists, or fail to provide adequate bicycle and pedestrian access.
- The project would increase transit demand above the levels able to be adequately provided by local transit operators or agencies.

These criteria are different from those used in the 1998 EIS/EIR, in part because the analysis was based on roadway capacities rather than the levels of service.

## **METHODOLOGY AND ASSUMPTIONS**

The following scenarios are analyzed in the traffic impact analysis:

- Existing Plus Project
- Future 2020 Baseline
- Future 2020 Baseline Plus Project

Existing conditions are described in the Setting section, above, and are based on counts of traffic at each of the study intersections taken in January 2003 and February 2004.

The Future 2020 Baseline scenario is based on the population and employment projections, reflective of the General Plan's growth scenario for 2020, for the off-island portion of the City of Vallejo. The assumed 2020 land uses have been updated to include recent proposed development plans such as the Waterfront Plan, the Downtown Specific Plan and development at the Solano County Fairgrounds. For Mare Island, the Future 2020 Baseline scenario assumes build-out based on the approved 1999 Specific Plan. The approved 1999 Specific Plan also included construction of a new "Southern Crossing" bridge over the Mare Island Strait connecting the south part of Mare Island with the mainland south of downtown Vallejo.

The Future 2020 Baseline Plus Project scenario is based on identical population and employment projections as the Future 2020 Baseline scenario for the off-island portion of the City of Vallejo. For Mare Island, the scenario assumes development build-out based on the proposed Mare Island Specific Plan instead of the approved 1999 Specific Plan. Thus, the analysis with the project identifies the traffic impacts that would occur if the development program in the proposed Mare Island Specific Plan were built out compared to impacts of approved development on Mare

Island. The Mare Island Specific Plan does not include construction of a new bridge over Mare Island Strait. The 2020 scenarios present the project in the context of future cumulative impacts.

### **Planned Road Improvements**

#### *On-Island Road Improvements*

The circulation plan for the Mare Island Specific Plan includes a number of changes to the existing road system and additional road improvements, shown generally in Figure II-6 in Chapter II, Project Description, p. II.19, and described below.

- SR 37 Interchange – the connections to the SR 37 interchange at the north end of Mare Island would be consolidated onto an improved two-way six-lane Railroad Avenue.
- Railroad Avenue – Railroad Avenue would be converted to two-way operation north of G Street and would be widened to provide three through lanes in each direction. South of G Street, Railroad Avenue would be improved to provide two through lanes in each direction south to A Street. At the intersection with G Street, the northbound and southbound approaches on Railroad Avenue would each provide one left-turn lane, two through lanes and one right-turn lane.
- P Street – the street would be reconstructed with two lanes in each direction connecting Azuar Drive with a signalized intersection at Railroad Avenue.
- Azuar Drive – the street would be improved with two lanes in each direction between P Street and 5<sup>th</sup> Street.
- G Street – the street would be improved with two lanes in each direction with signalized intersections at Azuar Drive and Railroad Avenue. The eastbound and westbound approaches at the Railroad Avenue intersection would be widened to provide two left-turn lanes and two through lanes.
- Walnut Avenue – the one-way segment north of G Street would be abandoned as a through street. At the intersection with G Street, the northbound lanes would be reduced from two to one and northbound left-turns would be prohibited.
- Azuar/12<sup>th</sup> Roundabout – the two intersections of Azuar Drive with Walnut Avenue and 12<sup>th</sup> Street would be consolidated into a single roundabout-controlled intersection.
- Mare Island Causeway – with implementation of the Mare Island Specific Plan, the Causeway is assumed to operate with one eastbound lane, one westbound lane, and a reversible center lane, so that two lanes can always be provided in the peak direction (westbound during the a.m. peak period and eastbound during the p.m. peak period).
- Flagship Drive – a new two-lane street is being constructed to serve the residential areas of Mare Island west of Azuar Drive and south of 5<sup>th</sup> Street.



### *Off-Island Road Improvements*

Four major transportation projects are currently under construction (or out to bid) in Vallejo, as described below.

- SR 37 Freeway Upgrade – the segment between the Napa River Bridge and a point approximately midway between Fairgrounds Drive and Mini Drive is being upgraded to a four-lane freeway with a grade-separated interchange at the SR 37/SR 29 junction.
- Wilson Avenue – the segment between Tennessee Street and SR 37 is out to bid for upgrades to include landscaping and left-turn bays.
- Capitol Street Extension – the recently completed segment between the City Hall parking lot and a point approximately 600 feet to the east of Mare Island Way is Phase 1 of the ultimate extension that will connect downtown with Mare Island Way.
- Sonoma Boulevard at I-80 WB Ramps/Maritime Academy – installation of a traffic signal.

The City of Vallejo has conducted a Transportation Impact Mitigation Fee Study that would provide a funding mechanism for the following improvements within the study area:

- Solano Avenue at Curtola Parkway - intersection spot improvements.
- Tennessee Street at Humboldt Street/Admiral Callaghan Lane - improve turn lanes.
- Sonoma Boulevard at Curtola Parkway - upgrade traffic signal.
- Wilson Avenue at SR 37 EB off-ramp – install a traffic signal.

### **Travel Forecasting Methodology**

Traffic forecasts for the Existing Plus Project scenario were calculated by adding trips generated by development on Mare Island to existing traffic counts. A citywide intersection traffic model using the Traffix software was adapted for this purpose. The assumptions for trip generation and directional distribution of the added traffic were obtained from the City of Vallejo's travel demand forecast model. Trips generated by current land uses on Mare Island were not included in the added traffic increment.

The City of Vallejo's travel demand forecast model was used to prepare forecasts of p.m. peak hour traffic volumes for roadway segments and intersections for all of the Future 2020 scenarios. The model estimates the number of trips based on a trip generation equation for each land use type. The Vallejo model includes buildout of land uses in the City consistent with the *Vallejo General Plan*. The model also includes 2020 regional trips to and from all other portions of the Bay Area based on the regional travel forecast model maintained by the Metropolitan Transportation Commission (MTC) and the countywide travel models for Solano and Napa counties. The model subsequently distributes the trips onto the network in the model, assigning auto trips onto individual highways and streets. Land uses and traffic origins and destinations are

grouped into “transportation analysis zones” (TAZ) to assist the computations. Figure III.B-3 shows the TAZs contained in the citywide travel model for Mare Island.

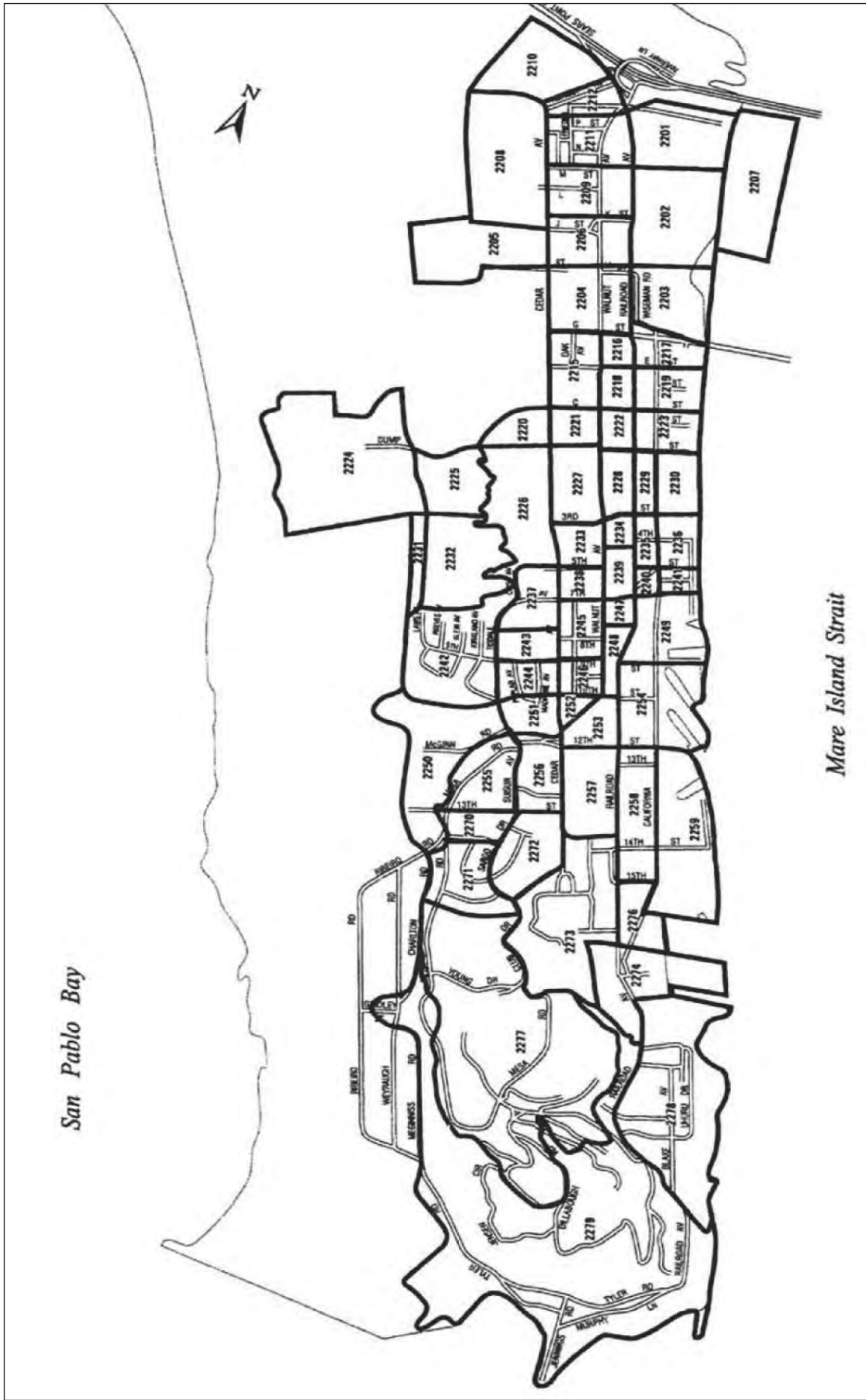
The Vallejo travel model was validated in 2003 by using 1999 land use and road network inputs and adjusting the equations and assumptions so that the estimated traffic volumes replicated observed 1999 traffic counts. Once a travel model is validated for a base year, it is assumed that the equations and assumptions are appropriate for application with future year land use and road network inputs.

*Revisions to Citywide Travel Model*

The citywide travel model was revised in 2004 to correctly represent the proposed street system on Mare Island and to more correctly represent trip generation for land use types on Mare Island. Future land uses were also updated to be consistent with the most current development proposals in Vallejo, including the Waterfront Project, the Vallejo Station Project, the Downtown Specific Plan and the Solano County Fairgrounds.

The future road network assumptions for Mare Island in the travel model were revised to include the following:

- Two-way operation on a six-lane Railroad Avenue north of G Street
- Abandonment of Walnut Avenue north of G Street
- G Street as a four-lane street
- Left-turn prohibition on northbound Walnut Street at G Street
- Azuar Drive as a four-lane street north of 5<sup>th</sup> Street
- Addition of Flagship Drive as a two-lane street
- Local street cross-sections and development access in areas south of G Street consistent with the Lennar Mare Island Street Cross-Sections prepared by Chaudary & Associates, Inc. in 2004



MARE ISLAND AMENDED AND RESTATED SPECIFIC PLAN  
**FIGURE III.B-3: MARE ISLAND TRANSPORTATION ANALYSIS ZONES**

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SOURCE: Fehr & Peers

A review of the citywide travel model indicated that revisions should be made to the trip generation equations for six land use categories to better represent proposed land uses on Mare Island. The purpose for these revisions is summarized below.

- The following five land use types, as proposed for Mare Island, are not included in the citywide travel model: research & development, light industrial, city park, regional park, and golf course. Trip generation equations were added to the model for these uses based on the standard Institute of Transportation Engineers (ITE) *Trip Generation*<sup>4</sup> reference.
- The trip generation equation for Touro University was revised based on ITE *Trip Generation* and survey data from other similar campuses that showed the current equation in the model understates the college's potential trip generation.
- The trip generation equation for industrial uses in the model was substantially lower than the equation identified in ITE *Trip Generation*. This equation is more representative of the existing heavy industrial uses on Mare Island and elsewhere in Vallejo. The model equation was retained and applied to all industrial uses (heavy or light) on Mare Island that would reoccupy existing buildings, while the higher ITE rate for light industrial was applied to light industrial uses in new buildings.

#### *Trip Generation*

The proposed total land uses on Mare Island with the Mare Island Specific Plan are shown in **Table III.B-3: Mare Island Total Land Use Quantities**. Land use quantities are shown separately for three groups of Mare Island land uses:

- “Master Developer” represents uses developed within the portion of Mare Island subject to the master developer agreement with the City of Vallejo, excluding North Island Reuse Area 1A and existing uses to remain. Lennar Mare Island was selected by the City as the Master Developer and is the project sponsor in this Subsequent EIR.
- “North Island” includes uses within North Island Reuse Area 1A.
- “Other” includes existing uses to remain such as the V.A. Hospital, Touro University, the golf course, and existing institutional uses such as the United States Forest Service.

Touro University is included in all Future 2020 scenarios with an ultimate planned enrollment of 2,000 students. Although the Touro University campus is contained within the Master Developer area, the expansion of Touro University is considered to be an “Other Use” for the purposes of this study and is included in the 2020 Baseline for all scenarios. Also, Touro University is included in the land use and trip generation calculations in terms of numbers of students, consistent with the Vallejo travel model, and therefore the square footage of Touro University buildings is not included in the non-residential square footage totals shown in Table III.B-3.

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<sup>4</sup> Institute of Transportation Engineers, *Trip Generation Handbook*, Sixth Edition, 2003.

III. Environmental Setting, Impacts and Mitigation  
B. Transportation

**Table III.B-3: Mare Island Total Land Use Quantities**

	Units	Master Developer	North Island	Other Uses	Total
<b>Residential:</b>					
Single Family Detached	Dwelling Units	870	-	-	870
Multi-Family Attached	Dwelling Units	530	-	-	530
<b>Non-Residential:</b>					
Retail	sf	156,000	28,000	3,000	187,000
Gas Station	sf	4,000	-	-	4,000
Service Commercial	sf	-	320,000	-	320,000
Office	sf	739,000	54,000	-	793,000
R&D	sf	743,000	-	-	743,000
Warehousing	sf	900,000	370,000	-	1,270,000
Light Industrial (reuse)	sf	1,156,000	-	-	1,156,000
Light Industrial (new)	sf	1,004,000	450,000	-	1,454,000
Heavy Industrial	sf	1,477,000	-	-	1,477,000
Hospital	Beds	-	-	87	87
Government	sf	16,000	-	391,000	407,000
Elementary School	Students	529	-	-	529
College	Students	-	-	2,000	2,000
Recreational Building	sf	229,000	16,000	-	245,000
Church	sf	22,000	-	-	22,000
City Park	Acres	80	-	-	80
Regional Park	Acres	-	-	268	268
Golf Course	Acres	-	-	172	172
<b>TOTALS</b>					
Residential	Dwelling Units	1,400	-	-	1,400
Non-Residential	sf	6,446,000	1,238,000	394,000	8,078,000

*Notes:*

Master Developer = Development areas excluding North Island Area 1A and uses that were existing prior to redevelopment activity and will remain.

North Island = Area 1A which is not included in the Master Developer agreement with the City of Vallejo.

Other Uses = Uses which were existing prior to redevelopment activity that will remain, including those within the Master Developer area.

sf = Gross square feet of building area.

Totals may not match Table II-1: Mare Island Specific Plan Land Use Program by Reuse Area: Changes from the 1999 Specific Plan, pp. II.9 – II.10, because units other than sq. ft. are used to calculate trips for some uses such as schools and hospitals.

*Source:* Dowling Associates, Inc., 2004.

The peak hour trip generation for all uses on Mare Island with the Specific Plan is shown in Table III.B-4. All land uses on Mare Island with the proposed Specific Plan for Mare Island would generate approximately 10,450 vehicle trips during the p.m. peak hour under the Future 2020 Baseline Plus Project scenario. This trip total includes trips generated by proposed uses on Mare Island, trips generated by existing uses that will remain, such as the golf course and U.S. Forest Service office, and trips generated by Touro University at an increased enrollment of 2,000 students.

III. Environmental Setting, Impacts and Mitigation  
B. Transportation

**Table III.B-4: Mare Island Total Trip Generation**

Land Use	Rate	P.M. Peak Hour Vehicle Trips			Total
		Master Developer	North Island	Other Uses	
<b>Residential:</b>					
Single Family Detached	0.89/unit	774	-	-	774
Multi-Family Attached	0.37/unit	196	-	-	196
<b>Non-Residential:</b>					
Retail	6.5/1,000 sf	1,014	182	20	1,216
Gas Station	82.0/1,000 sf	328	-	-	328
Service Commercial	2.15/1,000 sf	-	688	-	688
Office	1.86/1,000 sf	1,373	100	-	1,473
R&D	1.08/1,000 sf	802	-	-	802
Warehousing	0.70/1,000 sf	630	259	-	889
Light Industrial (reuse)	0.29/1,000 sf	335	-	-	335
Light Industrial (new)	0.98/1,000 sf	984	441	-	1,425
Heavy Industrial	0.29/1,000 sf	428	-	-	428
Hospital	1.20/bed	-	-	104	104
Government	1.34/1,000 sf	21	-	524	545
Elementary School	0.04/student	21	-	-	21
College	0.21/student	-	-	420	420
Recreational Building	2.86/1,000 sf	655	46	-	701
Church	1.27/1,000 sf	28	-	-	28
City Park	0.04/acre	3	-	-	3
Regional Park	0.06/acre	-	-	16	16
Golf Course	0.30/acre	-	-	52	52
<b>TOTAL</b>		<b>7,594</b>	<b>1,716</b>	<b>1,136</b>	<b>10,445</b>
Existing traffic to/from Mare Island					703
Net traffic increase					9,742
<b>1999 Specific Plan Total Trips</b>		<b>4,845</b>	<b>1,330</b>	<b>1,143</b>	<b>7,319</b>
Change due to Mare Island Specific Plan		+2,749	+386	-7	+3,126
		(+57%)	(+29%)	(-1%)	(+43%)

*Notes:*

Master Developer = Development areas excluding North Island Area 1A and uses that were existing prior to redevelopment activity that will remain.

North Island = Area 1A which is not included in the Master Developer agreement with the City of Vallejo.

Other Uses = Uses which were existing prior to redevelopment activity that will remain including those within the Master Developer area.

sf = Gross square feet of building area.

*Source:* Dowling Associates, Inc., 2004; City of Vallejo Citywide Travel Model.

The number of existing peak hour vehicle trips to and from Mare Island was calculated based on existing (2004) traffic counts. The total of 703 existing p.m. peak hour trips includes 554 using the Mare Island Causeway (104 to Mare Island, 450 from Mare Island) and 149 using the SR 37 interchange (10 to Mare Island, 139 from Mare Island). These existing trips were subtracted from the total Mare Island trip generation to determine the trip increment used for the Existing Plus Project scenario.

III. Environmental Setting, Impacts and Mitigation  
B. Transportation

A comparison of all Mare Island trips indicates that the Future 2020 Baseline Plus Project scenario would generate approximately 43 percent more p.m. peak hour trips than the 1999 Specific Plan included in the Future 2020 Baseline scenario. The increases in total trips mirror the change in proposed non-residential uses by scenario. The Future 2020 Baseline Plus Project scenario would increase non-residential square footage by 39 percent compared to the Future 2020 Baseline scenario. The total number of trips generated under the Mare Island Specific Plan, 10,445 trips, is also greater than the 9,477 P.M. peak hour vehicle trips generated in 1998 when the Shipyard was in operation (see 1998 EIS/EIR pp. 3-131 to 3-132), and greater than the 9,813 P.M. peak hour trips for the Reuse Plan Alternative analyzed in the 1998 EIS/EIR (see Table 4-18 on p. 4-89 of the 1998 EIS/EIR).

*Trip Distribution*

The directional distribution of peak hour trips to and from Mare Island land uses was derived from the Vallejo Citywide Travel Model. A summary of the distribution of trips generated by future development on Mare Island is shown on Table III.B-5. Approximately 19 percent of all Mare Island trips would travel to and from other Mare Island uses and would therefore stay on the island. About half of the total Mare Island trips would travel to and from other portions of Vallejo. The remaining 28 percent would travel to and from locations outside Vallejo.

**Table III.B-5: Mare Island Trip Distribution**

Area	Subarea	Percent of Total trips
Mare Island	North	3%
	Central	8%
	South	8%
<b>Subtotal, Mare Island</b>		<b>19%</b>
Vallejo	Northwest	23%
	Downtown	17%
	Northeast	5%
	East	5%
	Southeast	3%
<b>Subtotal, Vallejo</b>		<b>53%</b>
Benicia		1%
Other Solano County		4%
East Bay Area		6%
Central Bay Area		8%
West Bay Area		4%
Napa		4%
<b>Subtotal, Outside Vallejo</b>		<b>28%</b>
<b>Total All Areas</b>		<b>100%</b>

*Source:* Dowling Associates, Inc., 2004; City of Vallejo Citywide Travel Model.

## EXISTING PLUS PROJECT IMPACTS AND MITIGATIONS

### Intersection Traffic Impacts

**Impact B.1 Traffic generated by full buildout of the proposed project would cause levels of service to degrade to unacceptable levels at 10 intersections in the near-term Existing Plus Project scenario. (Significant)**

Table III.B-6 shows the intersection levels of service with existing traffic and with existing traffic plus full buildout of the project. Nine of the 22 study intersections would deteriorate from acceptable LOS D or better to LOS E or F. Projected volumes for the Existing Plus Project scenario are shown on Figures III.B-4a and III.B-4b.

An additional three intersections already operate at LOS E or F. Traffic generated by the project would increase delays at these intersections. The impacts related to these delay increases are discussed below in Impact B.2.

This analysis is conservative in that it does not account for any changes in travel patterns that are expected to occur in the future as traffic volumes increase on main streets in Vallejo and that are accounted for in the future cumulative impacts analysis in the citywide travel model. Buildout of Mare Island under the Lennar development program is expected to take several years; therefore, analyzing the development program in the context of existing traffic conditions produces a more conservative result for some locations than is shown for the future 2020 condition. Thus, the intersections of Sonoma Boulevard/Tennessee Street and Tennessee Street/I-80 westbound ramps degrade from LOS C to LOS F and E, respectively, in the Existing Plus Project scenario but are expected to operate at LOS D and LOS C, respectively, in the Future 2020 Baseline Plus Project scenario (see Table III.B-8 on p. III.B.34). Therefore, while feasible mitigation measures are identified here to reduce project-related impacts, none are identified in the 2020 cumulative scenario because by the time full development occurs on Mare Island under the Mare Island Specific Plan travel patterns are expected to have changed such that mitigation would not be necessary.



**Table III.B-6: Existing Plus Project Intersection Levels of Service**

Intersection	Traffic Control	Peak Hour	Existing		Existing Plus Project	
			Delay	LOS	Delay	LOS
<b>On-Island:</b>						
1. Railroad Ave. & P St.	Signal	P.M.	n.a.	n.a.	20	C
2. Azuar Dr. & G St.	Signal	P.M.	9	A	29	C
3. Walnut Ave. & G St.	1-way Stop	P.M.	11	B	142	F
4. Railroad Ave. & G St.	Signal	P.M.	13	B	201	F
5. Azuar Dr. & 12th St.	Roundabout	P.M.	12	B	2	B
<b>Off-Island:</b>						
6. Wilson St. & SR 37 EB Ramps	1-way Stop	P.M.	15	C	764	F
7. Sonoma Blvd. & Redwood St.	Signal	A.M.	20	B	20	C
		P.M.	31	C	41	D
8. Mare Island Way & Tennessee St.	Signal	A.M.	19	B	465	F
		P.M.	17	B	399	F
9. Sonoma Blvd. & Tennessee St.	Signal	P.M.	32	C	60	E
10. Broadway & Tennessee St.	Signal	P.M.	16	B	22	C
11. Tuolumne St. & Tennessee St.	Signal	P.M.	16	B	17	B
12. Tennessee St. & I-80 WB Ramps	2-way Stop	P.M.	22	C	59	F
13. Adm. Calln. Ln. & I-80 EB Ramps	2-way Stop	P.M.	374	F	747	F
14. Humboldt St. & Tennessee St.	Signal	P.M.	40	D	63	E
15. Humboldt St. & I-80 EB Ramps	2-way Stop	P.M.	73	F	135	F
16. Sonoma Blvd. & Georgia St.	Signal	P.M.	25	C	27	C
		A.M.	20	C	26	C
17. Sonoma Blvd. & Curtola Parkway	Signal	P.M.	22	C	78	E
		P.M.	28	C	172	F
19. Sonoma Blvd. & Solano Ave.	Signal	P.M.	13	B	13	B
20. Sonoma Blvd. & I-80 WB Ramps	2-way Stop	P.M.	48	E	117	F
21. Mare Island Way & Capitol St.	Signal	P.M.	n.a.	n.a.	4	A
22. Mare Island Way & Georgia St.	Signal	P.M.	11	B	18	B

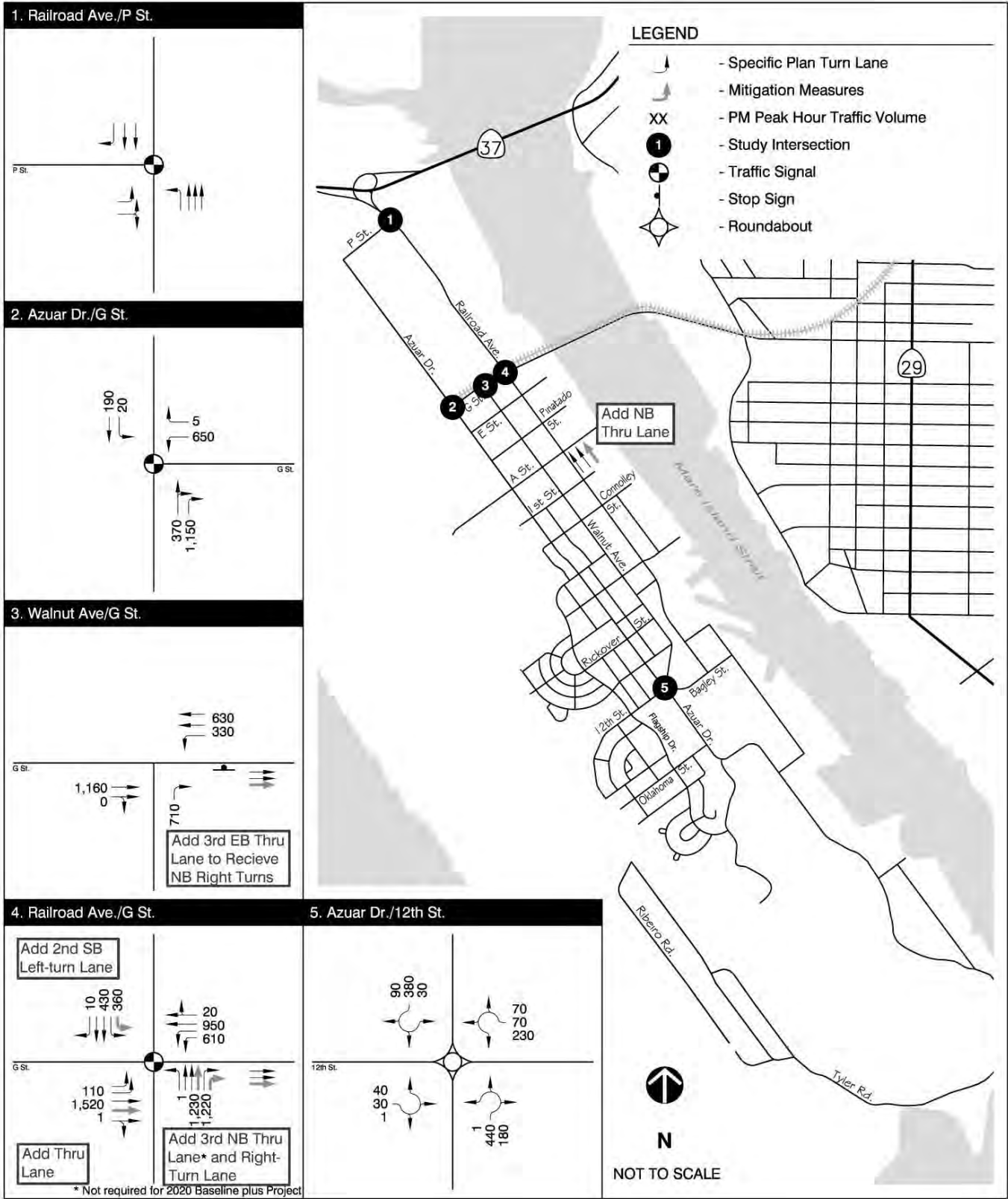
*Notes:*

LOS = Level of Service

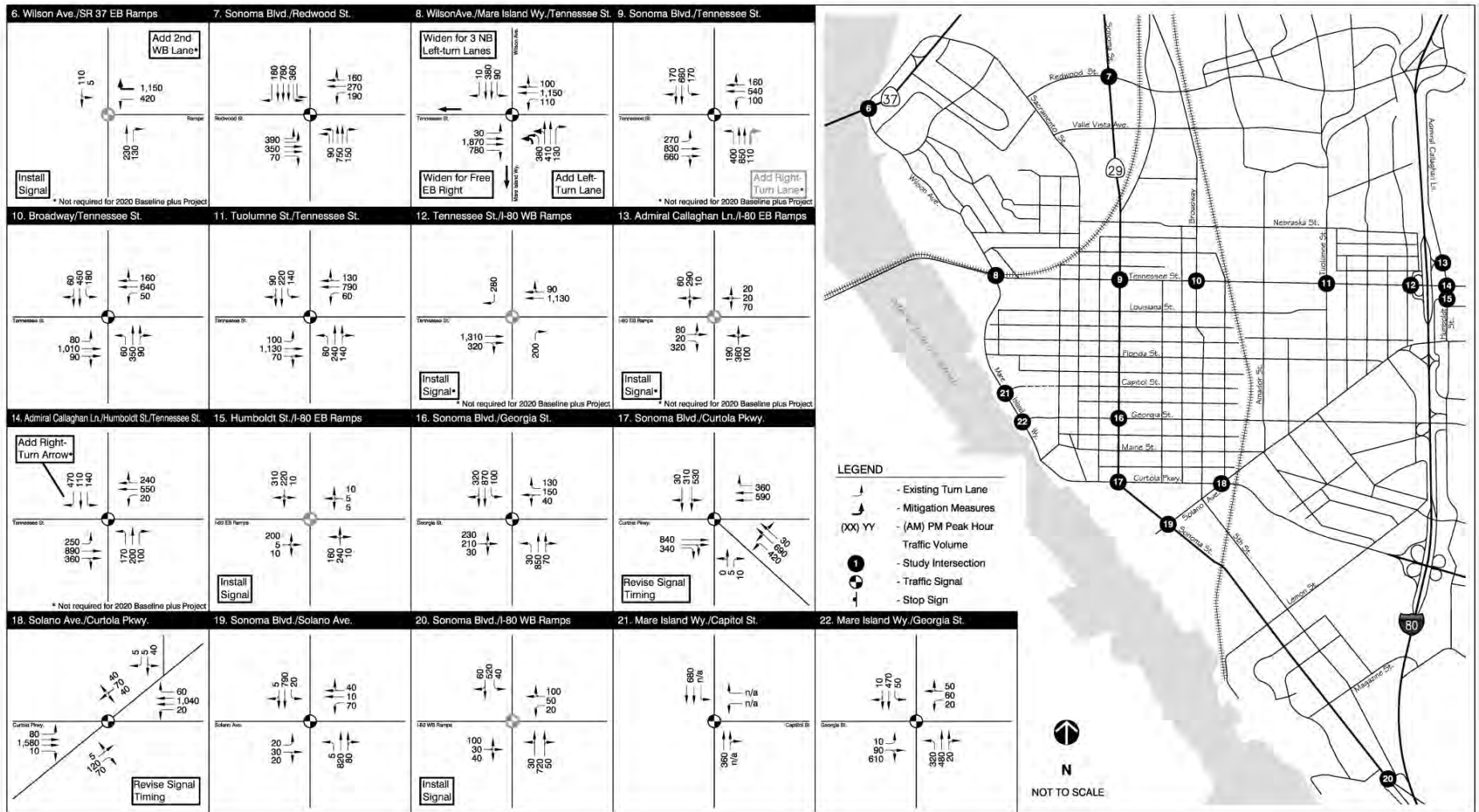
Delay = average stopped delay at signalized intersections, in seconds per vehicle. For unsignalized intersections, the highest delay for an individual movement at the intersection is listed.

n/a = intersection did not exist in 2004 when traffic counts were taken.

Source: Dowling Associates, Inc. 2005.



SOURCE: Fehr & Peers



SOURCE: Fehr & Peers

### **Mitigation Measure B.1**

The following mitigations are necessary to address impacts of the Existing Plus Project scenario. These measures are shown on Figures III.B-4a and III.B-4b. The City of Vallejo or the project sponsor shall construct the intersection improvements listed below as new buildings are constructed and occupied in the Plan Area. The City shall establish a financing mechanism and the project sponsor shall pay a fair share of the costs of the traffic mitigation at off-island locations; the project sponsor shall construct improvements at Mare Island intersections. (In the list below, the name of each intersection is preceded by a number that corresponds to its number in the tables. This convention is used throughout the mitigation measure listings in this section.)

**Mitigation Measure B.1a: Intersection 3 – Walnut Street and G Street.** Widen G Street to provide a third eastbound lane between Walnut Street and Railroad Avenue, to provide a receiving lane for the northbound right turn movement from Walnut Street to eastbound G Street. Prohibit northbound left turn movements from Walnut Street onto westbound G Street.

**Mitigation Measure B.1b: Intersection 4 – Railroad Avenue and G Street.** Widen the northbound approach on Railroad by approximately 24 feet to provide a third through lane and a second right-turn lane. Widen the southbound approach on Railroad Avenue to provide a second left-turn lane. Widen the eastbound approach on G Street to provide three through lanes. (LOS D – p.m.)

Note that this measure would require relocation of a part of Resource 491, the wall that lines this portion of G Street on the north side. Resource 491 is a Notable Resource and as such, is an individually significant Historical Resource under CEQA. Relocation of this wall would result in a significant impact to this historical resource if it would damage the physical integrity of this historical resource and would result in a loss of its integrity of location.

**Mitigation Measure B.1c: Intersection 6 – Wilson Avenue and SR 37 EB Ramps.** Install a traffic signal. Widen the eastbound freeway off-ramp by approximately 12 feet to provide separate left- and right-turn lanes at the Wilson Avenue intersection. (LOS D – p.m.)

**Mitigation Measure B.1d: Intersection 8 – Mare Island Way and Tennessee Street.** The project sponsor shall widen the northbound approach on Mare Island Way by approximately 12 feet and restripe to provide two left-turn lanes, one shared left-through lane, a through lane, and a right-turn lane. The project sponsor shall also configure the

southbound departure lanes on Mare Island Way to allow a free right-turn movement from the eastbound approach from the Causeway.

**Mitigation Measure B.1e: Intersection 9 - Sonoma Boulevard and Tennessee Street.** Add an exclusive right-turn lane on the northbound approach on Sonoma Boulevard.<sup>5</sup>

**Mitigation Measure B.1f: Intersection 12 - Tennessee Street and I-80 WB Ramps.** Signalize intersection. (LOS B – p.m.)<sup>6</sup>

**Mitigation Measure B.1g: Intersection 14 – Humboldt Street and Tennessee Street.** Add an exclusive right-turn signal indication on the southbound approach overlapping with the eastbound left-turn indication.

**Mitigation Measure B.1h: Intersection 17 – Sonoma Boulevard and Curtola Parkway.** Revise signal timings. (LOS D – p.m.)

**Mitigation Measure B.1i: Intersection 18 - Solano Avenue and Curtola Parkway.** Revise signal timings. (LOS C – p.m.)

With implementation of these mitigation measures, the service levels at all intersections would improve to acceptable levels. Mitigation measures implemented at the ramp junctions along I-80 may involve construction within the jurisdiction of the California Department of Transportation. An encroachment permit may be required from Caltrans before these measures can be implemented. The traffic signal installation included in Measure B.1c (not including the street widening) and Measures B.1g, B.1h, and B.1i are included in the Transportation Impact Mitigation Fee Study, to which the project sponsor would contribute. The project sponsor plans to implement Measures B.1a and B.1b.

The widening included in Measure B.1c and Measures B.1e, and B.1f have no established funding mechanism; therefore impacts at these intersections would remain significant and unavoidable if the project sponsor's fair share were not sufficient to accomplish the measure and other funding sources were not established. Other development projects proposed and under consideration in Vallejo would also contribute to cumulative impacts at these intersections, as discussed under Impact B.8. With cumulative growth in the future, three intersections, at Wilson

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<sup>5</sup> As discussed above, while this mitigation measure is identified here as available to reduce project-related impacts, no such measure is identified in the 2020 cumulative scenario because by the time full development occurs on Mare Island under the Mare Island Specific Plan, other development is expected to occur and travel patterns are expected to have changed such that mitigation would not be necessary.

<sup>6</sup> As discussed above, while this mitigation measure is identified here as available to reduce project-related impacts, no such measure is identified in the 2020 cumulative scenario because by the time full development occurs on Mare Island under the Mare Island Specific Plan, other development is expected to occur and travel patterns are expected to have changed such that mitigation would not be necessary.

Avenue / SR 37 EB Ramps (6), at Sonoma Boulevard / Tennessee Street (9) and at Tennessee Street / I-80 westbound ramps (12), are expected to operate at acceptable LOS, as shown in Table III.B-8 on p. III.B.34, as traffic volumes grow and motorists choose different, less congested routes. The City will monitor these intersections and will require the project sponsor to cooperate with the City in the formation of a funding mechanism to fund any of the mitigation measures that are found to be necessary in the future; the project sponsor shall contribute a fair share of the cost of mitigation through this funding mechanism. If required, the project sponsor shall advance additional funds, subject to a reimbursement agreement with the City, to ensure completion of these measures. With implementation of these funding measures, impacts would be reduced to less-than-significant levels.

**Impact B.2 Traffic generated by full buildout of the proposed project would cause average delays to increase by more than five seconds at two intersections that operate at LOS E or F without the project. (Significant)**

As shown in Table III.B-5, three study intersections currently operate at LOS E or F: Intersection 13, Admiral Callaghan Lane at the I-80 eastbound ramps (LOS F); Intersection 15, Humboldt Street at the I-80 eastbound ramps (LOS F); and Intersection 20, Sonoma Boulevard at the I-80 westbound ramps (LOS E). Therefore, the existing conditions at these locations are already significantly degraded. Project traffic would cause delays to increase by substantially more than five seconds, contributing to an existing significant impact. All three of these intersections currently operate with stop signs. Intersection 20 will operate at LOS A once a signal is installed as planned (see p. III.B.15); thus, significant traffic impacts would not occur at this third location.

**Mitigation Measure B.2**

The City of Vallejo shall construct the intersection improvements listed below as new buildings are constructed and occupied in the Plan Area. The City shall establish a financing mechanism and the project sponsor shall pay a fair share of the costs of the traffic mitigation.

**Mitigation Measure B.2a: Intersection 13 - Admiral Callaghan Lane and I-80 EB Ramps.** Signalize intersection. (LOS B – p.m.)

**Mitigation Measure B.2b: Intersection 15 - Humboldt Street and I-80 EB Ramps.** Signalize intersection. (LOS A – p.m.)

Implementation of these mitigation measures would reduce the significant impacts to less-than-significant levels. These measures have no established funding mechanism; therefore impacts at these intersections would remain significant and unavoidable if the project sponsor's fair share is not sufficient to accomplish them and other funding sources are not established. When signal warrants are met at these intersections, the City shall install signals. The project sponsor shall

cooperate with the City in the formation of a funding mechanism to fund installation. If required, the project sponsor shall advance additional funds, subject to a reimbursement agreement with the City, to ensure completion of these measures. With implementation of these funding measures, impacts would be reduced to less-than-significant levels.

### **Road Segment Traffic Impacts**

**Impact B.3 Traffic generated by full buildout of the proposed project would cause levels of service to degrade to unacceptable levels on two freeway segments and three local street segments in the near-term Existing Plus Project scenario. (Significant)**

Road segment levels of service were evaluated with project traffic added to existing traffic volumes (Table III.B-7). Existing (2004) lanes were assumed. The project would cause LOS F operations with the existing one lane in each direction on SR 37 west of SR 29. The project would also cause LOS F operations on northbound Railroad Avenue south of G Street (with existing lanes) and LOS E operations on the westbound Mare Island Causeway and eastbound Curtola Parkway.

**Mitigation Measure B.3a – State Route 37:** The California Department of Transportation will complete the current improvement project on SR 37 that will provide two lanes in each direction west of SR 29. The improvement will provide LOS C operations in the eastbound direction and LOS B in the westbound direction.

**Mitigation Measure B.3b – Mare Island Causeway:** The project sponsor shall construct intersection improvements at the intersection of Railroad Avenue with G Street to ensure that the westbound segment of the Causeway would operate at LOS D (see Mitigation Measure B.1b).

**Mitigation Measure B.3c – Curtola Parkway:** The City of Vallejo shall construct intersection improvements at the intersections of Curtola Parkway with Solano Way and Sonoma Avenue to ensure that the segment will operate at LOS D (see Mitigation Measures B.1h and B.1i). The City shall establish a financing mechanism and the project sponsor shall pay a fair share of the costs of the mitigation.

**Mitigation Measure B.3d – Railroad Avenue:** The project sponsor shall widen Railroad Avenue to provide three northbound lanes approaching G Street. The improvement would provide LOS D operations on the street segment.

**Table III.B-7: Existing Plus Project P.M. Peak Hour Road Segment Levels of Service**

Road Segment	Direction	Lanes <sup>1</sup>	Existing		Existing Plus Project	
			Volume	LOS	Volume	LOS
<b>Freeway Segments:<sup>2</sup></b>						
I-80 N. of Tennessee	EB	3	6,290	E	6,340	E
	WB	3	4,970	D	5,140	D
SR 37 W. of Fairgrounds	EB	2	2,050	C	2,630	C
	WB	3	1,690	A	2,060	B
SR 37 W. of SR 29	EB	1	1,370	B	2,280	F
	WB	1	940	A	1,490	F
SR 37 E. of Mare Island	EB	2	1,440	B	3,350	C
	WB	2	850	A	1,950	B
<b>Local Street Segments:<sup>3</sup></b>						
Mare Island Causeway <sup>4</sup>	EB	2	260	A	2,680	D
	WB	1	60	A	1,530	E
Curtola Pkwy. W. of Lemon	EB	2DL	1,010	C	1,690	E
	WB	2DL	750	C	1,120	C
Wilson Ave. N. of Tennessee	NB	1U	540	C	540	C
	SB	1U	480	C	480	C
Mare Island Way W. of Marin	EB	2DL	580	C	1,180	D
	WB	2DL	730	C	1,040	C
Tennessee St. W. of Tuolumne	EB	2DL	830	C	1,290	D
	WB	2DL	690	C	960	C
Railroad Ave. S. of G St.	NB	1U	70	A	2,450	F
	SB	1U	10	A	1,040	D
Azuar S. of 12th St.	NB	1U	310	A	780	C
	SB	1U	60	A	480	C

*Notes:*

1. Lanes: 2DL = 2 lanes divided with left-turn lanes, 1U = one lane undivided without left-turn lanes.
2. Level of service calculated using HCM 2000 analysis for freeway segments.
3. Level of service for all segments except Mare Island Causeway calculated using HCM 2000 planning analysis as documented by Florida Department of Transportation.
4. Level of service calculated using HCM 2000 analysis for two-lane rural highways (one lane) or multilane rural highways (2 lane).

*Source:* Dowling Associates, Inc. 2005.

Measure B.3a is under construction, the City has included Measure B.3c in its Transportation Impact Mitigation Fee Study, and Measures B.3b and B.3d are included in the Mare Island development program. Therefore impacts to road segments would be reduced to a less-than-significant level.

**Parking Impacts**

**Impact B.4 Full buildout of the proposed project would affect parking demand in the project vicinity. (Significant)**

The Mare Island Specific Plan identifies recommended parking requirements in its Table 5-3 for five land use types including retail, office, warehouse, light industrial, and heavy industrial. The



recommended parking requirements for retail, warehouse, and heavy industrial are equal to or greater than the parking requirements in the City of Vallejo Zoning Ordinance for those uses.

The recommended parking requirements for office uses is 27% lower than the parking requirements in the City of Vallejo Zoning Ordinance and 32% lower than parking requirements based on demand data in the ITE *Parking Generation*<sup>7</sup> handbook and the application of a desired occupancy level of 90%. Use of the recommended parking requirement for office uses may be appropriate for historic buildings that are being reused, as opposed to new office building construction that would have higher employment densities.

The City of Vallejo Zoning Ordinance does not provide a parking requirement for light industrial uses. The recommended parking requirement for light industrial in the Mare Island Specific Plan is approximately 35% lower than rates derived from the ITE *Parking Generation* handbook. Use of the recommended parking requirement for light industrial uses may be appropriate for historic buildings that are being reused, as opposed to new light industrial building construction that would have higher employment densities.

#### **Mitigation Measure B.4**

The Project Applicant shall construct parking facilities based on the requirements described below as existing buildings are renovated or remodeled and as new buildings are constructed and occupied in the Plan Area.

For historic buildings that are being reused, the recommended parking requirements may be applied provided that a justification for a rate reduction of 30-35% is provided for City staff review in each unit plan for buildings that could accommodate office or light industrial uses at any time in the future.

For new construction, the parking requirements in the City of Vallejo Zoning Ordinance shall be applied for office uses. For new construction of light industrial uses, a parking rate of 1.25 stalls per 1,000 square feet shall be applied.

The project applicant shall prepare a parking management plan for the central historic district. The plan shall provide a shared parking analysis.

With implementation of the mitigation measure, the parking provided by the proposed project would be adequate and the impact would be reduced to a less-than-significant level.

#### **Bicycle and Pedestrian Impacts**

**Impact B.5 Full buildout of the proposed project would contribute to the demand for bicycle and pedestrian facilities in the project area. (Less than Significant)**

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<sup>7</sup> Institute of Transportation Engineers, *Parking Generation*, Second Edition.

The Mare Island Specific Plan states “the bicycle and pedestrian network should provide a high degree of convenient connections between the residential, recreational, employment, and education uses on Mare Island and should minimize the number of intra-island automobile trips.”<sup>8</sup>

Class I bikeways/paths are proposed along the east and west edges of the developed portion of Mare Island and along Walnut Avenue. A Class II bikeway is proposed along Flagship Drive from Azuar Drive to approximately Nereus Street, and a Class III bikeway (no separate bicycle lane, signs identify shared bicycle/automobile lane) is planned on Azuar Drive.

**Mitigation:** No mitigation necessary.

### **Transit Impacts**

**Impact B.6 The full buildout of the proposed project would increase demand for public transit service to an area that is not currently served by transit. (Significant)**

The Mare Island Specific Plan anticipates bus transit service on Walnut Avenue, Azuar Drive, and Railroad Avenue within the project area (see Figure II-14: Transit Service, p. II.28), but makes no commitment to the costs associated with extending service.

### **Mitigation Measure B.6**

The project sponsor, the City of Vallejo, and/or other revenue sources shall fund the implementation of transit service as new buildings are constructed and occupied in the Plan Area, as described in the Mare Island Specific Plan, Chapter 5.6, and as shown on Figure II-4 of this Subsequent EIR. The project sponsor shall contribute its fair-share of the costs associated with providing public transit service to the Plan Area.

If all costs to implement this mitigation measure are provided, the transit service provided in the Plan Area would be adequate and the impact would be reduced to a less-than-significant level. As no funding source is assured, this impact could be significant and unavoidable.

### **Rail Impacts**

**Impact B.7 The full buildout of the proposed project would increase demand for rail service and would increase vehicular traffic, resulting in rail/vehicle conflict. (Significant)**

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<sup>8</sup> Mare Island Specific Plan, Section 5.7.

The Mare Island Specific Plan anticipate rail service within the project area, but makes no commitment to the costs associated with providing improvements associated with the rail service. As noted in Transportation Setting, Other Modes of Travel, a 1997 survey identified 85 distinct items of concern at 35 locations that require safety improvements. These locations were mainly along Railroad Avenue and Azuar Drive, both of which are shared by tracks for low speed trains to access customers. Since 1997, improvements have been made at a number of locations, reducing the number of items of concern to 58. These remaining items are listed in Table D-3 in Appendix D.

#### **Mitigation Measure B.7**

The project sponsor, the City of Vallejo, and/or other revenue sources shall fund the implementation of rail improvements as new buildings are constructed and occupied in the Plan Area. The project sponsor shall contribute its fair-share of the costs associated with providing rail improvements in the Plan Area.

If all costs to implement this mitigation measure are provided, the rail service in the Plan Area would be adequate and the impact would be reduced to a less-than-significant level.

#### **Cumulative Traffic Impacts (2020 Future Baseline Plus Project Scenario)**

##### **Impact B.8 Traffic generated by full buildout of the proposed project would affect traffic levels of service at local intersections in the project vicinity in the long-term 2020 Future Baseline Plus Project scenario. (Significant)**

Table III.B-8 shows the Future 2020 Baseline and the Future Baseline Plus Project intersection levels of service for the 22 study intersections. Note that the Future 2020 Baseline includes a southern crossing bridge, as was proposed under the 1999 Specific Plan. As discussed in the Project Description chapter of this SEIR, p. II.18, no southern crossing bridge is proposed under the proposed Mare Island Specific Plan and therefore no southern crossing bridge is included in the Future Baseline Plus Project scenario. Based on the future intersection and roadway geometrics, four of the 22 study intersections would deteriorate to worse than LOS D conditions during the a.m. and/or p.m. peak hours with project traffic. Projected volumes for the 2020 Future Baseline Plus Project are shown on Figures III.B-5a and III.B-5b.

An additional three intersections would operate at LOS E or F with 2020 Baseline traffic without the project. Traffic generated by the project would increase delays at two of these intersections. The cumulative impacts related to these delay increases are discussed below in Impact B.9.

**Table III.B-8: 2020 Future Baseline Plus Project Intersection Levels of Service**

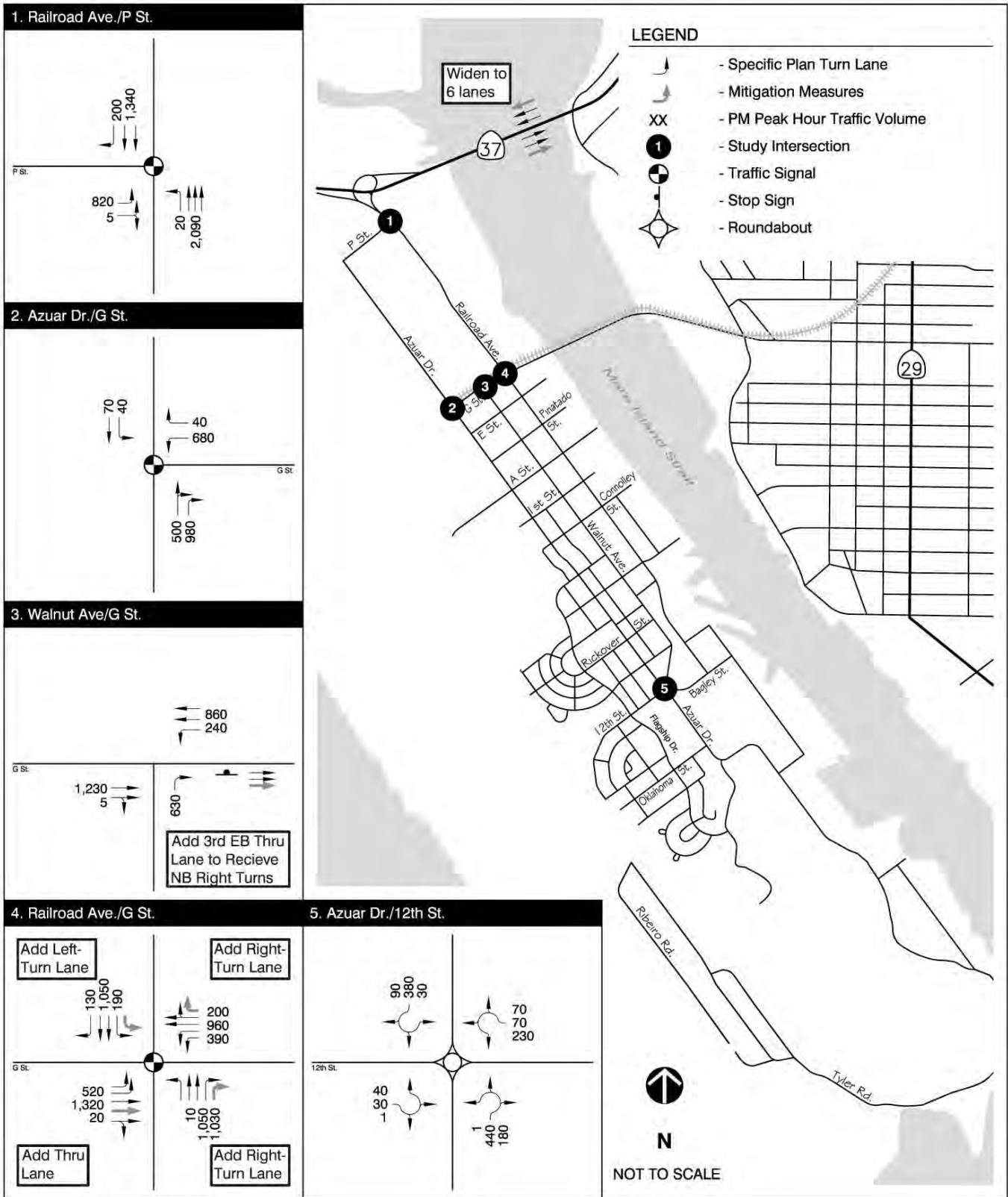
Intersection	Traffic Control	Peak Hour	2020 Baseline		2020 Baseline With Project	
			Delay	LOS	Delay	LOS
<b>On-Island:</b>						
1. Railroad Ave. & P St.	Signal	P.M.	16	B	22	C
2. Azuar & G St.	Signal	P.M.	17	B	24	C
3. Walnut & G St.	2-way Stop	P.M.	10	B	355	F
4. Railroad Ave. & G St.	Signal	P.M.	34	C	174	F
5. Azuar & 12th St.	Roundabout	P.M.	5	A	7	A
<b>Off-Island:</b>						
6. Wilson St. & SR 37 EB Ramps	Signal	P.M.	12	B	42	D
7. Sonoma Blvd. & Redwood St.	Signal	A.M.	20	B	20	B
		P.M.	33	C	34	C
8. Mare Island Way & Tennessee St.	Signal	A.M.	45	D	302	F
		P.M.	34	C	276	F
9. Sonoma Blvd. & Tennessee St.	Signal	P.M.	34	C	51	D
10. Broadway & Tennessee St.	Signal	P.M.	15	B	19	B
11. Tuolumne St. & Tennessee St.	Signal	P.M.	16	B	15	B
12. Tennessee St. & I-80 WB Ramps	2-way Stop	P.M.	23	C	22	C
13. Adm. Calln. Ln. & I-80 EB Ramps	2-way Stop	P.M.	423	F	383	F
14. Humboldt St. & Tennessee St.	Signal	P.M.	41	D	40	D
15. Humboldt St. & I-80 EB Ramps	2-way Stop	P.M.	221	F	232	F
16. Sonoma Blvd. & Georgia St.	Signal	P.M.	21	C	22	C
17. Sonoma Blvd. & Curtola Parkway	Signal	A.M.	22	C	62	E
		P.M.	28	C	77	E
18. Solano Ave. & Curtola Parkway	Signal	P.M.	55	E	108	F
19. Sonoma Blvd. & Solano Ave.	Signal	P.M.	18	B	22	C
20. Sonoma Blvd. & I-80 WB Ramps	Signal	P.M.	9	A	10	A
21. Mare Island Way & Capitol St.	Signal	P.M.	5	A	6	A
22. Mare Island Way & Georgia St.	Signal	P.M.	14	B	15	B

*Notes:*

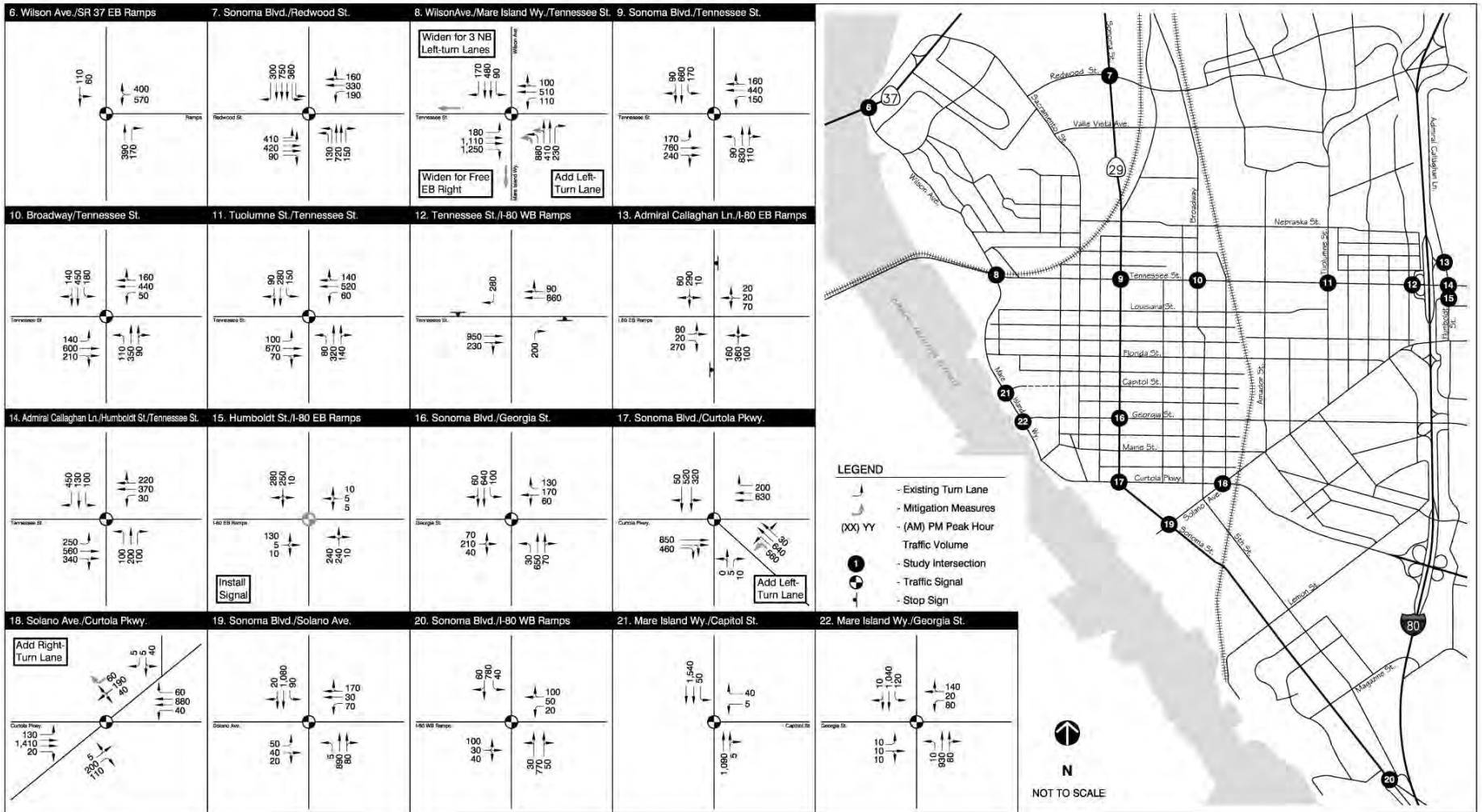
LOS = Level of Service

Delay = average stopped delay at signalized intersections, in seconds per vehicle. For unsignalized intersections, the average delay for all movements is listed first and the highest delay for an individual movement at the intersection is listed in parentheses.

*Source:* Dowling Associates, Inc. 2005.



SOURCE: Fehr & Peers



SOURCE: Fehr & Peers

Mitigation measures, as shown on Figures III.B-5a and III.B-5b, would be necessary at the four intersections that would deteriorate below LOS D in the future with the project for them to operate at acceptable service levels.

#### **Mitigation Measure B.8**

The project sponsor shall construct the intersection improvements listed below as new buildings are constructed and occupied in the Plan Area. The City shall establish a financing mechanism and the project sponsor shall pay a fair share of the costs of the traffic mitigation. The service level that would result from implementation of the mitigation measure is shown in parentheses, after the described mitigation.

**Mitigation Measure B.8a: Intersection 3 - Walnut Street and G Street.** Widen G Street to provide a third eastbound lane between Walnut Street and Railroad Avenue, to provide a receiving lane for the northbound right turn movement from Walnut Street to eastbound G Street. Prohibit northbound left turn movements from Walnut Street onto westbound G Street.

**Mitigation Measure B.8b: Intersection 4 - Railroad Avenue and G Street.** Construct all improvements currently planned by the project sponsor and the City of Vallejo. In addition, the project sponsor shall: widen the northbound approach on Railroad Avenue by 12 feet to provide a second right-turn lane; widen the southbound approach on Railroad Avenue by 12 feet to provide a second left-turn lane; widen eastbound G Street to provide a third through lane, merging to two lanes east of Railroad Avenue; widen the westbound approach on G Street to provide a right-turn lane; and, to accommodate widening the eastbound merge area on G Street, prohibit future street or driveway access to G Street east of Railroad Avenue. This would require motorists destined for the parking lot adjacent to the Welcome Center (Building 485) to travel south on Railroad Avenue, turn east on E Street and then north along the existing Nimitz Avenue right-of-way. While inconvenient, the impact of this mitigation measure would not be a significant environmental effect. (LOS D – p.m.)

Note that this measure would require relocation of a part of Resource 491, the wall that lines this portion of G Street on the north side. Resource 491 is a Notable Resource and as such, is an individually significant Historical Resource under CEQA. Relocation of this wall would result in a significant impact to this historical resource if it would damage the physical integrity of this historical resource and would result in a loss of its integrity of location.

**Mitigation Measure B.8c: Intersection 8 - Mare Island Way/Wilson Street and Mare Island Causeway/Tennessee Street.** The project sponsor shall widen the northbound approach on Mare Island Way by approximately 12 feet and restripe to provide two left-turn lanes, one shared left-through lane, a through lane and a right-turn lane. The project sponsor shall also reconfigure the southbound departure lanes on Mare Island Way to allow a free right-turn movement from the eastbound approach from the Causeway. (LOS D – p.m., LOS D – a.m.)

**Mitigation Measure B.8d: Intersection 17 - Sonoma Boulevard and Curtola Parkway.** Widen the northbound approach on Sonoma Boulevard to accommodate two left-turn lanes, one through lane and one shared through-right lane. (LOS D – p.m., LOS D – a.m.)

With implementation of these mitigation measures, the service levels at all intersections would improve to LOS D or better. Measures B.8a, B.8b, and B.8c would be implemented by the project sponsor as part of the Mare Island development program and these impacts would be reduced to less-than-significant levels. To the extent that funding is not assured for Measure B.8d, these impacts would remain significant and unavoidable. Other development projects proposed and under consideration in Vallejo would contribute to cumulative impacts at these two intersections. The City will monitor these intersections and will require the project sponsor to cooperate in the formation of a funding mechanism to fund mitigation measures at these two intersections. The project sponsor shall contribute a fair share of the cost of mitigation. If required, the project sponsor shall advance additional funds, subject to a reimbursement agreement with the City, to ensure completion of these measures. With implementation of these funding measures, impacts would be reduced to less-than-significant levels.

**Impact B.9 Traffic generated by full buildout of the proposed project with the 2020 Baseline would cause average delays to increase by more than five seconds at two intersections that would operate at LOS E or F without the project. (Significant)**

Three intersections are projected to operate at LOS E or F with the 2020 Baseline without the project. Traffic generated by the project added to the 2020 Baseline would cause average p.m. peak hour delays to increase by more than five seconds at the intersections of Humboldt Street and the I-80 eastbound ramps (south of Tennessee Street) and Solano Avenue and Curtola Parkway. Traffic generated by the project would not increase delays at the intersections of Admiral Callaghan Lane with the I-80 eastbound ramps. Although traffic to and from the project would pass through this intersection, the project would also divert substantial traffic away from this location so that the net effect compared to the 2020 Baseline would be a decrease in traffic volumes and delay.



**Mitigation Measure B.9a: Intersection 15 – Humboldt Street and I-80 Eastbound Ramps.** Signalize the intersection. (LOS A – p.m.)

**Mitigation Measure B.9b: Intersection 18 - Solano Avenue and Curtola Parkway.** Add an exclusive right-turn lane on the southbound approach. (LOS D – p.m.)

When a signal warrant is met at the intersection of Humboldt Street and the I-80 eastbound ramps, the City shall install a signal. The project sponsor shall cooperate with the City in the formation of a funding mechanism to fund installation and shall contribute a fair share to the cost of installation. The intersection of Solano Avenue and Curtola Parkway is included in the Transportation Impact Mitigation Fee Study; the project sponsor will be required to contribute a fair share to improvements at this location. If required, the project sponsor shall advance additional funds, subject to a reimbursement agreement with the City, to ensure completion of these measures. With implementation of these funding measures, impacts would be reduced to less-than-significant levels.

**Impact B.10 Traffic generated by full buildout of the proposed project would cause levels of service to degrade to unacceptable levels on one roadway segment in the long-term 2020 Future Baseline Plus Project scenario. (Significant)**

Table III.B-9 shows the 2020 Baseline with Project roadway levels of service for the 10 segments analyzed. Based on the committed future roadway geometrics, two of the 10 study roadways would operate at LOS E or F during the p.m. peak hour without the project. Traffic generated by the project would cause the level of service on one additional segment to degrade to worse than LOS D conditions during the p.m. peak hour: the eastbound direction of SR 37 east of Mare Island.

**Mitigation Measure B.10: SR 37 east of Mare Island.** The California Department of Transportation shall widen the Napa River Bridge on SR 37 from four lanes to six lanes.

With implementation of this mitigation measure, the service levels at all roadway segments would improve to acceptable levels. Mitigation Measure B.10, along SR 37, would involve widening the Napa River Bridge, a facility that is within the jurisdiction of the California Department of Transportation. The City of Vallejo would have no jurisdiction to implement this measure, and the cost of implementing this measure on a regional-serving facility would not be reasonable for any individual developer or group of local developers. As funding is not assured for this measure, the impact is significant and unavoidable.

**Table III.B.9: 2020 Future Baseline Plus Project P.M. Peak Hour Road Segment Levels of Service**

Road Segment	Direction	Lanes	2020 Baseline		2020 Baseline With Project	
			Volume	LOS	Volume	LOS
<b>Freeway Segments:</b>						
I-80 N. of Tennessee	EB	3	5,740	D	5,590	D
	WB	3	6,000	E	5,940	E
SR 37 W. of Fairgrounds	EB	2	4,000	F	4,340	F
	WB	3	3,250	C	3,470	C
SR 37 W. of SR 29	EB	2	2,790	C	3,530	D
	WB	2	1,770	B	2,170	C
SR 37 E. of Mare Island	EB	2	3,260	D	4,560	F
	WB	2	2,020	C	2,830	D
<b>Local Street Segments:</b>						
Curtola Pkwy. W. of Lemon	EB	2	1,060	C	1,600	D
	WB	2	1,030	C	1,030	C
Wilson Ave. N. of Tennessee	NB	2	750	C	720	C
	SB	2	730	C	680	C
Mare Island Way W. of Marin	EB	2	1,280	D	1,350	D
	WB	2	1,020	C	1,300	D
Tennessee St. W. of Tuolumne	EB	2	830	C	830	C
	WB	2	690	C	690	C
Railroad Ave. S. of G St.	NB	3	1,110	C	2,110	D
	SB	2	660	C	1,470	D
Azuar S. of 12th St.	NB	2	290	C	1,480	D
	SB	2	170	C	760	C

Source: Dowling Associates, Inc. 2004.

**Impact B.11 Traffic generated by full buildout of the proposed project with the 2020 Baseline would cause several impacts to study intersections and roadway segments that are significant and unavoidable. (Significant)**

The intersection of Railroad Avenue and G Street will have significant and unavoidable impacts should mitigation measures prove to be infeasible given the presence of historic resources. The segment of State Route 37, over the Napa River Bridge, will have significant and unavoidable impacts if the bridge can not be widened from four to six lanes.

**Mitigation Measure B.11: Implement Transportation Demand Management (TDM) Plan.** The project sponsor shall develop and implement a TDM Plan that will reduce the ultimate number of trips generated by the project by 15 percent. The project sponsor shall fund the ongoing annual TDM Plan costs. The TDM Plan could include a number of the following suggested measures, as needed to meet the overall reduction goal.

- Mare Island TDM Coordinator & Information Kiosks
- Coordination of a Rideshare Matching System
- Central Historic District Transit Center

### III. Environmental Setting, Impacts and Mitigation

#### B. Transportation

- Operation of Mare Island Shuttle linking to Vallejo Destinations
- Operation of Mare Island Express Buses linking to Regional Destinations
- Development of Pedestrian Corridors to Transit Center/Stops
- Transit Amenities (bus stops, shelters, etc.)
- Transit Pass Sale and/or Subsidy
- Preferential Carpool and/or Vanpool Parking
- Development of Additional On-Island Housing
- On-site Bike Lockers

With implementation of this mitigation measure, the number of vehicular trips would be reduced, thereby reducing traffic impacts and parking needs. The implementation of the TDM Plan would not eliminate the significant and unavoidable impacts described above, but would reduce the level of impact.



## **C. AIR QUALITY**

### **INTRODUCTION**

This section addresses the environmental setting, impacts, and mitigation measures related to air quality. Air pollution is a local and regional concern because it can be a health hazard and may adversely affect the productivity of agricultural lands. The San Francisco Bay Area is a shared air basin where concentrations of ozone and particulate matter violate standards for protecting public health. Because additional emissions of pollutants could cause or contribute to additional violations, the emissions associated with the Mare Island Specific Plan are discussed here.

The Initial Study concludes that an updated assessment of air quality impacts is necessary. This is due to changes in the regulatory setting since the 1999 CEQA Documents, an expanded development program, the availability of more detailed project information, and an updated traffic analysis.

### **SETTING**

#### **CLIMATE AND METEOROLOGY**

The climate of Mare Island is characterized by cool rainy winters and warm dry summers. Like the rest of the Bay Area, Vallejo possesses a Marine West Coast Climate with Mediterranean characteristics. Prevailing winds are from the west. Precipitation is less than about 20 inches per year, occurring almost exclusively between October and April. Temperatures are partly moderated by the marine air traveling across San Pablo Bay. Average summertime high temperatures are typically in the low-to-mid-80's (degrees Fahrenheit), and in the winter, low temperatures in the high-30's are common.

#### **AMBIENT AIR QUALITY STANDARDS**

National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) are planning standards that define the upper limits for ambient airborne concentrations of pollutants. The standards are designed to protect all aspects of the public health and welfare, with a reasonable margin of safety. At the national level, the federal Clean Air Act requires the U.S. Environmental Protection Agency (U.S. EPA) to establish NAAQS and designate areas that are either attaining or violating the standards. In California, the task of air quality management and regulation has been legislatively granted to the California Air Resources Board (CARB) and to local air districts. The CARB establishes CAAQS and designates the attainment status of each area in the state with the standards. The Bay Area Air Quality

Management District (BAAQMD) is the local air district that coordinates the efforts to comply with these standards.

The NAAQS and CAAQS are established for “criteria pollutants.” These are ozone, respirable particulate matter (PM<sub>10</sub>), fine particulate matter (PM<sub>2.5</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), and lead. Ozone is an example of a secondary pollutant that is not emitted directly from a source (e.g., an automobile tailpipe). It is formed in the atmosphere by chemical and photochemical reactions. Nitrogen oxides (NO<sub>x</sub>) and reactive organic gases (ROG), including volatile organic compounds (VOC), are regulated as precursors to ozone formation.

Compared to the standards in the 1999 CEQA Documents, the state-level standards for annual average particulate matter have been made more stringent. Table III.C-1 identifies the current ambient air quality standards.

**Table III.C-1: State and Federal Ambient Air Quality Standards**

Pollutant	Averaging Time	California Standard	National Standard
Ozone	1-hour	0.09 ppm	0.12 ppm
	8-hour	—	0.08 ppm
Inhalable particulate matter (PM <sub>10</sub> )	24-hour	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>
	Annual mean	20 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>
Fine particulate matter (PM <sub>2.5</sub> )	24-hour	—	65 µg/m <sup>3</sup>
	Annual mean	12 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>
Carbon monoxide (CO)	1-hour	20 ppm	35 ppm
	8-hour	9.0 ppm	9.0 ppm
Nitrogen dioxide (NO <sub>2</sub> )	1-hour	0.25 ppm	—
	Annual mean	—	0.053 ppm
Sulfur dioxide (SO <sub>2</sub> )	1-hour	0.25 ppm	—
	24-hour	0.04 ppm	0.14 ppm
	Annual mean	—	0.03 ppm

*Notes:* ppm = parts per million; µg/m<sup>3</sup> = micrograms per cubic meter; “—” = no standard

*Source:* CARB Ambient Air Quality Standards Table, 2003.

Toxic air contaminants (TACs) are a category of air pollutants separate from criteria pollutants that pose a present or potential hazard to human health, but which tend to be emitted on a localized and source-specific basis and cause impacts that are typically more localized than those created by criteria air pollutants. There are more than 900 toxic air contaminants recognized by different regulatory agencies. One of the most prevalent is particulate matter from diesel combustion, which was identified as a TAC in 1998. Although ambient air quality standards do not exist for these pollutants, sources of TACs are regulated with source-specific emission standards and risk-based limitations at the federal, state, and local levels.

### **AMBIENT AIR QUALITY CONDITIONS**

The BAAQMD operates a regional monitoring network which measures the ambient concentrations of criteria pollutants including ozone, carbon monoxide, particulate matter, and sulfur dioxide. In Vallejo, a monitoring station at 304 Tuolumne Street reports the local ambient air quality.

Data gathered from the Vallejo station indicate that ozone concentrations have exceeded the state 1-hour ozone standard about once or twice per year in recent years. The federal ozone standards are not normally exceeded in Vallejo. Because state and federal ozone standards are occasionally exceeded in the eastern counties of the Bay Area and in the southern Santa Clara Valley, the region is designated as a nonattainment area for ozone.

Concentrations of PM<sub>10</sub> have exceeded the state 24-hour standard in previous years. These standards are exceeded at most locations throughout the state. Concentrations of PM<sub>10</sub> have not exceeded the federal standards in Vallejo or the remainder of the Bay Area in recent years. Concentrations of PM<sub>2.5</sub> in Vallejo have exceeded the federal standards in the past (in 1999, 2001, and 2002). Carbon monoxide (CO) standards have not been exceeded anywhere in the Bay Area since 1991. Table III.C-2 shows the trends in air monitoring data for Vallejo.

### **EMISSION SOURCES AT MARE ISLAND**

The 1998 EIS/EIR illustrated the relatively intense levels of emissions sources operating at the Mare Island Naval Shipyard before closure. Stationary sources included boilers and power plants fueled by natural gas or fuel oil, fuel oil storage tanks, gasoline dispensing, abrasive blasting, degreasing operations, painting operations, and a plating shop. Active mobile sources included gasoline and diesel-fueled vehicles, locomotives, and marine vessels.

Most of the sources attributable to the Mare Island Naval Shipyard before closure have not operated for many years. Many sources and permits were cancelled or transferred to the City of Vallejo. The emission reductions caused by shutdowns of larger sources have likely been transferred to active Department of Defense facilities. Currently, few stationary sources are in use within the plan area, and no facilities in the area are regulated as active sources under the state Air Toxics Hot Spots Program. A recent search of the stationary source facility database maintained by CARB indicates that only temporary, portable, or exempt sources are currently operating on Mare Island.<sup>1</sup>

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<sup>1</sup> California Air Resources Board, Facility Search Engine, search for facilities within Zip Code 94589, conducted November 2004. Available at: <http://www.arb.ca.gov/app/emsinv/facinfo/facinfo.php>.

III. Environmental Setting, Impacts and Mitigation  
C. Air Quality

**Table III.C-2: Summary of Air Monitoring Data in Vallejo**

Pollutant	Value	Standard*	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Ozone (ppm)	1-hr	0.09	0.133	0.112	0.103	0.119	0.113	0.079	0.091	0.109	0.101	0.104
	8-hr	0.08	0.079	0.084	0.083	0.083	0.085	0.056	0.069	0.071	0.073	0.069
(# days)	Over											
	State Standard		6	5	1	3	4	0	0	1	2	1
	Over											
(# days)	Federal Standard		1	0	0	0	1	0	0	0	0	0
PM <sub>10</sub> (µg/m <sup>3</sup> )	24-hr	50	58.7	49.3	85.0	71.3	83.7	53.0	86.1	79.8	38.2	40.4
	Annual	20	18.7	17.2	18.3	17.2	19.3	15.0	19.5	21.4	16.8	
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	24-hr	65	—	—	—	—	90.5	60.1	90.1	72.3	30.8	36.9
	Annual	12	—	—	—	—	—	11.6	12.5	13.6	9.4	—
CO (ppm)	1-hr	20	7.0	6.0	—	—	—	—	—	—	—	—
	8-hr	9	5.26	4.89	4.89	5.30	5.49	5.11	4.09	3.85	2.89	3.39

Notes: ppm = parts per million

µg/m<sup>3</sup> = micrograms per cubic meter

“—” = data not available

\* The stricter of state or federal standards is presented.

Source: 304 Tuolumne Street monitoring station data; CARB Air Quality Data Statistics Site, 2005.



Southwest of the Specific Plan area, the Mare Island Dredged Material Disposal Ponds project is under review. A Draft EIR for that project was published on July 22, 2005. Emissions from this project would occur during levee-raising activities and during the placement of dredged material. According to the January 2004 Draft EIS/Draft EIR for the project, emissions from those activities would not be significant because they would likely be less than 100 tons per year of any pollutant. During the years of material placement, emissions would similarly not be significant according to BAAQMD criteria.<sup>2</sup>

## **REGULATORY SETTING**

### **Air Quality Planning and Attainment Status**

The California Air Resources Board is responsible for oversight of air quality management in the state. CARB's responsibilities include establishing emissions standards and regulations for certain mobile sources in the state (e.g., autos, light-duty trucks, etc.) and overseeing the efforts of local air pollution control districts. The BAAQMD is responsible for demonstrating that attainment of the ambient air quality standards is achieved or that it will be achieved expeditiously through proper regional planning.

The BAAQMD directly regulates stationary emission sources through its permitting authority in its New Source Review and Operating Permit regulations. The BAAQMD only indirectly manages emissions from mobile sources through coordination with regional municipalities and transportation planning agencies.

For state-level air quality planning purposes, the Bay Area is classified by the CARB as a serious nonattainment area for ozone, and it is a marginal nonattainment area for the newer federal 8-hour ozone standard. The nonattainment classification triggers various planning requirements and forces implementation of transportation performance standards. To improve ozone conditions, the BAAQMD continually adjusts the air quality management plans, which outline the necessary control measures for stationary and mobile sources and transportation control. The 2004 Ozone Strategy is the most recent air quality management plan, and it is discussed below.

The region is also a state-level nonattainment area for PM<sub>10</sub> and PM<sub>2.5</sub>, but there are no state planning requirements to meet these standards. The region currently attains all other federal and state standards.

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<sup>2</sup> City of Vallejo and U.S. Army Corps of Engineers, *Draft EIS/Draft EIR for Mare Island Dredged Material Disposal Ponds*, January 2004.

### **Management of Air Toxics**

Management of toxic air contaminants is accomplished through a combination of source identification, risk characterization, control requirements, and avoidance of land use conflicts. Mobile sources of TACs (such as particulate matter from diesel exhaust) are managed through vehicle emission control programs implemented on a state and federal level with the cooperation of fuel suppliers and vehicle and engine manufacturers. Stationary sources of TACs are subject to BAAQMD permitting requirements, which include an evaluation of potential TAC emissions and risks to nearby receptors. For new sensitive land uses resulting from local planning actions (including new residential areas and schools), it is the responsibility of the local land use jurisdiction to identify whether the new land uses would be located near existing sources of TACs. Avoiding land use conflicts can also accomplish management of the public's exposure to odors.

The Diesel Risk Reduction Program managed by CARB implements a state-wide effort to reduce toxic particulate matter emissions from diesel-fueled engines and vehicles by 85 percent by 2020, from a 2000 baseline.<sup>3</sup> Cleaner diesel fuel provides substantial reductions in these emissions from all on-road, off-road, and stationary engines in California. Regulations and programs have also been established for requiring all new on-road and off-road engines to be cleaner and for replacing and retrofitting engines.

### **Regional Clean Air Plan**

Recent and historical violations of the ozone standards described above in the Bay Area force ongoing revisions to the region's air quality management plans. The BAAQMD is currently preparing the Bay Area 2004 Ozone Strategy, which should be released in early 2005. The 2004 Ozone Strategy includes a request for the U.S. EPA to redesignate the area as an attainment area for the national 1-hour ozone standard, and it includes a maintenance plan for that standard. It will also address state-level requirements by including a triennial revision to the Bay Area strategy to attain the California State 1-hour ozone standard.

Many measures to improve air quality through land use and transportation planning are included in the 2004 Ozone Strategy. These Transportation Control Measures (TCMs) can be supported or implemented by local jurisdictions. Some of the TCMs that are relevant to the City of Vallejo and the Mare Island Specific Plan include:

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<sup>3</sup> California Air Resources Board, *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, October 2000, and Fact Sheet: California's Accomplishments in Reducing Diesel Particulate Matter Emissions, April 2004. Available at: <http://www.arb.ca.gov/diesel/dieselrrp.htm>.

- TCM 5: Improve Access to Rail And Ferries
- TCM 9: Improve Bicycle Access and Facilities
- TCM 14: Carpool and Vanpool Services and Incentives
- TCM 15: Local Land Use Planning and Development Strategies
- TCM 19: Improve Pedestrian Access and Facilities
- TCM 20: Promote Traffic Calming Measures

### **City of Vallejo General Plan**

City of Vallejo environmental plans and policies also recognize community goals for air quality. The Vallejo General Plan includes Chapter X, the Air Quality Element. The goals specified by the Air Quality Element include improving the air quality within the City, reducing the air quality impact associated with future development, and contributing towards improving regional air quality. Most of these policies focus on land use patterns and transportation systems. Policies regarding odors are implemented in the Vallejo Municipal Code as performance standards for commercial or industrial uses (see Section 16.72.090 of the Municipal Code).

## **IMPACTS AND MITIGATION**

### **APPROACH**

#### **Significance Thresholds/Significance Criteria**

The 1998 EIS/EIR established significance thresholds based on physical impacts, regulatory standards, or consistency with plans for meeting air quality standards. These criteria remain applicable. Air quality impacts are significant if the proposed project would directly or indirectly:

- Cause or contribute to a violation of state or federal ambient air quality standards;
- Cause a net increase in pollutant or pollutant precursor emissions that exceed the BAAQMD emission significance thresholds (80 pounds per day or 15 tons per year of ozone precursors, NO<sub>x</sub> or ROC, or PM<sub>10</sub>);
- Conflict with specific air quality management plan policies or programs; or
- Foster or accommodate development in excess of levels assumed by the applicable air quality management plan.

## PROJECT IMPACTS AND MITIGATION

### Demolition and Construction

#### **Impact C.1 Building demolition, renovation, and construction activities would cause temporary emissions of dust. (Significant and Mitigable)**

The 1998 EIS/EIR identified a temporary significant and mitigable air quality impact during demolition, renovation, and construction activities. The BAAQMD CEQA Guidelines for assessing the air quality impacts of projects and plans<sup>4</sup> recognize that fugitive dust from construction activities would cause a significant impact unless adequate dust control programs are implemented. The Mare Island Specific Plan would not substantially alter this previously identified impact.

Demolition, renovation, and construction activities would involve use of heavy-duty diesel-powered equipment that would emit ozone precursors and diesel particulate matter, a pollutant established as a TAC in 1998. The BAAQMD, in its CEQA Guidelines, has developed an analytical approach that obviates the need to quantitatively estimate these emissions. Tailpipe emissions of diesel equipment are included in the emission inventory as the basis for regional air quality plans, and therefore they are not expected to impede attainment or maintenance of standards in the region. Emissions of toxic diesel particulate matter during construction are addressed in the state-wide plan for diesel risk reduction adopted by CARB in 2000. This program involves state-wide distribution of cleaner diesel fuel, regulations forcing diesel engines to reduce particulate emissions, and incentive programs for replacing and retrofitting engines.

The 1998 EIS/EIR also identified the potential impact of demolition and renovation activities releasing asbestos-containing materials to the air. Buildings constructed prior to 1980 often include building materials containing asbestos. BAAQMD CEQA Guidelines recognize that airborne asbestos fibers pose a serious health threat and prescribe compliance with applicable regulations as a means for avoiding significant impacts. The demolition, renovation, or removal of asbestos-containing building materials is subject to the limitations of BAAQMD Regulation 11, Rule 2: Hazardous Materials; Asbestos Demolition, Renovation and Manufacturing. Adhering to BAAQMD asbestos removal regulations would minimize the potential risks associated with asbestos from demolition and renovation activities to a less-than-significant level.

Mitigation for construction site dust control was identified in the 1998 EIS/EIR, and in this Subsequent EIR, the mitigation is revised to be consistent with the current BAAQMD recommendations. Implementing Mitigation Measure C.1 would reduce the impact of dust

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<sup>4</sup> Bay Area Air Quality Management District, *BAAQMD CEQA Guidelines, Assessing the Air Quality Impacts of Projects and Plans*, December 1999.

emissions from project demolition, renovation, and construction activities to a less-than-significant level.

#### **Mitigation Measure C.1**

The following dust control practices would mitigate fugitive dust impacts during demolition, renovation, and construction activities:

Basic control measures to be implemented at all construction sites:

- Water all active construction areas at least twice daily.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.
- Pave, apply water three times daily, or apply (nontoxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.
- Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at construction sites.
- Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.

Enhanced control measures to be implemented at construction sites larger than four acres in area in conjunction with basic measures above:

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

Following are optional control measures that are strongly encouraged for large construction sites located near sensitive receptors, or that for any other reason may warrant additional emissions reductions. To the extent that these measures are feasible, implementation would further reduce dispersion of fine particulates.

- Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site.
- Install wind breaks, or plant trees/vegetative wind breaks at windward side(s) of construction areas.

- Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph.
- Limit the area subject to excavation, grading, and other construction activity at any one time.

To reduce emissions from construction equipment exhaust:

- Use alternative fueled construction equipment, when feasible.
- Minimize idling time (e.g., 5-minute maximum).
- Maintain properly tuned equipment.
- Limit the hours of operation of heavy-duty equipment and/or the amount of equipment in use.

### **Operation of Development within the Plan Area**

#### **Impact C.2 Operation including occupation and use of the development would cause long-term traffic-related emissions of ozone precursors and particulate matter. (Significant and Unavoidable)**

Motor vehicle exhaust from the traffic generated by the development would contain ozone precursors and particulate matter that could cause or contribute to existing violations of ambient air quality standards. Any project that would cause a net increase of more than 80 lb/day of these pollutants would be considered to have a significant impact.

The 1998 EIS/EIR identified a less-than-significant air quality impact caused by the traffic-related emissions during long-term operation. This finding was based on a comparison of the forecast traffic activity with preclosure traffic. The Mare Island Specific Plan would cause more vehicle trips and more daily vehicle miles traveled than that which occurred preclosure or was anticipated for the Reuse Plan Alternative in the 1998 EIS/EIR. Because emissions that occurred during operation of the Mare Island Naval Shipyard involved a much older motor vehicle fleet, the preclosure emissions were substantially higher than the emissions that would occur with the same level of activity today. The 1998 EIS/EIR did not quantify emissions from preclosure “area sources,” small stationary sources used for space heating, landscaping, woodstoves, or exempt consumer products.

Quantification of traffic-related emissions is not normally necessary for evaluating plan-level proposals according to the procedures outlined in the BAAQMD CEQA Guidelines. In lieu of emission quantification, the guidelines recommend that an analysis of the plan’s consistency with adopted regional air quality management plans be conducted. Because the 1998 EIS/EIR and this Subsequent EIR would together function as a “Program EIR” for the Mare Island Specific Plan, consistency with air quality plans is discussed below (under Impact C.5).

This Subsequent EIR would also function as a “Project EIR” because it would lead to development of 650 acres of eastern Mare Island through the Preliminary Master Development Plan. The Mare Island Specific Plan would provide a network of bicycle and pedestrian paths and access to transit services that would encourage non-motorized movement and minimize automobile traffic. These features are included in the definition of the project and its impacts. In this context, the emissions from the new daily vehicle trips are quantified and compared to the emissions that would occur under the 1999 Specific Plan. Although emissions of most pollutants would be lower than those occurring under preclosure conditions, the Mare Island Specific Plan would cause a substantial increase in emissions when compared to the 1999 Specific Plan. This would be a significant impact.

Table III.C-3 shows the emissions from preclosure conditions, for informational purposes, and provides a comparison of emissions from the 1999 Specific Plan and proposed Mare Island Specific Plan.

**Table III.C-3: Regional Emissions Caused by Development (tons per year)**

	NO <sub>x</sub>	PM <sub>10</sub>	CO	VOC	SO <sub>2</sub>
<b>Preclosure Shipyard</b>					
Traffic (76,350 daily trips)	305.3	59.4	1,541.2	153.5	---
<b>1999 Specific Plan</b>					
Area Sources	8.0	28.4	188.1	89.4	0.5
Traffic (69,719 daily trips)	42.4	103.5	422.0	45.8	0.7
<b>1999 Specific Plan Total</b>	<b>50.4</b>	<b>132.0</b>	<b>610.1</b>	<b>135.2</b>	<b>1.1</b>
<b>2005 Specific Plan</b>					
Area Sources	10.5	29.4	196.0	92.6	0.5
Traffic (96,513 daily trips)	58.0	141.3	577.5	61.8	0.9
<b>2005 Specific Plan Total</b>	<b>68.5</b>	<b>170.6</b>	<b>773.5</b>	<b>154.4</b>	<b>1.4</b>
<b>Net Increase (1999 to 2005 Specific Plan)</b>	18.1	38.7	163.4	19.2	0.3
<b>Significance Thresholds</b>	<b>15</b>	<b>15</b>	<b>---</b>	<b>15</b>	<b>---</b>

*Notes:*

Preclosure conditions as shown in 1998 EIS/EIR, based on EMFAC7F model (1996).

All other scenarios based on URBEMIS2002 model.

Totals may not add due to rounding.

*Source:* URBEMIS2002 Analysis, Turnstone Consulting, 2005.

Emissions of ozone precursors (NO<sub>x</sub> and VOC) and PM<sub>10</sub> under the Mare Island Specific Plan would exceed the significance thresholds. Primarily, the project-related emissions would be from motor vehicle activity, but emissions from heating and other energy use (area sources) would also contribute to this significant impact. Emissions of CO would not substantially affect regional air quality, but they could adversely affect local conditions near heavy traffic (as discussed under Impact C.3, below). To mitigate the project’s significant impacts from traffic and area sources,

the BAAQMD recommends a range of strategies for reducing the number of vehicle trips and vehicle miles traveled and minimizing the demand for heating, cooling, and other energy use.

The 1998 EIS/EIR did not identify mitigation for this impact because impacts were shown to be less than those occurring under preclosure conditions. This Subsequent EIR expands the analysis and identifies mitigation that is consistent with the current BAAQMD recommendations. Implementing Mitigation Measure C.2 would reduce this impact, but because the net emissions increase would likely remain above the significance thresholds, the impact would remain significant and unavoidable.

### **Mitigation Measure C.2**

Incorporating the following design features would reduce traffic-related emissions:

For commercial, institutional, and industrial uses within the Specific Plan area:

- Encourage area tenants to implement carpool/vanpool programs, e.g., carpool ride matching for employees, assistance with vanpool formation, provision of vanpool vehicles, etc.
- Construct transit facilities such as bus turnouts/bus bulbs, benches, shelters, etc.
- Design and locate new buildings to facilitate transit access, e.g., locate building entrances near transit stops, eliminate building setbacks, etc.
- Provide on-site shops and services, e.g., cafeteria, bank/ATM, dry cleaners, convenience market, for area employees, where feasible.
- Provide on-site child-care facilities within walking distance of area employment centers, where feasible.
- Provide shuttle service to transit stations and multimodal centers, where needed.
- Provide preferential parking (e.g., near building entrance, sheltered area) for carpool and vanpool vehicles.
- Implement parking fees for single occupancy vehicle commuters.
- Provide secure, weather-protected bicycle parking for area employees.
- Provide safe, direct access for bicyclists to adjacent bicycle routes.
- Provide showers and lockers for employees bicycling or walking to work.
- Provide secure short-term bicycle parking for retail customers and other non-commute trips.

For residential uses within the Specific Plan area:

- Provide neighborhood-serving shops and services within one-half mile of residential areas, where feasible.



- Provide transit facilities, e.g., bus bulbs/turnouts, benches, shelters, etc.
- Provide shuttle service to transit stations and multimodal centers.
- Provide shuttle service to major destinations such as employment centers, shopping centers, and schools.
- Connect bicycle lanes and/or paths in residential areas to the rest of the network on Mare Island.
- Connect pedestrian sidewalks and/or paths to adjacent land uses, transit stops, and/or citywide network.

**Impact C.3 Operation including occupation and use of the development would cause localized carbon monoxide hot spots. (Less than Significant)**

The 1998 EIS/EIR identified a less-than-significant impact due to potentially elevated concentrations of carbon monoxide at locations of congested traffic because modeled CO concentrations did not exceed the ambient air quality standards. Because the present-day motor vehicle fleet causes lower levels of CO emissions than were anticipated at the time of the 1998 EIS/EIR, the Mare Island Specific Plan would not be likely to substantially alter this impact.

Carbon monoxide concentrations in the San Francisco Bay Area have not exceeded the ambient air quality standards since 1991. Carbon monoxide emissions at congested intersections, where motor vehicles slow down and idle, can under certain conditions exceed the 20 ppm 1-hour ambient air quality standard or 9 ppm 8-hour ambient air quality standard. Intersections operating at level of service (LOS) D or better are not normally expected to cause substantial carbon monoxide buildup, because at these less congested intersections, CO concentrations are better able to dissipate. At intersections operating at LOS E or F, carbon monoxide buildup is more likely, yet still uncommon.

Table III.C-4 shows the anticipated maximum CO concentrations that would occur at the edge of each roadway for the most-congested intersections affected by the Mare Island Specific Plan. The results are presented assuming implementation of none of the mitigation measures for traffic and circulation. The localized CO concentrations would be less than significant with or without traffic mitigation.

**Mitigation:** No mitigation necessary.

**Impact C.4 Operation of industrial land uses would cause emissions from new stationary sources and heavy-duty diesel truck traffic. (Significant and Mitigable)**

The 1998 EIS/EIR identified a less-than-significant impact due to establishing new industrial operations that would establish new emission sources. The BAAQMD regulations establish permitting requirements for stationary sources that require any new sources to be offset by

**Table III.C-4: Localized Carbon Monoxide Concentrations (parts per million)**

	2004 Existing Conditions	1999 Specific Plan	2005 Specific Plan
<b>1-Hour Concentrations</b>			
<b>Location</b>			
Wilson / SR 37 EB Ramps	5.11	4.79	5.07
Wilson / Mare Is Way / Tennessee-Causeway	5.91	5.84	7.22
Sonoma / Tennessee	7.20	6.02	6.19
Sonoma / Curtola	6.53	5.85	6.42
Sonoma / I-80 WB Ramps	5.75	5.58	5.59
Railroad / G St	4.96	5.73	7.79
Azuar / G St	4.63	4.38	5.44
<b>8-Hour Concentrations</b>			
<b>Location</b>			
Wilson / SR 37 EB Ramps	3.83	3.59	3.78
Wilson / Mare Is Way / Tennessee-Causeway	4.39	4.32	5.29
Sonoma / Tennessee	5.29	4.45	4.57
Sonoma / Curtola	4.82	4.33	4.73
Sonoma / I-80 WB Ramps	4.28	4.14	4.15
Railroad / G St	3.73	4.24	5.69
Azuar / G St	3.50	3.30	4.04
<i>Notes:</i> Assumes 2020 background CO concentrations of approximately 4.0 ppm (1-hour) and 3.0 ppm (8-hour) based on rollback method (BAAQMD 1999). California Ambient Air Quality Standards for CO: 20 ppm (1-hour) and 9 ppm (8-hour).			

*Source:* BAAQMD CEQA Guidelines, Manual Method; Turnstone Consulting, 2005.

emission reductions in order to ensure that no net increases in ozone precursors or PM<sub>10</sub> emissions are caused by the stationary sources in the region. The permitting programs also include a review of toxic air contaminant emissions to ensure that new stationary sources of toxic air contaminants are not located near land uses that are sensitive. These permitting programs controlling stationary sources result in less-than-significant impacts from new industrial uses. The BAAQMD permitting regulations, however, do not apply to mobile sources of toxic air contaminants, such as diesel-powered vehicles.

Adverse health risks and potential nuisance conditions can be avoided by establishing buffer zones between land uses that are sources and receptors. BAAQMD CEQA Guidelines recommend that community plans include measures to establish such buffer zones, where appropriate. Heavy industrial uses allowed in Reuse Areas 5, 10A, and 10B under the Mare Island Specific Plan include manufacturing, construction services, warehousing, Army Reserve activities, or distribution centers. Any of these permitted uses could generate substantial heavy-duty diesel truck traffic. This traffic could pass through or adjacent to Reuse Areas 2A, 3B, 4, 6, 8, and 9, where residential, educational, and mixed residential uses would be allowed.

Adverse health risks could occur for any receptors in close proximity of intense diesel truck traffic. For example, the CARB Diesel Risk Reduction Program identifies potentially adverse health risks near distribution centers having daily operations of more than 200 trucks. Locations within 20 meters (66 feet) of the fence-line of such facilities can be exposed to diesel particulate matter concentrations causing approximately 10 excess cancer cases per million (based on 70 years of exposure),<sup>5</sup> enough to be considered a significant health risk by the BAAQMD.

It is assumed that Reuse Areas 5, 10A, or 10B could each generate more than 200 truck trips per day, depending on how they are developed and used. Ensuring that high levels of diesel vehicle activity occur at a sufficient distance from sensitive receptors would reduce the potential impacts. Without implementation of a protective measure to provide adequate buffer zones, a significant TAC impact could occur from diesel truck activity. Mitigation Measure C.4 would ensure that appropriate buffer zones are maintained around the potential sources of toxics and odors.

#### **Mitigation Measure C.4**

Provide an adequate buffer zone between any source of toxic air contaminants or odors and land uses sensitive to air contaminants, such as residential, educational, and health care facilities. Possible sources of toxic air contaminants include land uses attracting a high level of diesel vehicle activity, heavy-duty truck routes, and industrial uses, depending on the tenant. The appropriate dimensions of each buffer zone would depend on a variety of factors, including the nature of the activities occurring at the source and the types and quantities of materials being stored or used at the facility. For example, any use that has the potential to generate 200 heavy-duty diesel truck trips per day should be located at least 20 meters (about 65 feet) away from sensitive uses.

Project sponsor shall require that each industrial tenant provide information on daily truck trips expected to be generated. Any industrial use generating 200 or more diesel truck trips per day shall be located at least 65 feet from sensitive uses such as residential, educational and health care facilities.

#### **Impact C.5 Development of the Mare Island Specific Plan would be consistent with adopted air quality management plans. (Less than Significant)**

The 1998 EIS/EIR identified a less-than-significant impact due to the potential for conflicts with adopted air quality plans or goals. The 1998 EIS/EIR found that the Reuse Plan Alternative would be consistent with many of the land use and transportation policies of the BAAQMD air quality management plan and the Vallejo General Plan. The Specific Plan for reuse of Mare

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<sup>5</sup> California Air Resources Board, *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles, Appendix VII*, October 2000.

### III. Environmental Setting, Impacts and Mitigation

#### C. Air Quality

Island was originally adopted by the City of Vallejo in 1999. Since that time, regional transportation and air quality planners have analyzed and revised regional growth projections so that the traffic-related emissions from the 1999 Specific Plan would be included. The Mare Island Specific Plan would include increased development that would need to be reflected in future air quality management plan updates.

The 2004 Ozone Strategy specifies that local jurisdictions take steps to ensure that land use and transportation planning leads to a general reduction in vehicle use by enhancing access to transit or uses that minimize vehicle travel distances. The Mare Island Specific Plan would provide for mixed-use and interspersed residential, commercial, and retail uses, and development patterns would emphasize pedestrian-scale activity clusters with pedestrian, bicycle, and transit circulation features. The waterfront areas and historic core would provide limited parking facilities in order to protect historic resources, and access to the existing City of Vallejo ferry terminal could be provided via a water taxi. A new transit service would loop through the central areas and connect, within a 5-minute walk, most residential and employment land uses on Mare Island with the existing City of Vallejo ferry terminal and downtown.

Mitigation measures identified above would further ensure that the Mare Island Specific Plan would be consistent with regional clean air plan policies for reducing vehicle trips, reducing the length of vehicle trips, and coordinating land uses to avoid conflicts from sources of toxics and odors. Although the Mare Island Specific Plan would be consistent with the various air quality management policies relevant to the City of Vallejo and BAAQMD, the specific land use pattern proposed in the Mare Island Specific Plan has not yet been incorporated into the regional air quality management plan prepared by BAAQMD. Regional air quality plans are required to be updated periodically to address changing land use circumstances in the region. Because future air quality plan updates would accommodate the changing nature of development and population on Mare Island including the Mare Island Specific Plan, which provides features consistent with air quality plan goals, this issue would not be considered a significant impact. This conclusion is not changed from the discussion in the 1998 EIS/EIR.

## **D. NOISE**

### **INTRODUCTION**

This section addresses the environmental setting and impacts related to community noise. New land use development that involves a wide range of uses usually has the potential to bring sensitive uses within close proximity of uses or transportation facilities that might be substantial sources of noise. Because the Mare Island Specific Plan calls for development of land uses that could generate substantial sources of noise near noise-sensitive land uses, the effects of the development under the proposed project are reviewed here.

The Initial Study concluded that an updated assessment of traffic noise impacts under the Mare Island Specific Plan was called for in light of an expanded development program, more detailed project information, and an updated traffic analysis. After publication of the Initial Study, the City of Vallejo revised and adopted a new General Plan Noise Element, which redefines the policies on acceptable noise levels. Therefore, a discussion of construction and operational noise in relation to the new policies is included in this Subsequent EIR, along with a comparison to the analysis in the 1998 EIS/EIR.

### **SETTING**

#### **NOISE TERMINOLOGY**

Sound is described in terms of loudness and pitch. The standard rating of sound loudness (amplitude) measurement is the decibel scale (dB). Since the human ear is not equally sensitive to sound at all pitches (frequencies), a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. Environmental noise loudness is typically measured in terms of the A-weighted decibel scale (dBA). This is a logarithmic scale that provides compensation approximating the sensitivity of the human ear to different pitches. The City of Vallejo uses the following descriptors to quantify the effects of community noise on people, depending on the energy of the noise and what time of day the noise occurs:

- Leq, the equivalent energy noise level, is the average acoustic energy content of noise for a stated period of time, typically one hour, Leq(h);
- Ldn, the day-night average noise level, is a 24-hour average Leq with a 10 dBA “penalty” added to noise occurring during the hours of 10:00 p.m. to 7:00 a.m. to account for the greater nighttime sensitivity of people.
- The Community Noise Equivalent Level (CNEL) is a 24-hour average noise level similar to the Ldn, with an additional 5 dBA penalty for events occurring between 7 p.m. and 10 p.m.

The logarithmic decibel scale allows an extremely wide range of acoustic energy to be characterized in a manageable notation. For example, a doubling of noise energy is correlated to a 3.0 decibel increase in noise levels. This is also the minimum change in environmental noise that is recognizable by the human ear. An energy change of approximately a factor of ten is required for the human auditory system to perceive a doubling of noise loudness (a 10 decibel increase). On the A-weighted decibel scale, the sound level of normal talking is about 60 to 65 dBA. In general, a difference of more than 3 dBA is a perceptible change in environmental noise, while a 5 dBA difference typically causes a change in community reaction.

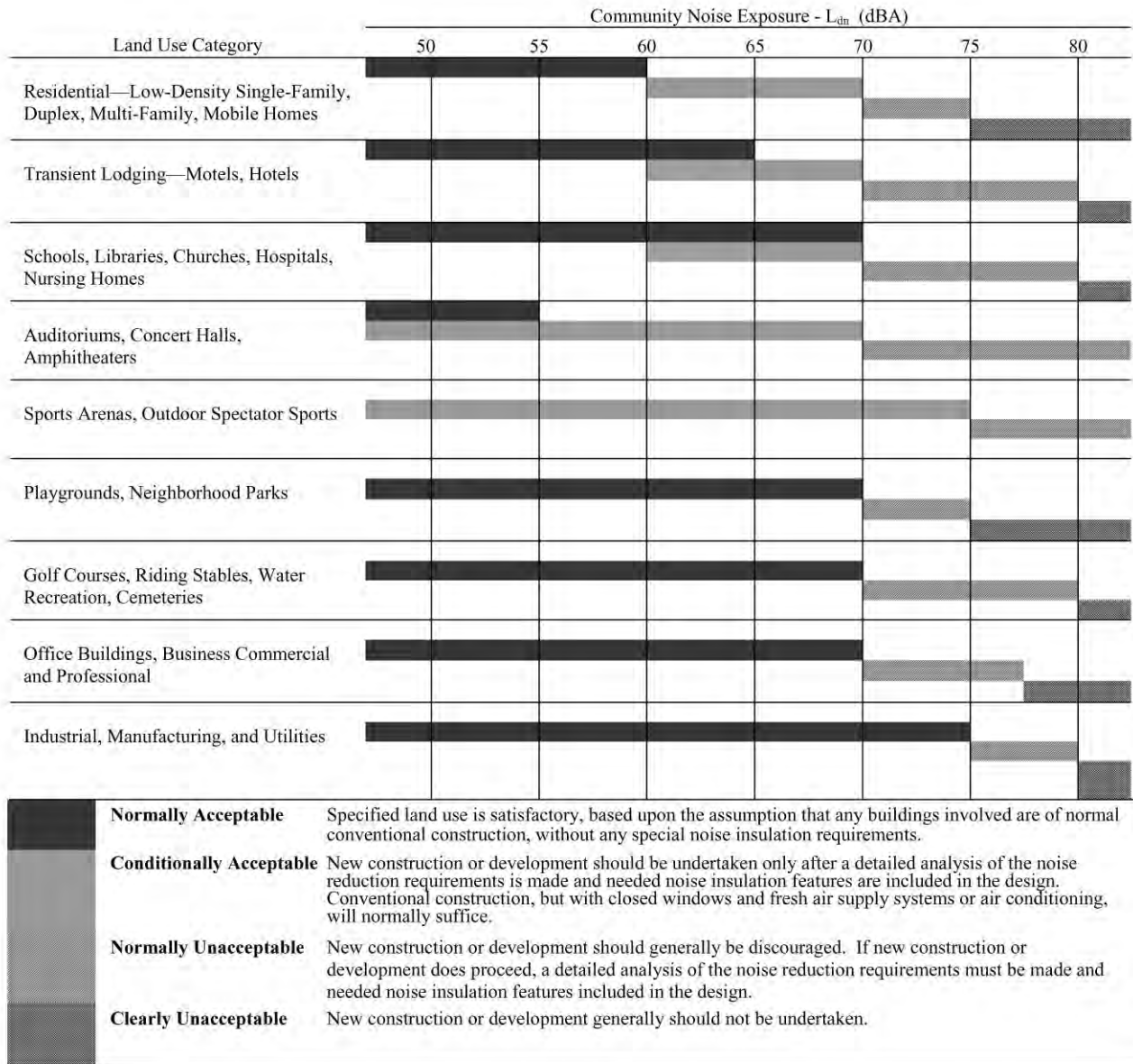
Noise levels diminish (or attenuate) as distance from the source increases based on an inverse square rule, depending on how the noise source is physically configured. Sound from a point source, such as a single piece of construction equipment, attenuates at a rate of 6 dBA per doubling of distance. Heavily traveled roads with few gaps in traffic behave as continuous line sources and attenuate roughly 3 dBA per doubling of distance.

### **REGULATORY SETTING**

The Noise Control Act of 1972 assigns the U.S. EPA the responsibility of developing regulations to adequately control environmental noise such that it does not endanger the population's health and welfare. The EPA established the Office of Noise Abatement and Control, but in 1981, funding for the office was removed. Similarly, the California Department of Health Services once operated an Office of Noise Control that has since been disbanded. As such, environmental noise protection is mainly a local government responsibility, managed by the City of Vallejo.

#### **City of Vallejo General Plan, Noise Element**

In July 2004, the City of Vallejo City Council approved revisions to the General Plan Noise Element (originally prepared in 1974) to establish noise control policies and programs and limit the exposure of the community to excessive noise levels. The revised Noise Element recognizes that industrial uses located on Mare Island are likely to generate noise impacts to residential and commercial uses on Mare Island. Land use compatibility guidelines are defined in the revised Noise Element, reproduced here as Figure III.D-1.



SOURCE: City of Vallejo

The following goals and policies are established by the revised Noise Element:

- Policy 1a: The exterior noise level at primary outdoor use areas for residences should not exceed the maximum “normally acceptable” level of 60 dBA Ldn. Small decks and entry porches do not need to meet this goal. Noise levels up to 65 dBA Ldn may be allowed at the discretion of the City where it is not economically or aesthetically reasonable to meet the more restrictive outdoor goal.
- Policy 1b: The interior noise standard shall be 45 dBA Ldn for all residential uses including single- and multi-family housing, hotels/motels, and residential healthcare facilities.
- Policy 2: Avoid adverse effects of noise-producing activities on existing land uses by implementing noise reduction measures limiting hours of operation, or by limiting increases in noise.
- Policy 2b: Where appropriate, limit noise generating activities (for example, construction and maintenance activities and loading and unloading activities) to the hours of 7:00 a.m. to 9:00 p.m.
- Policy 2c: When approving new development, limit project-related noise increases to no more than 10 dBA in non-residential areas and 5 dBA in residential areas where the with-project noise level is less than the maximum “normally acceptable” level. Limit project-related increases in all areas to no more than 3 dBA where the with-project noise level exceeds the “normally acceptable” level.

**City of Vallejo Municipal Code**

Chapter 16.72 of the Vallejo Municipal Code includes performance standards that are enforced by the Police Department. This ordinance helps to protect sensitive land uses from “dangerous or objectionable” noise from neighboring uses. The maximum allowed noise levels range from 55 to 75 Leq, depending on the affected land use and are allowed to be 5 dBA higher in the daytime (between 7 a.m. and 10 p.m.). Noise from hammering or other impulsive annoyances is specifically restricted, and temporary construction and demolition noise is specifically exempt. Table III.D-1 summarizes the limits.

**Table III.D-1: Vallejo Municipal Code Maximum Noise Levels**

Land Use, Zoning District	Maximum Leq (dBA)	Maximum Daytime Leq (7 a.m. - 10 p.m.) (dBA)
Resource Conservation, Rural Residential, and Medical Districts	55	60
Low, Medium, and High Density Residential Districts	60	65
Professional Offices, Neighborhood, Pedestrian, and Waterfront Shopping and Services Districts	70	75
Freeway Shopping and Service, Linear Commercial and Intensive Use Districts	75	80

*Source:* Vallejo Municipal Code, Chapter 16.72.



## EXISTING NOISE CONDITIONS

Before closure of Mare Island, motor vehicle traffic, rail operations, crane operations, industrial facility operations, and the rifle range were each notable noise sources. Traffic is normally the primary noise source in developed areas, and each of the other sources currently remains active to some degree except the rifle range. Noise conditions on-island vary from quiet, around those areas that are relatively free of active use, to levels generally above 60 Ldn, where existing commercial and industrial activity accompanies occupied uses. The existing industrial uses (e.g., trucking centers, recycling, manufacturing, fabrication, and repair) are stationary noise sources that attract notable truck or rail traffic. No monitoring data are available for on-island noise levels.

Traffic is the dominant noise source in the off-island surroundings. In 2004, the City of Vallejo commissioned studies of existing noise levels for the Vallejo Station Project and the Waterfront Project environmental documents. Along the Mare Island Causeway, Ldn levels were found to be about 67 Ldn on one occasion near the edge of the road, decreasing with distance to less than 60 Ldn roughly 100 feet from the centerline (illustrated by Locations 6, 10, and E in that study).<sup>1</sup>

## NOISE-SENSITIVE AREAS

Certain land uses are noise-sensitive if quiet is important to the usefulness of the area. The City of Vallejo defines noise-sensitive land uses in the revised Noise Element. Noise-sensitive land uses include schools, hospitals, nursing homes, parks, and residential areas.

Residents of Mare Island would be noise-sensitive receptors. For example, the Coral Sea Village and Farragut Village neighborhoods contain residential uses and therefore are noise-sensitive land uses. Other present on-island uses, such as the educational facilities (currently in Quarters E and Buildings 733/737 and at Touro University and the elementary school), the park, and golf course, would also be sensitive to noise. Touro University also includes residences for students and therefore would be sensitive to nighttime noise; the other educational uses would be less sensitive than residential uses because higher nighttime noise levels would not detract from their usability. No other existing on-island uses are considered noise-sensitive.

Noise-sensitive land uses can be found along many of the routes that access Mare Island. There are established residential uses and parks along the Mare Island Causeway, Mare Island Way, Wilson Avenue, and Tennessee Street, where neighborhoods and River Park face the existing traffic. Future residences are also planned for the property adjacent to the Mare Island Causeway west of the Tennessee Street intersection.

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<sup>1</sup> City of Vallejo and Redevelopment Agency of the City of Vallejo, *The Vallejo Station Project and the Waterfront Project Revised Draft EIR*, June 2005, Table 3.14-2, p. 3.14-6.

## IMPACTS AND MITIGATION

### APPROACH

#### Significance Thresholds/Significance Criteria

The 1998 EIS/EIR relied upon the guidelines of the then-current Noise Element to characterize disposal and reuse impacts. Noise levels were described in terms of the Community Noise Equivalent Level (CNEL), which has been replaced in the revised Noise Element with the Ldn descriptor. No other changes to these criteria would be necessitated by the revised Noise Element. With this minor adjustment, the criteria from the 1998 EIS/EIR remain applicable. They are as follows:

- An incremental Ldn decrease would be considered a beneficial impact even if the overall Ldn exposure remains above land use compatibility criteria.
- A project-related noise level increase of 3 dBA or more would be considered a significant impact if noise-sensitive land uses are affected and if the overall noise level is within 5 dBA of the land use compatibility criteria.
- An incremental Ldn increase of any magnitude would be considered a significant impact if the overall Ldn exposure is 5 dBA or more above the land use compatibility criteria.
- An incremental Ldn increase that results in an overall Ldn exposure that exceeds General Plan land use compatibility criteria would be considered a significant cumulative impact even though the incremental change may be less than significant.

### PROJECT IMPACTS AND MITIGATION

#### Demolition and Construction

##### **Impact D.1 Project demolition and construction activities would cause temporary disturbance to adjacent land uses. (Significant and Mitigable)**

The 1998 EIS/EIR identified a temporary significant and mitigable noise impact during demolition and construction activities. Locations near construction activities would likely experience noise levels temporarily above the General Plan land use compatibility criteria. The Mare Island Specific Plan would not substantially alter this previously identified impact. Table III.D-2 summarizes heavy equipment noise estimates for typical construction sites.

New residences under construction and planned within Reuse Areas 2A, 3B, 4, 6, and 8 and on-island educational land uses and recreation areas could be adversely affected by future construction noise at any nearby on-island location. The “normally acceptable” 60 Ldn level for

**Table III.D-2: Typical Construction Site Noise Impacts**

<b>Receptor Distance (feet)</b>	<b>Bulldozer Leq (dBA)</b>	<b>Loader Leq (dBA)</b>	<b>Truck Leq (dBA)</b>	<b>Combined Equipment Leq (dBA)</b>	<b>Workday Increment Ldn (dBA)</b>
50	85.0	80.0	85.0	88.6	84.8
100	78.9	73.9	79.0	82.6	78.8
200	72.7	67.8	72.9	76.4	72.6
400	66.2	61.5	66.7	70.1	66.3
600	62.2	57.7	63.0	66.3	62.5
800	59.3	54.9	60.3	63.5	59.7
1,000	56.9	52.6	58.1	61.2	57.4
1,500	52.2	48.3	54.1	57.0	53.2
2,000	48.6	45.1	51.2	53.7	49.9

*Source:* Summary from 1998 EIS/EIR.

residences could be exceeded by short-term construction activities, if they are within about 800 feet. If pile driving is used at construction sites, then sensitive land uses within about 2,000 feet of the activity would be temporarily disturbed. This radius of impact is slightly smaller than that identified by the 1998 EIS/EIR because the City’s definition of maximum “normally acceptable” noise levels changed in the revised Noise Element.

A temporary disturbance to birds could occur during demolition and construction activities within reuse areas adjacent to open space. This impact was not identified in the 1998 EIS/EIR, but more recent biological surveys conducted for the Draft EIS/Draft EIR for the Mare Island Dredged Material Disposal Ponds project (January 2004) indicate the presence of special-status species. California black rail, California clapper rail, osprey, and great blue herons have been observed at the south and west boundaries of Mare Island in the marsh and at the piers. The great blue heron is not a designated rare or threatened species but is a species of special concern. A great blue heron rookery (nesting site) was identified on the west side of Mare Island in the 1998 EIS/EIR (p. 3.87) outside of the development area in the Mare Island Specific Plan.

Construction activities related to development under the Mare Island Specific Plan would not take place in close proximity to the heron nesting areas or near the black rail and clapper rail wetlands areas, and therefore would not substantially affect noise levels experienced by this wildlife. The temporary effects of construction noise near the south end of Mare Island would be less intense than those identified in the 1998 EIS/EIR, which analyzed the effects of constructing the southern crossing bridge, and would, therefore, not warrant mitigation for potential effects on wildlife.

Measures previously identified in the 1998 EIS/EIR and in the EIS/EIR for the Dredged Material Disposal Ponds project would protect these biological resources by ensuring on-site monitoring of construction activities and by restricting construction activities to designated work zones.

The following mitigation was identified in the 1998 EIS/EIR, and it is consistent with Policy 2b of the revised Noise Element. Implementing this mitigation measure would reduce the impact of noise from project demolition and construction activities to a less-than-significant level.

**Mitigation Measure D.1**

Limit construction activities to normal daytime hours (7 a.m. to 6 p.m.), Monday through Saturday, with no construction on Sundays or federal holidays unless approved by the Chief Building Official.

**Impact D.2 Construction activities for the proposed southern crossing bridge would not occur. (No Impact)**

The 1998 EIS/EIR identified a temporary noise impact from construction of the southern crossing bridge that is now obsolete because the bridge would not be built under the Mare Island Specific Plan.

**Mitigation:** No mitigation necessary.

These mitigation measures from the 1998 EIS/EIR no longer apply.

**Noise/Land Use Compatibility Conflicts**

**Impact D.3 Noise impacts from relocating the rifle range would not occur. (No Impact)**

The 1998 EIS/EIR identified a noise impact from the rifle range that is now obsolete because the rifle range would not be included in the Mare Island Specific Plan.

**Mitigation:** No mitigation necessary.

These mitigation measures from the 1998 EIS/EIR no longer apply.

**Impact D.4 Noise from industrial operations could be incompatible with adjacent noise-sensitive land uses. (Significant and Mitigable)**

The 1998 EIS/EIR identified a significant and mitigable noise impact from industrial operations. As in the 1998 EIS/EIR, industrial land uses could generate noise levels incompatible with adjacent noise-sensitive land uses. The Mare Island Specific Plan would alter this previously identified impact because although the Mare Island Specific Plan land uses are generally consistent with those envisioned by the 1998 EIS/EIR, Reuse Area 10A now calls for Mixed Use Light Industrial and Heavy Industrial uses rather than Residential and Retail uses.

The impact of noise from industrial operations is most pronounced where spatial separation and buffering land uses would not provide sufficient space to isolate industrial operations. Reuse Areas 5 and 10A could be developed with light industrial uses (relatively low intensity and housed primarily in enclosed buildings with limited, screened outdoor areas) or heavy industrial uses (manufacturing, processing, or warehouse and distribution, which may require truck transport and ship traffic or outdoor laydown areas). Over 1.5 million square feet of light and heavy industrial could be developed within Reuse Area 5, and the activities could affect adjacent educational development in Reuse Area 9, developed recreation space in Reuse Area 4, and the southern edge of low-density residential in Reuse Area 6. The northern end of Reuse Area 10A would include a significant laydown area adjacent to Berth 24 where rail and/or water access may facilitate large-scale storage and handling of materials, and the remainder of this industrial area would border the regional park in Reuse Area 12.

The flexibility of the Mare Island Specific Plan could allow noise-generating uses to occupy the industrial areas in Reuse Areas 5 and 10A, causing potentially significant noise impacts to the surrounding uses. The revised Noise Element defines the land use compatibility guidelines for community noise and specifies that noise levels below 70 Ldn would be “normally acceptable” for schools, playgrounds, and neighborhood parks. Industrial operations within Reuse Area 5 would need to cause less than 60 Ldn at the edge of residential uses in Reuse Area 6 (across Azuar Drive), and less than 70 Ldn at the boundaries of Reuse Areas 4, 8, and 9, in order to be consistent with the revised Noise Element and compatible with adjacent uses. Reuse Area 10A would need to comply with the 70 Ldn level to avoid affecting the adjacent planned regional park.

Implementing the following mitigation measures would reduce the impact of noise from project industrial operations to a less-than-significant level.

#### **Mitigation Measure D.4.a**

A qualified acoustical consultant shall be retained by the project sponsor to perform annual noise evaluations near light and heavy industrial uses that are located adjacent to residential areas in Reuse Areas 4, 6, 8 and 9, and in Reuse Area 10A near the planned regional park and report to the City. If the ambient Ldn exceeds Noise Element standards in any location, the acoustical consultant shall provide detailed recommendations as to one of the following: installation of noise insulation in the industrial building; changing the types of activities performed or enclosing the activities on the industrial site; or relocating the industrial use elsewhere on Mare Island, at an appropriate distance from residential uses or the regional park.

**Mitigation Measure D.4.b**

Industrial uses shall provide a maximum separation between industrial and adjacent residential, educational, or recreational development; noise-intensive industrial operations shall be concentrated away from adjacent residential, educational, or recreational development; and light industrial and office uses in enclosed buildings should be used to provide a buffer zone and isolate industrial noise from adjacent residential, educational, or recreational development.

**Impact D.5 Traffic would cause noise increases at locations near sensitive land uses.  
(Significant and Unavoidable)**

The 1998 EIS/EIR identified a significant and mitigable noise impact from changes in traffic patterns along streets where residential development may be exposed to excessive traffic noise levels. The 1998 EIS/EIR found that high volumes of traffic along major on-island roadway segments facing residential areas (formerly Cedar, now Azuar Drive) could cause noise levels exceeding the guideline levels recommended by the Noise Element. Because citywide traffic information has been updated, the guideline levels of the Noise Element have been recently revised, and the Mare Island Specific Plan includes land use changes, reanalysis of this impact is necessary.

On-island and off-island noise-sensitive land uses along major roadways would be most likely to experience a substantial traffic noise increase from the traffic attracted to uses on Mare Island. New residences under construction and planned within Reuse Areas 2A, 3B, 4, 6, and 8, educational land uses, and recreation areas and off-island neighborhoods along major access routes could each be adversely affected by increased traffic noise. Table III.D-3 illustrates the estimated traffic noise levels in terms of both 1-hour Leq during the P.M. peak traffic hour and the day-night average (Ldn) for locations within 50 feet of the centerline of the roadways. The table compares traffic noise with development under the 1999 Specific Plan with traffic noise that would result with the greater level of development under the Mare Island Specific Plan. The off-island traffic noise accounts for cumulative development in the vicinity, including development from the Waterfront Project, the Vallejo Station Project, and the Downtown Specific Plan, and therefore provides a cumulative traffic noise impact analysis.

On-Island Traffic Noise

Table III.D-3 shows that on busy Walnut Avenue and Azuar Drive noise levels with the Mare Island Specific Plan would be greater than the 60 Ldn “normally acceptable” criterion for residences established in the revised Noise Element. Throughout the Specific Plan development area, development would cause incremental increases in traffic noise along most on-island roadways compared to noise levels with the adopted 1999 Specific Plan, and would result in noise

**Table III.D-3: Summary of Traffic Noise Modeling Results**

<b>Location</b>	<b>Existing 2004 p.m. Leq (dBA)</b>	<b>1999 Specific Plan p.m. Leq (dBA)</b>	<b>2005 Specific Plan p.m. Leq (dBA)</b>	<b>Existing 2004 Ldn (dBA)</b>	<b>1999 Specific Plan Ldn (dBA)</b>	<b>2005 Specific Plan Ldn (dBA)</b>
<b>On-Island Roadways</b>						
Walnut Ave. south of G St.	56.1	56.1	64.1	56.0	56.0	64.0
Azuar Drive south of A St.	–	61.4	68.3	–	61.3	68.2
Flagship Drive south of Mesa	–	51.8	62.2	–	51.7	62.1
<b>Off-Island Roadways</b>						
Curtola Parkway east of Sonoma	65.8	66.4	67.8	65.8	66.3	67.7
Mare Island Way/Curtola west of Sonoma	65.9	67.6	68.8	65.8	67.5	68.7
Mare Island Way south of Georgia	64.7	65.5	68.0	64.6	65.4	67.9
Mare Island Way north of Florida	65.4	68.0	70.0	65.3	67.9	69.9
Wilson Ave. north of Tennessee	64.8	66.2	66.2	64.7	66.1	66.1
Tennessee St. west of Sonoma	64.5	64.5	67.2	64.4	64.5	67.1
Tennessee St. east of Wilson/Mare Is Way	62.3	65.0	68.0	62.3	64.9	67.9
Mare Island Causeway west of Wilson/Mare Is Way	59.7	67.0	70.8	59.6	67.0	70.7

*Notes:*

Modeling results are for locations 50 feet from roadway centerline: p.m. peak hour traffic (Leq) and average daily (Ldn) with 15 percent of traffic occurring between 10 p.m. and 7 a.m.

*Source:* Turnstone Consulting, 2005.

levels that exceed Vallejo Noise Element criteria. At residential locations facing Azuar Drive and Walnut Avenue (Reuse Area 6) the overall exposure would be 5 dBA above the 60 Ldn “normally acceptable” criterion for residences, and the increase caused by the Mare Island Specific Plan would be greater than 5 dBA. If there were substantial amounts of truck traffic on these roads, noise levels would be higher. The traffic noise levels would likely be over 65 Ldn, making this a significant impact along Azuar Drive. Noise levels along Flagship Drive would remain less than significant.

A similar impact would occur on Railroad Avenue, where development of high-density residential use could occur with little setback (in the mixed-use areas in Reuse Areas 2A and 3B). Noise levels at 50 feet from the centerline of Railroad Avenue, which is expected to be the primary truck route to the southern industrial areas, would be approximately 70 Ldn, beyond the allowable level of 65 dBA. With this level of traffic noise, special noise insulation features would be needed in residential structures, including fixed windows and air conditioning or a

separate fresh air supply. Noticeable noise increases would also occur along Flagship Drive (Reuse Area 8), but with appropriate setbacks, the traffic noise would be attenuated to acceptable levels. Along these roadway segments, because the incremental contribution of the project would create a potentially significant impact, mitigation would be necessary to reduce these impacts to a less-than-significant level.

Other mixed-use areas would experience noticeably increased traffic noise levels along other important parts of the street framework. Although project-related increases would be more than 3 dBA compared to noise levels under the 1999 Specific Plan, the overall levels would be compatible with the proposed non-residential land uses of Reuse Area 3B, developed recreation uses of Reuse Area 4, and the educational uses of Reuse Area 9. This impact would not be significant. Industrial areas in Reuse Areas 5 and 10A would not be adversely affected.

#### Off-Island Traffic Noise

Future traffic noise levels at many off-island locations would be noticeably higher (more than 3 dBA) with the Mare Island Specific Plan when compared to 2004 conditions. Incremental traffic noise increases would also result from the changes in traffic volumes with the proposed project compared to traffic noise with development under the 1999 Specific Plan, although these increases would be less than 3 dBA and would not be noticeable to most people at most analysis locations.

Compared to the levels anticipated under the 1999 Specific Plan, elimination of the southern crossing would cause the largest off-island incremental increases along the Mare Island Causeway, Tennessee Street, and Mare Island Way. Within 50 feet of the centerline of the Mare Island Causeway, the traffic noise levels would increase by 11.1 dBA compared to existing levels, and by 3.7 dBA, to 70.7 Ldn, compared to traffic noise under the 1999 Specific Plan. The change from existing 2004 conditions would be perceived as more than a doubling of noise loudness. This would be a significant increase resulting in an overall noise level incompatible with the planned residential uses south of the Causeway. This would be a significant impact warranting additional mitigation. Increased noise levels in River Park north of the Causeway would only occur within 50 feet of the roadway, and would not significantly impact the majority of the Park.

Noise levels on all portions of Mare Island Way with the Mare Island Specific Plan would increase by less than 3 dBA compared with traffic noise under the 1999 Specific Plan, resulting in levels between 68 and approximately 70 Ldn. These levels would be compatible with non-residential uses along this thoroughfare but would not be compatible with residential uses, and therefore would result in a substantial contribution to a significant cumulative impact. Compared to 2004 existing traffic noise levels along Mare Island Way, future traffic noise would increase by



over 4 dBA near Florida Street and 3.3 dBA south of Georgia Street, a significant increase in both locations. Near Mare Island Way/Curtola west of Sonoma traffic noise would increase by less than 3 dBA but would substantially exceed residential noise criteria in the Noise Element.

Compared to the results of the 1999 Specific Plan, noise levels along Tennessee Street west of Sonoma Boulevard would increase by less than 3 dBA and by 3 dBA along Tennessee Street east of Wilson/Mare Island Way. While not more than a 3 dBA increase, these changes would be significant for residential uses on Tennessee Street because the overall exposure would be greater than 65 Ldn. Traffic noise would increase by over 5 dBA along this segment of Tennessee Street compared to 2004 existing traffic noise, also a substantial contribution to a significant cumulative impact.

#### Rail Operations

Rail operations under the Mare Island Specific Plan would continue as anticipated in the 1998 EIS/EIR. The railroad spur from Broadway to Mare Island would generate temporary noise impacts through the historic core of Reuse Areas 3A and 3B and into the industrial areas in Reuse Areas 5 and 10B. As described in the 1998 EIS/EIR, use of this spur is limited, with a few railcar movements per month, and use is expected to remain limited to a few railcars at a time. If use of the rail spur increased to two movements per day, rail operations would generate an incremental noise source of about 48 Ldn 50 feet from the tracks. Sounding the locomotive horn would add brief events of about 100 dBA. These infrequent events would not substantially affect the overall noise levels in these areas, and while noticeable, the impact would not be significant.

#### Summary of Traffic Noise Impacts

The following mitigation includes a revised version of the measure that was identified in the 1998 EIS/EIR. Additional on-island mitigation is identified for the specific locations of Azuar Drive, and Walnut Avenue, where residential development exists or is planned. Implementing these mitigation measures would reduce the impact of noise from on-island traffic to a less-than-significant level.

#### **Mitigation Measure D.5.a**

Use roadway designs and traffic controls to discourage high traffic volumes and speeds along Azuar Drive south of G Street, and establish a heavy truck prohibition on Azuar Drive south of G Street, on Walnut Avenue between Kansas Street and G Street, and on Flagship Drive.

**Mitigation Measure D.5.b**

Establish a noise monitoring program to provide for biennial noise measurements along the residential portions of Azuar Drive and Walnut Avenue taken in conjunction with traffic counts; a detailed acoustical study prepared by an appropriately qualified acoustical consultant documenting results of the measurements and discussing noise levels in relation to Noise Element criteria; and implementation of a noise insulation program if any residences along these streets are shown to be exposed to traffic noise levels that have increased by 5 dB or more.

**Mitigation Measure D.5.c**

Provide building construction and noise insulation to achieve interior noise levels of less than 45 dBA Ldn, approximately 25 dBA exterior-to-interior reduction as required in Title 24 of the California Code of Regulations, for high-density residential development in mixed uses of Reuse Areas 2A and 3B.

**Mitigation Measure D.5.d.1**

Develop a noise insulation strategy with the Waterfront Project proponent to provide building construction and noise insulation to achieve interior noise levels of less than 45 dBA Ldn, approximately 25 dBA exterior-to-interior reduction as required in Title 24 of the California Code of Regulations, for planned residential development adjacent to and south of Mare Island Causeway, west of Mare Island Way.

**Mitigation Measure D.5.d.2**

The project sponsor shall participate by contributing a fair share of funding for acoustical studies and window replacement for residential uses along Tennessee Street between Mare Island Way and Sonoma Boulevard, similar to the program described for Mare Island in Measure D.5b.

## **E. UTILITIES**

### **INTRODUCTION**

Implementation of the proposed development program has the potential to require new, improved, or expanded facilities for providing the necessary services. This section addresses the environmental setting and impacts related to water supply and wastewater collection and conveyance.

The 1999 CEQA Documents contained no information about Water Supply. Under SB 610, the City must evaluate the sufficiency of water supplies to meet existing and future demand, including demand associated with the project. Therefore the Initial Study found that further discussion of Water Supply was necessary in the Subsequent EIR. The Water Supply Assessment prepared for Mare Island pursuant to SB610 is summarized in the Water Supply discussion below, and is provided in Appendix E to this Subsequent EIR.<sup>1</sup>

At the time of publication of the Initial Study, details on the necessary upgrades to the wastewater collection and transport system were still being developed for the proposed project. The Initial Study found that further discussion of wastewater collection was, therefore, necessary in the Subsequent EIR. (Note, however, that the Initial Study determined that further discussion of wastewater treatment was not necessary in the Subsequent EIR, finding that the Vallejo Sanitation and Flood Control District wastewater treatment facility has adequate wastewater treatment capacity to serve the project's projected demand.)

This Utilities section is organized into two subtopics: Water Supply and Wastewater Collection and Transport. Each subtopic includes a discussion of Setting, Impacts and Mitigation.

### **WATER SUPPLY**

#### **SETTING**

##### **WATER RESOURCES IN THE VALLEJO AREA**

The City of Vallejo is a public water supplier that purchases, treats, distributes, and sells water in the City of Vallejo and unincorporated areas of Solano County. The City of Vallejo currently operates two separate water systems: the City of Vallejo water system and Vallejo Lakes water system, collectively called the "City of Vallejo Water Systems." The City's distribution system currently serves the area of the proposed project, the former Mare Island Naval Shipyard.

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<sup>1</sup> Brown and Caldwell, *Water Supply Assessment for the City of Vallejo, Mare Island Redevelopment Project*, June 2005.

The City of Vallejo Water Systems currently use surface water as their sole source of supply. The City currently obtains surface water from four sources: Solano Project Water, State Water Project, Vallejo Permit Water, and Lakes Frey and Madigan. Table III.E-1 summarizes these surface water supplies.

**Table III.E-1: Existing Surface Water Sources**

Source	Water Entitlements (ac-ft/yr)	
	Until 2005	2010 and beyond
State Water Project	5,600	5,600
Vallejo Permit Water	17,200	22,800
Solano Project Water	14,600	14,600
Lakes Frey and Madigan	400	400
<b>Total</b>	<b>37,800</b>	<b>43,400</b>

*Source: Brown and Caldwell, Water Supply Assessment for the City of Vallejo, Mare Island Redevelopment Project, June 2005, pp. 2-1 and 4-2.*

Lake Curry is a future water source for the City located in Napa County. The City owns the water rights for Lake Curry but currently lacks a method of conveyance to immediately use the raw water impounded behind the dam. The City is actively investigating the most efficient method of transport of the water to a point usable by City of Vallejo customers. It is anticipated that this process may take up to five years to be finalized, and, if approved, for City water customers to realize use of this water.

**BASELINE WATER SUPPLY AND DEMAND**

The City of Vallejo Water Systems use two water treatment plants (WTP): the Fleming Hill WTP and the Green Valley WTP. The Green Valley WTP serves only the Vallejo Lakes water system and does not serve Mare Island. The Fleming Hill WTP serves the project site.

The Fleming Hill WTP treats water that is supplied from the Sacramento River Delta and delivered through the North Bay Aqueduct (State Water Project), Vallejo Permit Water, and Lake Berryessa (Solano Project Water). The Fleming Hill WTP is the main water treatment facility for the City. The WTP treats raw water using preozonation, coagulation, flocculation, sedimentation, intermediate ozonation, filtration, and disinfection. A recent expansion program increased the design flow rate to 42 million gallons per day (mgd). The Fleming Hill WTP is the only WTP that can supply water to customers within the City limits and nearby unincorporated areas.

In 2001, water users in the City of Vallejo Water Systems service area consumed approximately 20,377 ac-ft of treated water produced by the Fleming Hill WTP (this value also accurately represents the amount of water received by the City from its wholesale suppliers). The City also provides water under transfer agreements with the cities of American Canyon, Benicia, and

Fairfield. These service agreements cover both raw and treated water. In 2001, the City transferred 5,640 ac-ft of water to the three agencies.

The City's agreement with the Solano County Water Agency (SCWA) requires specific drought measures by all Participating Agencies (including the City of Vallejo) when the water level in Lake Berryessa drops below half full. Water savings could also be achieved through the implementation of certain anticipated water demand management measures during drought years. A draft Water Shortage Contingency Plan (WSCP) has been prepared by City staff. Staff plans to present this WSCP to the City Council for adoption and implement Stage 1 demand management measures during drought years.<sup>2</sup>

## REGULATORY FRAMEWORK

The following state and local laws, programs and policies affect water supply in the Vallejo area.

### Water Supply Assessment

The City of Vallejo has prepared a Water Supply Assessment<sup>3</sup> (WSA) for the implementation of the Lennar Mare Island development program pursuant to Sections 10910 to 10915 of the California Water Code, often referred to as "SB 610" based on substantial modifications to these sections of the Water Code in 2001. SB610 requires land use planning entities, such as the City of Vallejo, when evaluating certain large development and redevelopment projects, to request an assessment of the availability of water supplies from the water supply entity that will provide water to the project. Such a WSA is performed in conjunction with the land use approval process associated with the project and must include an evaluation of the sufficiency of the water supplies available to the water supplier to meet existing and future demands, including the demand associated with the project over a twenty-year time period that includes normal, single-dry, and multiple-dry years.

The WSA prepared for the implementation of the Lennar Mare Island development program concluded that the City has an adequate water supply to serve the existing demand in addition to the demand created by the approved and pending development projects through 2025 for a normal water year. The WSA also examined water supply reliability for single and multiple dry years. For a single dry year, the WSA concluded that the City's water supply is adequate to meet the demand for the year 2025 for existing development as well as the approved and pending development projects. For the third dry year of the multiple dry year scenario, the WSA

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<sup>2</sup> Brown and Caldwell, *Water Supply Assessment for the City of Vallejo, Mare Island Redevelopment Project*, June 2005, p. 4-4.

<sup>3</sup> Brown and Caldwell, *Water Supply Assessment for the City of Vallejo, Mare Island Redevelopment Project*, June 2005.

concluded that the City's available supply will not be sufficient to meet demand for the existing plus approved and pending development under the Vallejo General Plan.

### **California State Drinking Water Regulations**

The California Department of Health Services has established standards for drinking water supplied by public water systems. The state standards must meet or exceed federal drinking water standards established by the U.S. Environmental Protection Agency. Concentrations of specified constituents, such as minerals, total dissolved solids, and bacteriological contaminants, are limited to maximum contaminant levels (MCLs). Public water suppliers must obtain a permit from the Department of Health Services to provide domestic water supplies (water provided for drinking and other non-agricultural or industrial uses). The City has the required permits and meets required MCLs at the Fleming Hill WTP.

### **City of Vallejo**

The City of Vallejo General Plan Public Facilities and Natural Resources Elements include the following policies related to water supplies:

#### Other Services Policy 7: Water Service

- a. Landscaping of public facilities should feature drought tolerant species.
- b. The City should actively pursue a program to detect and repair water leaks and replace worn water mains.
- c. Subdivisions should follow the City's "Xeriscaping Guidelines for Model Homes in New Development."

Water Resources Policy 2: Protect watershed areas, particularly the area north of Lake Herman, in conformance with the policies and ordinances of the City of Benicia.

Water Resources Policy 3: The City should actively encourage conservation of water through reduced per capita consumption.

## **IMPACTS AND MITIGATION**

### **SIGNIFICANCE CRITERIA**

Supplying the project site with water would have a significant environmental impact if the project would:

- Require the construction of new water supply facilities that themselves could cause significant impacts; or

- Result in or contribute to demand on the water supply system exceeding water supply entitlements.

## METHODOLOGY AND ASSUMPTIONS

### Future Water Demand

In order to assess the impact of the project on water supply, this Subsequent EIR considers the existing water demand for the City of Vallejo, water demand for buildout of the Mare Island Specific Plan (plus expansion of the Touro University campus), water demand for City-wide buildout, and water demand for other pending and approved development. As described in the Water Supply Assessment, the future water demand for the development program in the Mare Island Specific Plan would be 3,190 ac-ft/yr.

The WSA for the implementation of the Lennar Mare Island development program estimated that water use in the Fleming Hill water service area in 2004 was about 20,545 ac-ft per year.<sup>4</sup> The WSA assumed increases in water demand every five years through 2025, when total demand was estimated to be about 34,610 ac-ft per year.<sup>5</sup> The total estimated demand includes all approved and pending development projects, including the Mare Island Specific Plan and expansion of the Touro University campus on Mare Island, as well as the demands for the adjacent jurisdictions that are supplied with water by Vallejo.

These estimates were based on population growth estimates generated by the City's Traffic Model. The Traffic Model yields higher population growth projections than either the Association of Bay Area Governments projections or the projections used in the Revised Draft Environmental Impact Report for The Vallejo Station Project and The Waterfront Project.<sup>6</sup> In addition, the City used a conservative water demand factor by increasing historical average residential use by about 33 percent.<sup>7</sup> No reduction in demand is assumed during multiple dry years, a conservative approach when evidence from prior drought periods shows that water conservation has occurred in most Northern California cities.

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<sup>4</sup> Brown and Caldwell, *Water Supply Assessment for the City of Vallejo, Mare Island Redevelopment Project*, June 2005, p. 3-3.

<sup>5</sup> Brown and Caldwell, *Water Supply Assessment for the City of Vallejo, Mare Island Redevelopment Project*, June 2005, Table 4-3, p. 4-4.

<sup>6</sup> Brown and Caldwell, *Water Supply Assessment for the City of Vallejo, Mare Island Redevelopment Project*, June 2005, Appendix B.

<sup>7</sup> Brown and Caldwell, *Water Supply Assessment for the City of Vallejo, Mare Island Redevelopment Project*, June 2005, p. 3-3.

### Future Water Supply

The sources of supply identified in Table III.E-1 represent all known sources currently available to the City. The City, in conjunction with the Vallejo Sanitation and Flood Control District, has considered reclaimed water as additional supply. While reclaimed, secondary-treated water is available, studies have repeatedly shown that its distribution would be cost prohibitive.<sup>8</sup> No groundwater sources are or will be available. Lake Curry water would become available if the City constructs necessary conveyance facilities that the City believes will be provided by year 2009. Lake Curry water is not assumed to be available in the analysis of future water supply because conveyance facilities have not been designed or approved. The City's Fleming Hill WTP already has sufficient capacity to treat the projected demand.

Table III.E-2 shows a comparison of projected water demand and projected water supply reliability under three water supply scenarios: average/normal dry year, single dry-water year, and multiple dry-water years. The demand projection in Table III.E.2 is based on full build-out of the City General Plan, implementation of the Mare Island Specific Plan (including expansion of Touro University), the Waterfront Project, and the Downtown Specific Plan. As shown in Table III.E-2, it is anticipated that the City of Vallejo has sufficient water supplies to serve all existing and projected development under normal conditions. However, under drought conditions with several consecutive drought years, projected water demand would exceed the projected water availability.

**Table III.E-2: Projected Water Supply Reliability Under Drought Conditions (ac-ft/year)**

	Normal Year	Single Dry Year	Consecutive Dry Years		
			Year 1	Year 2	Year 3
Total Supply (year 2025)	43,400	37,720	37,720	35,250	32,050
Total Demand (year 2025)	34,610	34,610	34,610	34,610	34,610
Surplus or (Deficit)	8,790	3,110	3,110	640	(2,560)

Source: Brown and Caldwell, *Water Supply Assessment for the City of Vallejo, Mare Island Redevelopment Project*, Table 4-3, p. 4-4, June 2005.

It is assumed that a single dry-water year would result in a reduction in normal year supply. The surface water supplies to the City of Vallejo water systems could be further reduced during a multiple dry year scenario. For purposes of the Water Supply Assessment, for the third year of the multiple dry year scenario, it is assumed that an overall reduction to approximately 74 percent

<sup>8</sup> Brown and Caldwell, *Water Supply Assessment for the City of Vallejo, Mare Island Redevelopment Project*, June 2005, p. 2-2.



of normal year supply would occur.<sup>9</sup> These reductions in supply are incorporated in the values given in Table III.E-2.

Water conservation measures could influence the City's water demand. The City has drafted a Water Shortage Contingency Plan that it plans to adopt. This plan includes specific water conservation measures that the City would implement if the plan is adopted, such as prohibiting street washing for other than public health reasons and prohibiting uncontrolled water usage such as washing a car with a constantly running hose. These water conservation measures are expected to offset the water deficit during the third consecutive dry year.

## PROJECT IMPACTS AND MITIGATION

### **Impact E.1 Full buildout of the proposed project would result in an increased demand for water conveyance facilities. (Less than Significant)**

The buildout described by the Mare Island Specific Plan, and expansion of Touro University in Reuse Area 9, would require the improvement of existing water lines and construction of new water lines to serve the project site and connect to the City's water supply trunk lines. The Mare Island Specific Plan would provide for the development of the necessary facilities. New and improved water pipelines would be provided to accommodate the project demand under the proposed development program. Therefore, the necessary water conveyance facilities would be provided and this impact would be less than significant.

**Mitigation:** No mitigation necessary.

### **Impact E.2 Implementation of the Mare Island Specific Plan would increase the demand for water. This increase would not exceed the water supply available to the City of Vallejo in normal, single dry, or multiple dry years. (Less than Significant)**

Implementation of the Lennar Mare Island development program would include 1,400 dwelling units and approximately 9 million sq. ft. of non-residential uses. Based on this project description, and including assumptions regarding expansion of the Touro University campus, the WSA prepared in accordance with SB 610 projects a maximum water demand of 3,190 ac-ft/yr from Mare Island.<sup>10</sup> In 2005, water use by the City of Vallejo system was estimated at

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<sup>9</sup> Brown and Caldwell, *Water Supply Assessment for the City of Vallejo, Mare Island Redevelopment Project*, June 2005, p. 4-2.

<sup>10</sup> Brown and Caldwell, *Water Supply Assessment for the City of Vallejo, Mare Island Redevelopment Project*, June 2005, p. 3-7.

23,470 ac-ft/yr.<sup>11</sup> Thus, assuming no growth in the City of Vallejo except on Mare Island, demand from the project and expansion of Touro University, plus existing water demand, would total 26,660 ac-ft/yr.

In a normal climate year, the available water supply for the Vallejo Water Systems in 2025 will be 43,400 ac-ft/yr. In single and multiple dry-water years the normal year supply would likely be reduced, to as low as approximately 74 percent of normal year supply in the third year of a multiple dry year cycle.<sup>12</sup> Table III.E-3 shows that if existing water demand were combined with demand from Mare Island and an expanded Touro University, a surplus of water would be available in a single dry year as well as the third year of consecutive dry years. Table III.E-3 assumes that no reduction in demand would occur during multiple dry years, a conservative approach when evidence from prior drought periods shows that water conservation has occurred in most Northern California cities. Thus, the City’s projected water supply would be sufficient to serve the existing water demand plus that resulting from buildout of the Mare Island Specific Plan and expansion of Touro University.

**Table III.E-3: Projected Water Supply Reliability for Existing Water Demand Plus Project (ac-ft/yr)**

	Normal Year	Single Dry Year	Third Consecutive Dry Year
Total Supply (year 2025) <sup>1</sup>	43,400	37,720	32,050
Total Demand (year 2025) <sup>2</sup>	26,660	26,660	26,660
<u>Surplus or (Deficit)</u>	16,740	11,060	5,390

*Notes:*

1. WSA, Table 4-2, p. 4-3.
2. WSA, p. 3-6.

*Source:* Brown and Caldwell, *Mare Island Water Supply Assessment for the City of Vallejo, Mare Island Redevelopment Project*, June 2005; and Turnstone Consulting.

The City of Vallejo anticipates full City-wide buildout of the General Plan by 2020. Table III.E-4 shows the water supply and water demand for full City-wide buildout plus development under the Mare Island Specific Plan. Although water demand would be greater than for the projection above with growth only on Mare Island, the City’s projected water supply would be sufficient to serve the City-wide buildout water demand plus that of the Mare Island Specific Plan. Thus the impact of the project on water supply would be less than significant.

**Mitigation:** No mitigation necessary.

<sup>11</sup> Brown and Caldwell, *Water Supply Assessment for the City of Vallejo, Mare Island Redevelopment Project*, June 2005, Table 3-6, p. 3-6.

<sup>12</sup> Brown and Caldwell, *Water Supply Assessment for the City of Vallejo, Mare Island Redevelopment Project*, June 2005, p. 4-2.

**Table III.E-4: Projected Water Supply Reliability for City-wide Buildout Plus Project (ac-ft/yr)**

	Normal Year	Single Dry Year	Third Consecutive Dry Year
Total Supply (year 2025) <sup>1</sup>	43,400	37,720	32,050
Total Demand (year 2025) <sup>2</sup>	27,060	27,060	27,060
Surplus or (Deficit)	16,340	10,660	4,990

*Notes:*

1. WSA, Table 4-2, p. 4-3.
2. WSA, pp. 4-3 to 4-4.

*Source:* Brown and Caldwell, *Water Supply Assessment for the City of Vallejo, Mare Island Redevelopment Project*, June 2005; Turnstone Consulting.

**Impact E.3 Implementation of the Mare Island Specific Plan would increase the demand for water and would contribute to a cumulative water shortage in the third year of a series of multiple dry water years. (Less than Significant with Mitigation)**

In a normal climate year, the available water supply for the Vallejo Water Systems in 2025 will be 43,400 ac-ft/yr and cumulative demand from this project plus the demand from the Vallejo Station and Waterfront Projects, the Vallejo Downtown Project, and City buildout as described in the *Vallejo General Plan* would be 34,610 ac-ft/yr. Thus, water supplies would be adequate to serve the proposed project. In a single dry year, the available supplies in 2025 would exceed demand. However, in the third year of consecutive dry years, the City’s projected water supply would not be sufficient to serve cumulative projected development, including the Mare Island Specific Plan.

**Mitigation Measure E.3a:** The City could implement water conservation measures the same as or similar to those included in the draft Water Shortage Contingency Plan. Implementation of these measures would offset the water deficit in the third year of consecutive dry years.

**Mitigation Measure E.3b:** The City could construct the facilities necessary to allow use of the Lake Curry water supply. Utilization of this water supply source would provide sufficient water to serve cumulative project development in the third year of consecutive dry years without implementation of the conservation measures identified in Measure E.3a. The Lake Curry supply could be accessed by two alternative water transport systems: either a pipeline from Lake Curry to the Putah South Canal, or increased release of water to Suisun Creek. The pipeline alternative would be approximately five miles long and would be constructed below ground adjacent to Gordon Valley Road. If the alternative of releasing water to Suisun Creek were selected, the water would be withdrawn from the Creek where it crosses the Putah South Canal and conveyed to the WTP via the Canal.

Implementation of either of these alternative methods would create impacts. Short-term impacts of pipeline construction would include dust, noise, and temporary traffic disruption. Air quality impacts of dust generation could be mitigated with standard measures for dust suppression. Impacts would last a few weeks in any one location along the five miles of the pipeline route and would not result in permanent impacts to ambient noise levels or traffic.

Construction of the pipeline would also result in impacts to biological resources. Impacts to biological resources were studied at a general level along the expected pipeline route.<sup>13</sup> These impacts could include the following:

- Loss or temporary disturbance of developed, non-native grassland, and oak woodland habitats. Given the limited extent of these habitats expected to be impacted, the regional abundance of developed and non-native grassland habitats, and the lack of sizable populations of special-status species expected to occur in these habitats on the project site, impacts to these habitats would be less than significant.
- Loss of foraging habitat for various special-status animal species. Due to the minimal amount of overall habitat loss, as well as the local abundance of these habitats, there would be a less-than-significant loss of foraging habitat.
- Potential direct and indirect losses of freshwater emergent wetlands and disturbance to aquatic habitat in Suisun Creek and supporting tributaries. These impacts could be mitigated to a less-than-significant level by avoidance or replacement of these habitats.
- Potential direct loss of riparian habitat. This impact could be mitigated to a less-than-significant level by avoidance or restoration of these habitats.
- Loss or temporary disturbance to California native bunchgrass habitat. This impact could be mitigated to a less-than-significant level by avoidance or restoration of this habitat.
- Loss of or temporary disturbance to special-status plant species. Plant species that could be affected are big-scale balsamroot, Mount Diablo fairy-lantern, dwarf downingia, adobe-lily, and Brewer's western flax. This impact could be mitigated to a less-than-significant level by avoidance of occurrences of these species.
- Loss of the valley elderberry longhorn beetle. This impact could be mitigated to a less-than-significant level by avoidance of occurrences of this species or transplanted of elderberry plants to a mitigation area if they cannot be avoided by the proposed pipeline.
- Potential indirect impacts to steelhead rainbow trout. This impact could be mitigated to a less-than-significant level by minimizing impacts to water quality during the construction of the project or replacing lost steelhead rainbow trout habitat.
- Potential impacts to western pond turtles. This impact could be mitigated to a less-than-significant level by avoidance of occurrences of this species.
- Potential impacts to pallid bats. This impact could be mitigated to a less-than-significant level by avoidance of occurrences, or relocation, of this species.

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<sup>13</sup> H. T. Harvey & Associates, *City of Vallejo, Lake Curry Water Supply, Biotic Resources Assessment*, 2005.

- Potential impacts to San Francisco dusky-footed woodrats. This impact could be mitigated to a less-than-significant level by avoidance of occurrences, or relocation, of this species.

Therefore, pipeline construction impacts would be less than significant with appropriate mitigation. There would be no long term impacts from operation of the pipeline. It is not known whether changes in water levels in the reservoir due to use of the water in some years would result in impacts to biological resources within the reservoir. The City will study effects of the pipeline alternative in more detail as part of its environmental review of use of Lake Curry water.

Impacts of release to, and withdrawal from, Suisun Creek would be primarily related to the anadromous steelhead rainbow trout population in the Creek<sup>14</sup> and could potentially be significant and unavoidable. If the released water is cool (less than 70° F), such releases could benefit the federally threatened steelhead by maintaining low water temperatures, and possibly lowering water temperatures, in Suisun Creek. Conversely, the release of water 70° F or warmer would have adverse effects on steelhead. The increase in the discharge rate from two cubic feet per second (cfs) to seven cfs could potentially result in increased turbidity, which could adversely affect both steelhead and foothill yellow-legged frogs. The City will undertake more detailed environmental evaluation of this alternative.

## WASTEWATER COLLECTION AND TRANSPORT

### INTRODUCTION

The Mare Island Reuse Infrastructure Study (MIRIS), prepared in 1997 as part of the City's Reuse Plan and the adopted 1999 Specific Plan, evaluated the conditions and capacities of the water, sewer, and storm drainage systems existing at that time on Mare Island and made recommendations for the reuse of these systems based on the city Reuse Plan for Mare Island. Chapter 6 of the proposed Mare Island Specific Plan would supersede the MIRIS by incorporating the *Master Utility Plans* (MUP).<sup>15</sup> The MUP analyzes wastewater collection and transport system demand at buildout under the proposed Mare Island Specific Plan development program, discusses changed conditions that have occurred since the completion of the MIRIS, and identifies proposed wastewater collection and transport system improvements and phasing.

This section of the Subsequent EIR describes the potential wastewater collection and transport impacts of the proposed Mare Island Specific Plan. The section describes existing wastewater collection and transport facilities. The Setting describes existing wastewater collection and

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<sup>14</sup> H.T. Harvey & Associates, *City of Vallejo, Lake Curry Water Supply, Biotic Resources Assessment*, 2005.

<sup>15</sup> Chaudhary & Associates, *Mare Island Amended and Restated Specific Plan, Lennar Mare Island-Master Utility Plans*, 2005.

transport facilities both for Mare Island and for the City of Vallejo system which will receive wastewater generated on Mare Island, and summarizes applicable policies and ordinances. The Impacts and Mitigation section provides the criteria used in the analyses, presents results of the impacts analyses, and identifies mitigation measures that would reduce or eliminate the impacts where feasible.

The City's wastewater treatment capacity was analyzed in the Initial Study. The impact of the implementation of the Mare Island Specific Plan was found to be less than significant (see Appendix A to this Subsequent EIR).

## SETTING

### EXISTING WASTEWATER COLLECTION SYSTEM

The Vallejo Sanitation and Flood Control District (the "VSFCD") recently annexed Mare Island into its District and is responsible for the operation and maintenance of the sanitary sewer and stormwater system on Mare Island. The sanitary sewer wastewater is not treated on site. After wastewater is collected by gravity sewers and pump stations throughout Mare Island, it is pumped by the DOM-4 pump station through an 18-inch diameter force main<sup>16</sup> attached to the Mare Island Causeway to the VSFCD's North Interceptor, which leads to the wastewater treatment plant, located on Ryder Street in southern Vallejo. Approximately five years ago, the City upgraded the DOM-4 pump station. Although the rest of the Mare Island sanitary sewer system is currently functional, it is in very poor condition with significant infiltration and inflow problems which will require substantial replacement or relining of the system.

### REGULATORY FRAMEWORK

#### City of Vallejo General Plan Policies

The City of Vallejo General Plan Public Facilities and Other Services Element provides goals related to providing an efficient and financially sound system of urban services to protect the health, safety and general welfare of Vallejo area residents. Policies furthering these goals that are relevant to Mare Island include the following:

- Other Services Policy 1: Encourage infilling, that is, development within the urban area already served by sewer, drainage and water lines, and streets.
- Other Services Policy 2: New development should bear the costs to extend or upgrade public services and/or provide or upgrade public facilities to serve the new development proportionately to the demand generated by the new development. It is recognized that in some instances the City may also participate in the cost to extend public services and/or

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<sup>16</sup> A force main is a pipe through which liquid is forced by pumping, rather than flowing by gravity.

public facilities to areas in which such services/facilities do not currently exist when the City makes a specific finding that such an extension will benefit the community.

- Other Services Policy 3: Encourage revenue-generating uses on Mare Island to mitigate the costs of improving and maintaining public facilities and services on the Island.
- Other Services Policy 6: Sanitary and Storm Water Systems:
  - a. The number of new catch basins with debris traps should be minimized; drainage into wetlands or other sensitive areas should be first channeled through a sedimentation basin.
  - b. Subdivision designs should be reviewed to minimize the amount of impermeable surface.

### **Vallejo Sanitation and Flood Control District Standards**

The *Vallejo Sanitation and Flood Control District Guide to Existing Policies and Engineering Design Standards*<sup>17</sup> provides standards for the design of new sewer lines and for determining the adequacy of existing lines.

## **IMPACTS AND MITIGATION**

### **SIGNIFICANCE CRITERIA**

A project would normally have a significant effect on the environment if wastewater from the project would require or result in the construction of new, or expansion of existing, wastewater collection and transport facilities, and that construction would cause significant environmental impacts.

### **PROJECT IMPACTS AND MITIGATION**

#### **Impact E.4 Full buildout of the proposed project would result in an increased demand for wastewater collection and transport facilities. (Less than Significant)**

The buildout described by the Mare Island Specific Plan, plus expansion of the Touro University campus on Mare Island, would require the improvement of existing, and construction of new, sanitary sewer lines to serve the project site and connect to the City's sanitary sewer trunk lines. In Reuse Areas 1, 2a and 3a, the improvements would consist of new gravity and pressure mains in Railroad Avenue, Walnut Avenue, E Street, Pintado Street, and Nimitz Avenue, and relining the main collector line on Railroad Avenue. There would also be two new pump stations at the north end of Railroad Avenue. In Reuse Areas 2b, 3b, 4, 5, 10a and 10b, the improvements would include installing new lines in Azuar Drive, A Street, 2<sup>nd</sup> Street, Connelly Street, Walnut

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<sup>17</sup> City of Vallejo, *Vallejo Sanitation and Flood Control District Guide to Existing Policies and Engineering Design Standards*, May 2002.

III. Environmental Setting, Impacts and Mitigation  
E. Utilities

Avenue, 7<sup>th</sup> Street, 8<sup>th</sup> Street, E. Avenue, Rickover Street, Bagley Street, Oklahoma Street, Nereus Street, and 15<sup>th</sup> Street, and replacing or reactivating some existing pump stations. Improvements in Reuse Areas 6, 7, 8, and 9 would comprise two new pump stations in the North Coral Sea and Farragut Village areas, and new lines in Residential Parkway, Oklahoma Street and the North Coral Sea area, Farragut Village, and South Residential Village. The wastewater conveyance system would deliver wastewater to the existing DOM-4 pump station that was recently upgraded by the City of Vallejo and that would continue to operate.

The Mare Island Specific Plan would provide for the development of the necessary facilities, described in detail in the 2005 *Master Utility Plan*. Temporary impacts resulting from construction activities, such as dust and noise, are discussed in other sections of this Subsequent EIR, and mitigation measures are identified that would reduce impacts to less-than-significant levels. Therefore, the necessary wastewater collection and transport facilities would be provided and this impact would be less than significant.

**Mitigation:** No mitigation necessary.



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## IV. OTHER CEQA CONSIDERATIONS

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### A. GROWTH INDUCEMENT

Direct increases in employment and business, such as those of the proposed project, may induce further indirect growth in population, housing, employment outside of the Plan Area, and would induce demand for a range of other goods and services to meet the production and consumption needs of the additional economic and residential activity. Some of the induced growth would occur locally in the City of Vallejo. The remainder would likely occur within the nearby communities in Solano County.

The 1999 CEQA Documents analyzed employment, population, and housing impacts of the Reuse Plan in the Socioeconomics section. It compared the projected employment and population resulting from the Reuse Plan with anticipated growth in Vallejo's Sphere of Influence and region (within Napa and Solano Counties).<sup>1</sup> Mare Island is developed with structures totaling about 7.9 million sq. ft. of non-residential space. Approximately 3 million square feet of this existing non-residential space on Mare Island is leased and occupied by about 70 businesses, employing around 1,500 persons.<sup>2</sup>

As discussed in the Initial Study (Appendix A to this Subsequent EIR) under Population and Housing, the residential component of the Mare Island Specific Plan development program calls for substantially the same amount of residential units on Mare Island (up to 1,400 units) as analyzed by the 1999 CEQA Documents for Mare Island. Population increase in the region, beyond that already projected by the 1999 CEQA Documents, would result from persons and their families attracted to the area by the additional job opportunities created under the Mare Island Specific Plan. The Mare Island Specific Plan envisions an additional 2.72 million sq. ft. of nonresidential, employment-generating space beyond the 5.9 million sq. ft. contemplated in the Reuse Plan and 1999 Specific Plan, and assessed in the 1999 CEQA Documents. The Mare Island Specific Plan would result in the creation of about 5,450 additional jobs, attracting about 12,040 additional residents to Solano and Napa counties by the year 2020, beyond the 9,669 new Mare Island jobs and 21,327 new residents attracted to the region by those jobs, already projected by the 1999 CEQA Documents.

Construction under the proposed project would not require unusual construction methods. Construction labor requirements for the project, therefore, would be expected to be filled by the regional labor market available for construction projects in Vallejo and nearby surrounding areas.

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<sup>1</sup> 1998 EIS/EIR, Section 4.2, Socioeconomics, p. 4-6.

<sup>2</sup> Lennar Mare Island, *Progress Report*, Fall 2002, p.1.

Since the project would be phased and require standard construction practices, the project is not anticipated to attract construction labor from areas beyond the region's borders.

Given the island location of the Plan Area, roadway, infrastructure and public service improvements included in the proposed project would not open new undeveloped areas to new development other than those of the Plan Area.

## **B. CUMULATIVE IMPACTS**

Section 15130 of the *CEQA Guidelines* requires that an EIR contain a discussion of cumulative impacts. In this EIR, cumulative impacts are discussed in applicable sections of Chapter III.

## **C. SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED**

In accordance with CEQA and the State *CEQA Guidelines*, the purpose of this section is to identify significant impacts that could not be eliminated or reduced to less-than-significant levels by implementing mitigation measures included in the proposed project or identified in the EIR.

The project, with mitigation, would have the following unavoidable significant impacts:

- Impact A.2: The proposed demolition of Notable Resources would impact each of these Contributing Resources at the level of the individual resource.
- Impact A.7: The proposed project would contribute to cumulative impacts on Mare Island historical resources.
- Impact C.2: Operation including occupation and use of the development would cause long-term traffic-related emissions of ozone precursors and particulate matter.
- Impact D.5: Traffic would cause noise increases at locations near sensitive land uses.

Mitigation measures are identified for all transportation impacts in Section III.B, Transportation. Impact B.10 identifies a significant impact along State Route 37, and identifies widening the Napa River bridge from four to six lanes as mitigation. Implementation of this mitigation measure would be outside the City's jurisdiction, and the cost would be unreasonable for an individual project sponsor or local jurisdiction to bear. Therefore, this impact remains significant and unavoidable.

**D. SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD BE CAUSED BY THE PROPOSED PROJECT SHOULD IT BE IMPLEMENTED**

The following significant irreversible environmental changes would occur with the development of the proposed project:

- Development would involve irreversible use of resources to construct buildings and infrastructure, including lumber, concrete, sand, gravel, masonry, metals, and water.
- Development of buildings and infrastructure, and occupancy of these buildings would use energy resources in the form of fossil fuels, including fuel oil, natural gas, and gasoline or diesel fuel for construction equipment, automobiles, and trucks that would use the project site. The buildings would be required to comply with California Code of Regulations Title 24 energy regulations; therefore, energy would be used in an efficient manner.



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## **V. ALTERNATIVES TO THE PROPOSED PROJECT**

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This chapter identifies alternatives to the proposed Mare Island Specific Plan and discusses the environmental effects associated with the alternatives. The *California Environmental Quality Act Guidelines (CEQA Guidelines)* specify that an EIR must describe a reasonable range of alternatives to the proposed project, which could feasibly attain most of the basic project objectives. The alternatives considered should focus on elimination or reduction of significant adverse impacts caused by the proposed project. The CEQA Guidelines further state that an EIR need not consider every conceivable alternative to the project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation. An EIR is not required to consider alternatives which are infeasible.

The Alternatives chapter identifies a reasonable range of feasible alternatives to the proposed project and discusses the environmental effects associated with the alternatives in relation to impacts identified for the proposed project. The City of Vallejo must consider approval of an alternative if that alternative would substantially lessen or avoid significant environmental impacts identified for the proposed project and that alternative is determined to be feasible. The determination of feasibility will be made by the City of Vallejo.

### **A. NO PROJECT ALTERNATIVE**

CEQA requires that an EIR evaluate a No Project Alternative. The purpose of the No Project Alternative is to allow decision-makers to compare the effects of the proposed project with the effects of not approving a project. In this EIR, the No Project Alternative is analyzed under two scenarios: the No Development Alternative, and Development Under the Existing 1999 Specific Plan Alternative.

### **NO DEVELOPMENT ALTERNATIVE**

#### **DESCRIPTION**

The No Development Alternative creates no change to existing conditions. Under this alternative, Mare Island would remain in its existing condition. Existing land uses would continue in their current location and intensity. Buildings would remain largely vacant. No new land uses would be introduced. No buildings would be demolished and no new buildings would be constructed.

## **ENVIRONMENTAL ANALYSIS**

This alternative generally reflects existing physical conditions on Mare Island. If existing physical conditions in the project area were to continue into the future, the conditions described in the Setting discussion in the Transportation, Air Quality, Noise and Utilities sections of this Subsequent EIR would continue unchanged.

Over time, the No Development Alternative could result in significant impacts related to Cultural Resources. Vacant Contributing Resources would continue to be maintained in accordance with City of Vallejo Municipal Code, Section 16.28.048 which requires owners to “keep in good repair all exterior portions of such resource, all interior portions of City Landmarks, and all interior portions thereof whose maintenance is necessary to prevent deterioration and decay of any exterior architectural feature.” Without new viable uses, adequate monitoring, maintenance and security of vacant buildings cannot be sustained indefinitely into the future. Deterioration would eventually result in significant impacts to individual historical resources as well as to the Mare Island Historic District, under the No Development Alternative.

## **DEVELOPMENT UNDER THE EXISTING 1999 SPECIFIC PLAN ALTERNATIVE**

### **DESCRIPTION**

The Development Under the Existing 1999 Specific Plan Alternative (the “1999 Specific Plan Alternative”) assumes development of Mare Island would proceed according to the 1999 Specific Plan (see Table II-1 in Chapter II, Project Description). This version of the No Project Alternative allows decision makers to compare the development proposal with development that would be reasonably likely to occur under a continuation of existing 1999 Specific Plan, if the proposed Mare Island Specific Plan were not approved. This alternative was analyzed in the 1999 CEQA Documents.

## **ENVIRONMENTAL ANALYSIS**

### **Cultural Resources**

Like the proposed project, the 1999 Specific Plan envisioned reuse of the former military base as mixed-use community and major Bay Area employment center. Unlike the proposed project, the 1999 Specific Plan did not provide any specific criteria or procedures for review of proposals for demolition, new construction or alteration of buildings within the Mare Island Historic District. Also, unlike the proposed project, the 1999 Specific Plan did not include any building development program to specify the location of new construction, and reuse or demolition of Contributing Resources to the Mare Island Historic District.

Although not specifically provided for under the 1999 Specific Plan, demolition of a significant number of Contributing Resources would be required to adapt the Naval Base facility to viable new civilian uses and implement the 1999 Specific Plan development program. The reasons for demolition would be the same as those identified for demolition under the proposed project (to allow for infrastructure improvements, residential land uses, parking and laydown areas for non-residential developments, open space and off-street bikeway and pedestrian access). Like the proposed project, demolition would likely result in a significant impact to the District as a whole. Also like the proposed project, the Contributing Resources that would be demolished to effectuate the 1999 Specific Plan, would include some resources that could be considered as significant historical resources, in themselves, resulting in significant impacts to individual historical resources.

Under this alternative, development projects implementing the 1999 Specific Plan would continue to be reviewed in the absence of specific criteria and procedures for review of proposals involving Contributing Resources and for review of new construction in the District. Such an approach would not be sustainable indefinitely, with a growing number of individual development proposals. The Mare Island Specific Plan requires the establishment of “specific and detailed standards for each contributing resource.”<sup>1</sup> Environmental review of each individual development proposal under the 1999 Specific Plan would also proceed on a case-by-case basis, presenting an obstacle to consideration of the cumulative effect of loss of historic resources.

### **Transportation and Traffic**

The 1999 Specific Plan assumes implementation of all local street improvements assumed for the proposed project. In addition, the 1999 Specific Plan includes construction of a new bridge across Mare Island Strait (Southern Crossing) connecting the south part of Mare Island directly with the mainland.

All land uses on Mare Island with the 1999 Specific Plan alternative would generate approximately 7,319 vehicle trips during the p.m. peak hour. This is about 30 percent fewer trips than the 10,445 p.m. peak hour vehicle trips that would be generated by all Mare Island land uses with the proposed project.

Traffic operations were evaluated for 2020 cumulative conditions with the 1999 Specific Plan alternative. Traffic operations with existing traffic plus the 1999 Specific Plan alternative were not evaluated. Therefore, there is no direct comparison with project impacts B.1, B.2 or B.3.

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<sup>1</sup> City of Vallejo, Zoning Ordinance Chapter 16.38 “Architectural Heritage and Historic Preservation,” Section 16.38.036.

Parking, bicycle and pedestrian, transit and rail impacts for the 1999 Specific Plan alternative would be similar to those for the proposed project. Impacts B.4, B.5, B.6 and B.7 and the associated mitigation measures would also apply to the 1999 Specific Plan alternative.

Intersection operations were evaluated for 2020 conditions with the 1999 Specific Plan (Table V.A-1). The 1999 Specific Plan would cause LOS E or F operations at three intersections,

**Table V.A-1: 2020 Future Intersection Levels of Service with 1999 Specific Plan**

Intersection	Traffic Control	Peak Hour	2020 with Project (2005 Specific Plan)		2020 with 1999 Specific Plan	
			Delay	LOS	Delay	LOS
<b>On-Island:</b>						
1. Railroad Ave. & P St.	Signal	P.M.	22	C	16	B
2. Cedar (Azuar) & G St.	Signal	P.M.	24	C	17	B
3. Walnut & G St.	2-way Stop	P.M.	355	F	10	B
4. Railroad Ave. & G St.	Signal	P.M.	174	F	34	C
5. Cedar (Azuar) & 12th St.	Roundabout	P.M.	7	A	5	A
<b>Off-Island:</b>						
6. Wilson Ave. & SR 37 EB Ramps	Signal	P.M.	42	D	12	B
7. Sonoma Blvd. & Redwood St.	Signal	A.M.	20	B	20	B
		P.M.	34	C	33	C
8. Mare Island Way & Tennessee St.	Signal	A.M.	302	F	45	D
		P.M.	276	F	34	C
9. Sonoma Blvd. & Tennessee St.	Signal	P.M.	51	D	34	C
10. Broadway & Tennessee St.	Signal	P.M.	19	B	15	B
11. Tuolumne St. & Tennessee St.	Signal	P.M.	15	B	16	B
12. Tennessee St. & I-80 WB Ramps	2-way Stop	P.M.	22	C	23	C
13. Adm. Calln. Ln. & I-80 EB Ramps	2-way Stop	P.M.	383	F	423	F
14. Humboldt St. & Tennessee St.	Signal	P.M.	40	D	41	D
15. Humboldt St. & I-80 EB Ramps	2-way Stop	P.M.	232	F	221	F
16. Sonoma Blvd. & Georgia St.	Signal	P.M.	22	C	21	C
17. Sonoma Blvd. & Curtola Parkway	Signal	A.M.	62	E	22	C
		P.M.	77	E	28	C
18. Solano Ave. & Curtola Parkway	Signal	P.M.	108	F	55	E
19. Sonoma Blvd. & Solano Ave.	Signal	P.M.	22	C	18	B
20. Sonoma Blvd. & I-80 WB Ramps	Signal	P.M.	10	A	9	A
21. Mare Island Way & Capitol St.	Signal	P.M.	6	A	5	A
22. Mare Island Way & Georgia St.	Signal	P.M.	15	B	14	B

*Notes:* LOS = Level of Service  
 Delay = average stopped delay at signalized intersections, in seconds per vehicle. For unsignalized intersections, the average delay for all movements is listed first and the highest delay for an individual movement at the intersection is listed in parentheses.

*Source:* Dowling Associates, Inc. 2005.



compared with five with the proposed project. Figures V-1a and V-1b show the 2020 Future Baseline Plus 1999 Specific Plan Alternative peak hour volumes, lanes and mitigation for Mare Island and Vallejo, respectively. Compared to the proposed project, intersection Mitigation Measures B.8a (Walnut Avenue and G Street), B.8b (Railroad Avenue and G Street) and B.8c (Mare Island Way/Wilson Avenue and Mare Island Causeway/Tennessee Street) would not be necessary. Mitigation Measures B.8d (Sonoma Boulevard and Curtola Parkway), B.9a (Humboldt Street and I-80 Eastbound Ramps) and B.9b (Solano Avenue and Curtola Parkway) would still be necessary. Mitigation Measure B.8 is presented in detail on pp. III.B.37 to III.B.38.

Road segment operations were evaluated for 2020 conditions with the 1999 Specific Plan (Table V.A-2). The 1999 Specific Plan would eliminate the significant impact identified by the proposed project in the eastbound direction on SR 37 east of Mare Island. Compared to the proposed project, Mitigation Measure B.10 (widen the Napa River Bridge on SR 37 east of Mare Island) would not be necessary.

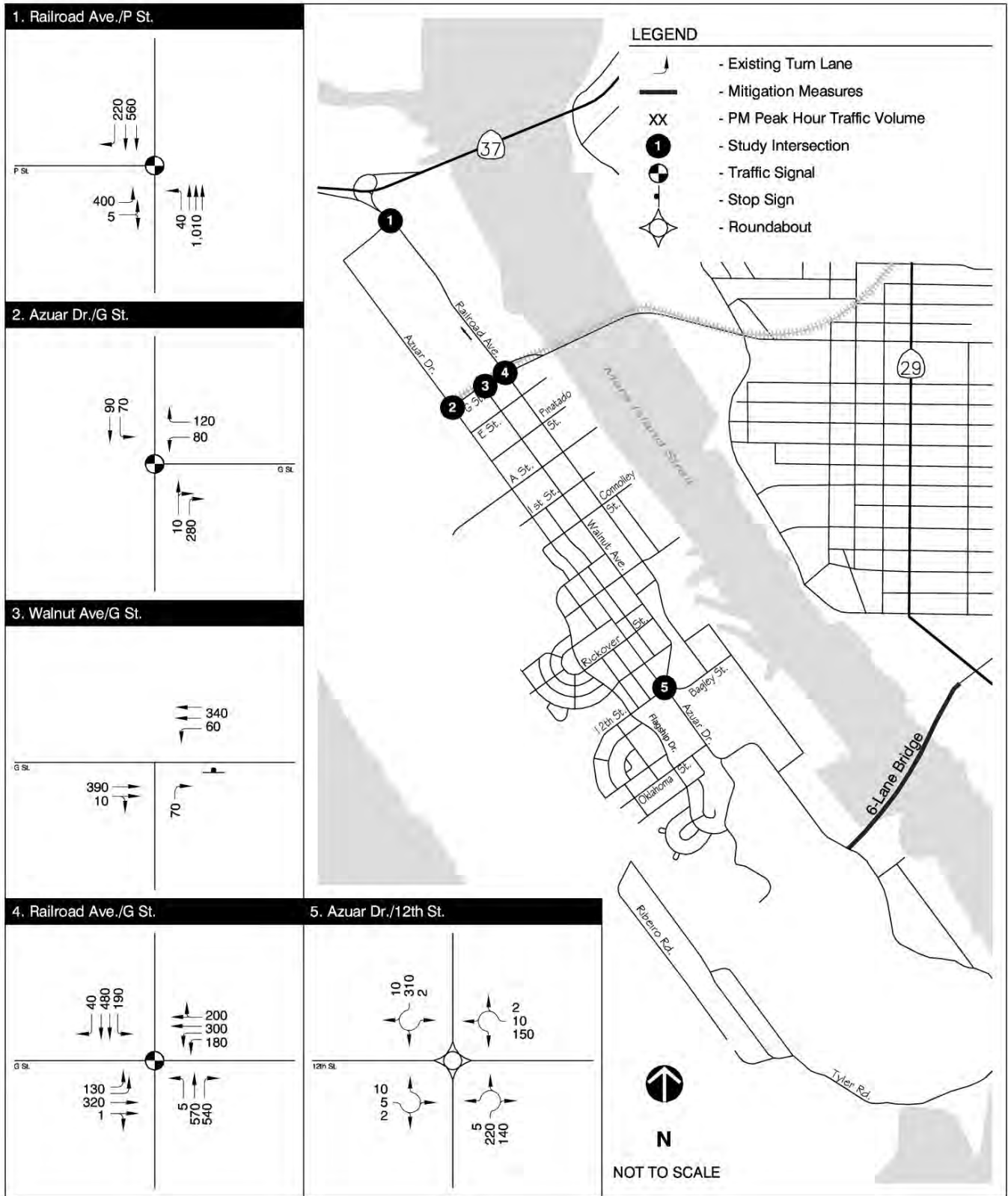
**Table V.A-2: 2020 Future P.M. Peak Hour Road Segment Levels of Service with 1999 Specific Plan**

Road Segment	Direction	Lanes	2020 with Project (2005 Specific Plan)		2020 with 1999 Specific Plan	
			Volume	LOS	Volume	LOS
<b>Freeway Segments:</b>						
I-80 N. of Tennessee	EB	3	5,590	D	5,740	D
	WB	3	5,940	E	6,000	E
SR 37 W. of Fairgrounds	EB	2	4,340	F	4,000	F
	WB	3	3,470	C	3,250	C
SR 37 W. of SR 29	EB	2	3,530	D	2,790	C
	WB	2	2,170	C	1,770	B
SR 37 E. of Mare Island	EB	2	4,560	F	3,260	D
	WB	2	2,830	D	2,020	C
<b>Local Street Segments:</b>						
Curtola Pkwy. W. of Lemon	EB	2	1,600	D	1,060	C
	WB	2	1,030	C	1,030	C
Wilson Ave. N. of Tennessee	NB	2	720	C	750	C
	SB	2	680	C	730	C
Mare Island Way W. of Marin	EB	2	1,350	D	1,280	D
	WB	2	1,300	D	1,020	C
Tennessee St. W. of Tuolumne	EB	2	830	C	830	C
	WB	2	690	C	690	C
Railroad Ave. S. of G St.	NB	3	2,110	D	1,110	C
	SB	2	1,470	D	660	C
Azuar S. of 12th St.	NB	2	1,480	D	290	C
	SB	2	760	C	170	C

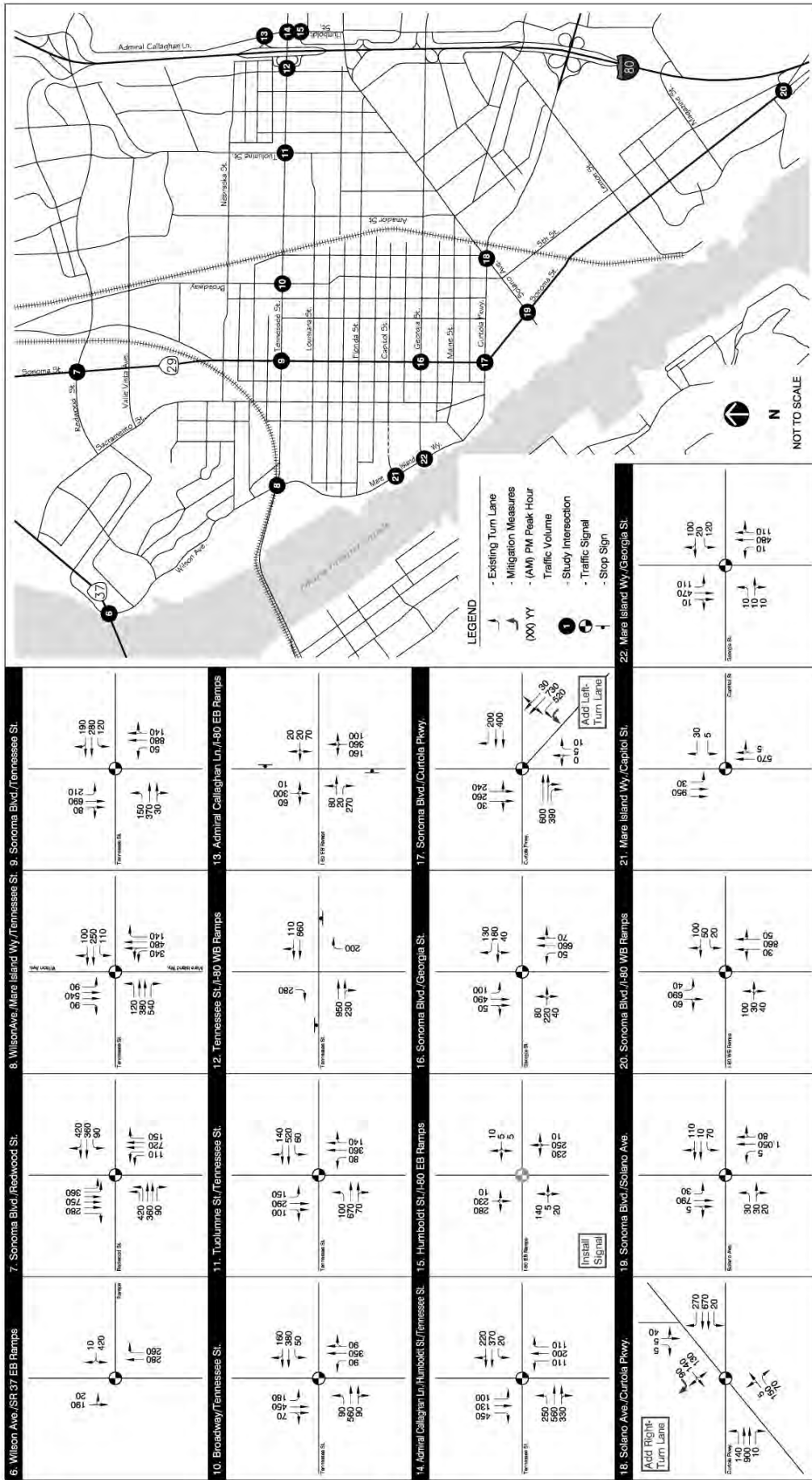
Notes: LOS = Level of Service

Under Solano County's CMP, LOS E or better is considered acceptable for freeways.

Source: Dowling Associates, Inc. 2005.



SOURCE: Fehr & Peers



SOURCE: Fehr & Peeters

TURNSTONE CONSULTING

MARE ISLAND AMENDED AND RESTATED SPECIFIC PLAN  
**FIGURE V-1b: 2020 FUTURE BASELINE PLUS 1999 SPECIFIC PLAN ALTERNATIVE PEAK HOUR VOLUMES, LANES AND MITIGATION-VALLEJO**

## Air Quality

Construction air emissions would be similar to those described for the proposed project. As with the proposed project, mitigation measures recommended by the BAAQMD identified in Mitigation Measure C.1 (implement dust control practices, pp. III.C.9 to III.C.10) would reduce significant construction air quality impacts from development under the 1999 Specific Plan to less-than-significant levels.

Motor vehicle exhaust from the traffic generated by development under the 1999 Specific Plan would contain ozone precursors and particulate matter that could cause or contribute to existing violations of ambient air quality standards, as for the proposed project. As shown in Table V.A-3, the 1999 Specific Plan would result in less emissions of ozone precursors and particulate matter than the proposed project (identified in the table as “2005 Specific Plan”), although the emissions amounts would continue to exceed BAAQMD thresholds for criteria pollutants. As with the proposed project, development under the 1999 Specific Plan would result in considerably less pollutant emissions than were emitted on Mare Island when the Shipyard was in full operation, as shown in the 1998 EIS/EIR (see Table III.C-3).

**Table V.A-3: Regional Emissions Caused by Development (tons per year)**

<b>Pollutants</b>	<b>1999 Specific Plan</b>	<b>2005 Specific Plan</b>
<b>NO<sub>x</sub></b>	<b>50.4</b>	<b>68.5</b>
<b>PM<sub>10</sub></b>	<b>132.0</b>	<b>170.6</b>
<b>CO</b>	<b>610.1</b>	<b>773.5</b>
<b>VOC</b>	<b>135.2</b>	<b>154.4</b>
<b>SO<sub>2</sub></b>	<b>1.1</b>	<b>1.4</b>

*Notes:* Based on URBEMIS2002 model.

*Source:* URBEMIS2002 Analysis, Turnstone Consulting, 2005.

Mitigation Measure C.2 (incorporate design features to reduce traffic-related emissions, pp. III.C.12 to III.C.13) identified for the proposed project would be applicable to the Existing 1999 Specific Plan Alternative. As for the proposed project, because the net emissions increase would likely remain above the significance thresholds, the impact would remain significant and unavoidable.

Table V.A-4 shows localized CO concentrations at the traffic study intersections calculated for existing conditions, for the Existing 1999 Specific Plan Alternative, and for the proposed project. All locations would be below the 1-hour and 8-hour California thresholds, which are the same as or more stringent than the federal thresholds established by the U.S. EPA. Because the present-day motor vehicle fleet causes lower levels of CO emissions than were anticipated at the time of the 1998 EIS/EIR, development under the Existing 1999 Specific Plan Alternative would remain

**Table V.A-4: Localized Carbon Monoxide Concentrations (parts per million)**

	<b>2004 Existing Conditions</b>	<b>1999 Specific Plan</b>	<b>2005 Specific Plan</b>
<b>1-Hour Concentrations</b>			
<b>Location</b>			
Wilson / SR 37 EB Ramps	5.11	4.79	5.07
Wilson / Mare Is Way / Tennessee-Causeway	5.91	5.84	7.22
Sonoma / Tennessee	7.20	6.02	6.19
Sonoma / Curtola	6.53	5.85	6.42
Sonoma / I-80 WB Ramps	5.75	5.58	5.59
Railroad / G St	4.96	5.73	7.79
Cedar / G St	4.63	4.38	5.44
<b>8-Hour Concentrations</b>			
<b>Location</b>			
Wilson / SR 37 EB Ramps	3.83	3.59	3.78
Wilson / Mare Is Way / Tennessee-Causeway	4.39	4.32	5.29
Sonoma / Tennessee	5.29	4.45	4.57
Sonoma / Curtola	4.82	4.33	4.73
Sonoma / I-80 WB Ramps	4.28	4.14	4.15
Railroad / G St	3.73	4.24	5.69
Cedar / G St	3.50	3.30	4.04

*Notes:* Assumes 2020 background CO concentrations of approximately 4.0 ppm (1-hour) and 3.0 ppm (8-hour) based on rollback method (BAAQMD 1999). California Ambient Air Quality Standards for CO: 20 ppm (1-hour) and 9 ppm (8-hour).

*Source:* BAAQMD CEQA Guidelines, Manual Method; Turnstone Consulting, 2005.

less than significant, as found for the proposed project and as determined in the 1998 EIS/EIR for the Reuse Plan alternative. No mitigation would be necessary.

Impacts from stationary sources on Mare Island and diesel emissions from truck traffic generated by uses on Mare Island would be similar to but somewhat less than described for the proposed project. Mitigation Measure C.4 (provide a buffer zone between uses with high volumes of diesel truck traffic and sensitive uses such as schools and residences, p. III.C.15) would remain applicable to the 1999 Specific Plan Alternative.

### Noise

Implementation of the 1999 Specific Plan would generate less operational and traffic noise than the proposed project. With this alternative, significant noise impacts related to the demolition and construction phases of the development program would be temporary and mitigable. As with the proposed project, locations near construction activities would likely experience noise levels temporarily above the General Plan land use compatibility criteria. Although the level of noise experienced at these locations would be less than that under the proposed project, it would still

warrant mitigation, as identified in the 1998 EIS/EIR and in Mitigation Measure D.1 (limit hours of construction, p. III.D.8), in this Subsequent EIR.

The intensity of development with this alternative would result in the generation of less traffic than the proposed project. Table V.A.5 compares traffic noise with development under the 1999 Specific Plan with traffic noise that would result with the greater level of development under the proposed Mare Island Specific Plan. Under this alternative, traffic noise levels along on-island roadways would be at least 3 dBA below those for the Mare Island Specific Plan at both measurement levels, p.m. Leq and Ldn. Furthermore, while the 60 Ldn noise threshold would be exceeded along all on-island roadways with the proposed project, traffic noise along all but one of the on-island roadways (Azuar Drive south of A St.) would be below this level with this alternative. Along all but one of the off-island roadways, traffic noise levels with this alternative would vary from existing conditions by less than 3 dBA at both measurement levels, p.m. Leq

**Table V.A-5: Summary of Traffic Noise Modeling Results**

Location	Existing 2004	1999 Specific Plan	2005 Specific Plan	Existing 2004	1999 Specific Plan	2005 Specific Plan
	p.m. Leq (dBA)	p.m. Leq (dBA)	p.m. Leq (dBA)	Ldn (dBA)	Ldn (dBA)	Ldn (dBA)
<b>On-Island Roadways</b>						
Walnut Ave. south of G St.	56.1	56.1	64.1	56.0	56.0	64.0
Azuar Drive south of A St.	—	61.4	68.3	—	61.3	68.2
Flagship Drive. south of Mesa	—	51.8	62.2	—	51.7	62.1
<b>Off-Island Roadways</b>						
Curtola Parkway east of Sonoma	65.8	66.4	67.8	65.8	66.3	67.7
Mare Island Way/Curtola west of Sonoma	65.9	67.6	68.8	65.8	67.5	68.7
Mare Island Way south of Georgia	64.7	65.5	68.0	64.6	65.4	67.9
Wilson Ave. north of Tennessee	64.8	66.2	66.2	64.7	66.1	66.1
Tennessee St. west of Sonoma	64.5	64.5	67.2	64.4	64.5	67.1
Tennessee St. east of Wilson/Mare Is Way	62.3	65.0	68.0	62.3	64.9	67.9
Mare Island Causeway west of Wilson/Mare Is Way	59.7	67.0	70.8	59.6	67.0	70.7

*Notes:* Modeling results are for locations 50 feet from roadway centerline; p.m. peak hour traffic (Leq) and average daily (Ldn) with 15 percent of traffic occurring between 10 p.m. and 7 a.m.

*Source:* Turnstone Consulting, 2005.

and Ldn. Except for traffic noise along the Mare Island Causeway west of Wilson/Mare Island Way and cumulative traffic noise at some residences along Tennessee Street east of its intersection with Mare Island Way, traffic noise increases would not be noticed by most persons as compared to the proposed project where increases equal to or greater than 3 dBA would be noticed along five out of eight roadways at both measurement levels, p.m. Leq and Ldn.

### Utilities

The Water Supply impacts of development under the 1999 Specific Plan were described in the 1999 CEQA Documents. The 1999 CEQA Documents found that “regional water supply would not be adversely affected” by implementation of the 1999 Specific Plan and that no mitigation was therefore necessary (1998 EIS/EIR, p 4-132). It also found that Mare Island water storage capacity would be sufficient with implementation of the water system improvements included as part of the 1999 Specific Plan. Since completion of the 1999 CEQA Documents, a project-specific Water Supply Assessment has been carried out that provides further information and indicates that in the third year of a series of dry-water years there would not be sufficient water to meet future demand by 2025. The demand from Mare Island would contribute to this water shortage. Although development under the 1999 Specific Plan would be less than that identified for the proposed project, resulting in less water demand than identified for the proposed project, the resulting demand would still be expected to contribute substantially to the cumulative demand for water in multiple dry years. Therefore, Impact E.3 would continue to occur and Mitigation Measures E.3a (implement water conservation measures, p. III.E.9) and E.3b (construct facilities to allow use of the Lake Curry water supply, pp. III.E.9 to III.E.10) would continue to be applicable.

The 1999 CEQA Documents found that development under 1999 Specific Plan would exceed the existing wastewater collection system capacity. Like the proposed project, improvements to the wastewater collection system under the 1999 Specific Plan were found to reduce this impact to a less-than-significant level.

## **B. HISTORIC PRESERVATION ALTERNATIVE**

### **DESCRIPTION**

As with the proposed project, the general intent of the Preservation Alternative would be to promote diverse and self-sustaining economic development and reuse on Mare Island. However, the Preservation Alternative should also substantially lessen adverse impacts on “Historical Resources” (as defined in *CEQA Guidelines* 15064.5(a)) by retaining and reusing a substantially greater proportion of Contributing Resources than under the proposed project. The characteristics of the Preservation Alternative are described below.

## Land Use Program

### Increased Residential Use in Retained Buildings

Under the Preservation Alternative, those retained Contributing Resources that would otherwise be proposed for demolition under the proposed project would be reused as multi-unit residential buildings if 2,000 square feet or larger. There are 32 such buildings in the Plan Area, totaling approximately 900,000 square feet (in Reuse Areas 2A, 2B, A, B, 4, 5, and 6). If less than 2,000 square feet, such buildings are assumed to be reused as support buildings for uses in other buildings (e.g., garages, sheds, storage) for the purposes of the Preservation Alternative.

Under the Preservation Alternative, the average size of dwelling units in a reused Contributing Resource is assumed to be 1,800 square feet. In total, the Preservation Alternative could provide approximately 500 dwelling units in addition to the 1,400 under the proposed project, as shown in Table V.B-1.

**Table V.B-1: Preservation Alternative - Additional Residential Units by Reuse Area**

Reuse Area	2A	2B	3A	3B	4	5	6	8	Plan Area Total
Proposed Project	100	0	0	129	47	0	610	514	<b>1,400</b>
Additional Units under the Preservation Alternative	86	38	102	159	27	37	51	0	<b>500</b>
<b>TOTAL</b>	<b>186</b>	<b>38</b>	<b>102</b>	<b>288</b>	<b>74</b>	<b>37</b>	<b>661</b>	<b>514</b>	<b>1,900</b>

Source: City of Vallejo and Turnstone Consulting

### Decreased Non-Residential/Non-Civic Uses

Under the Preservation Alternative, the additional building area from Contributing Buildings retained for residential use (approximately 900,000 sq. ft.) would be offset by a decrease, in the same amount, non-residential/non-civic uses. This 14 percent decrease in non-residential/non-civic uses would be distributed proportionally across all non-residential/non-civic land use categories and all reuse areas. (See **Table V.B-2: Preservation Alternative Non-Residential Building Development Program for Reuse Areas 1B-10A.**) Full build-out under the Preservation Alternative would result in a total of about 6.47 million square feet of non-residential/non-civic development in reused and new buildings in the Plan Area (Consisting of about: 1.31 million square feet of Office/R&D; 2.00 million square feet of Light Industrial; 0.14 square feet of Retail/Commercial; 0.88 million square feet of Warehouse; 1.32 million square feet of Heavy Industry; 0.81 square feet of Civic / Educational). Decreased non-residential use would result in decreased jobs creation under the Preservation Alternative.



Table V.B-2: Preservation Alternative - Non-Residential Building Development Program for Reuse Areas IB-10A

	AREA 1B	AREA 2A	AREA 2B	AREA 3A	AREA 3B	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9	AREA 10A	ALL AREAS
<b>OFFICE/ R&amp;D</b>	Reused 0	76,264	0	0	127,500	100,620	44,954	0	0	0	11,290	0	360,628
	New 0	172,044	288,100	273,760	185,540	0	0	0	0	17,200	17,200	0	953,843
<b>TOTAL</b>	0	248,308	288,100	273,760	313,040	100,620	44,954	0	0	17,200	28,490	0	1,314,471
<b>LIGHT INDUS.</b>	Reused 148,550	0	17,200	0	334,744	31,304	299,428	0	0	0	0	318,466	1,149,692
	New 31,786	86,022	124,700	136,879	263,380	0	210,700	0	0	0	0	0	853,467
<b>TOTAL</b>	180,336	86,022	141,900	136,879	598,124	31,304	510,128	0	0	0	0	318,466	2,003,158
<b>RETAIL/ COMM.</b>	Reused 0	0	0	5,171	0	55,264	12,221	2,735	0	0	0	0	75,390
	New 0	43,000	0	3,440	5,590	8,600	0	0	0	0	0	0	60,630
<b>TOTAL</b>	0	43,000	0	8,611	5,590	63,864	12,221	2,735	0	0	0	0	136,020
<b>WARE- HOUSE</b>	Reused 263,908	0	0	0	185,760	0	0	0	0	333,413	0	0	783,082
	New 0	0	0	96,750	0	0	0	0	0	0	0	0	96,750
<b>TOTAL</b>	263,908	0	0	96,750	185,760	0	0	0	0	333,413	0	0	879,832
<b>HEAVY INDUS.</b>	Reused 157,756	0	0	0	0	0	1,053,860	0	0	0	0	15,712	1,227,328
	New 0	0	0	0	0	0	0	0	0	0	0	94,600	94,600
<b>TOTAL</b>	157,756	0	0	0	0	0	1,053,860	0	0	0	0	110,312	1,321,928
<b>CIVIC</b>	Reused 0	131,245	0	0	16,900	81,003	0	25,035	0	13,625	542,890	0	810,698
	New 0	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	0	131,245	0	0	16,900	81,003	0	25,035	0	13,625	542,890	0	810,698
<b>ALL USES</b>	Reused 570,214	207,509	17,200	5,171	664,904	268,191	1,410,463	27,770	0	347,038	554,180	334,178	4,406,818
	New 31,786	301,065	412,800	510,829	454,510	8,600	210,700	0	0	17,200	17,200	94,600	2,059,290
<b>TOTAL</b>	602,000	508,574	430,000	516,000	1,119,414	276,791	1,621,163	27,770	0	364,238	571,380	428,778	6,466,108

Source: City of Vallejo and Turnstone Consulting

The totals for existing space in this table exclude the following:

- Federal Buildings: Veterans Administration clinic (Area 3); US Forest Service building (Area 9); US Army Reserve buildings (Areas 9 and 10).
- Vallejo Unified School District buildings (Area 6)

### Parking

To reduce the necessity to demolish Contributing Buildings to make room for surface parking, off-street parking requirements on Mare Island would be relaxed. The relaxed parking rate for projects that reuse Contributing Resources would be 70 percent of the amount that would otherwise be required for the same use(s) under the Mare Island Specific Plan.

### **Increased Retention of Contributing Resources**

The Preservation Alternative would call for retention of Contributing Resources as follows:

#### Unclassified Contributing Resources

Like the proposed project, all 110 Unclassified Contributing Resources in the Plan Area (Reuse Areas 10, 11, and 12) would be retained under the Preservation Alternative.

#### Landmarks

Like the proposed project, all 42 Landmarks in the Plan Area would be retained under the Preservation Alternative.

#### Notable Contributors

Under the Preservation Alternative, all of the 165 Notable Contributors in the Plan Area would be retained (under the proposed project, 82% of the 165 Notable Contributors in the Plan Area would be retained).

#### Component Contributors

Under the Preservation Alternative about 25% of the 185 Component Contributors in the Plan Area would be retained (under the proposed project, about 16% of the Component Contributors in the Plan Area would be retained). Retained Component Contributors under the Preservation Alternative would consist of the following:

- All Component Contributors in Reuse Areas 2A, 2B, 3A, and 10A: These areas are at the northern and southern periphery of the National Register Historic District. Extensive demolition in these areas would undermine the integrity of Historic District boundaries, by removing the justification for inclusion of these portions of the District.
- 10% of the Component Contributors would be retained in Reuse Areas 3B, 4, 5, 6, 8, 9 (like the proposed project).

There are no Component Contributors in Reuse Areas 1A, 1B, 7, 10B, 11, 12, and 13.

## ENVIRONMENTAL ANALYSIS

### Cultural Resources

According to CEQA Guidelines Section 15064.5(b) a project would have a significant effect on a historical resource under CEQA if it “materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance *and* that justify its inclusion in , or eligibility for inclusion, in the California Register of Historical Resources (*emphasis added*).” Thus, CEQA’s significance criteria for impacts to historical resources is one of both manner and degree: whether the proposed project would adversely alter the characteristics of the resource that convey its historical significance (i.e., its integrity); and whether such an impact on integrity is of such degree that inclusion of the historical resource in the California Register would no longer be justified.

#### Impact on the District

Like the proposed project, the Preservation Alternative would allow for demolition of a relatively large number of Contributing Resources in the District. As such, the Preservation Alternative would alter in an adverse manner, components of the District that convey its historical significance. Turning to the question of degree, the retention of all Component Contributors within Reuse Areas 2A, 2B, 3A at the northern end of the District would retain the justification for inclusion these portions of the District in the National Register Historic District. Within Reuse Areas 3B, 4, 5, 6, 8, 9, like the proposed project, the Preservation Alternative would allow for demolition of 135 Component Contributors. Demolition of Component Contributors in these areas would not rise to such a degree that inclusion of these areas in the California Register would no longer be justified. Even with demolition, these areas would continue to be anchored by a representative mix of Contributing Resources of different building types and from different eras. Therefore, unlike the proposed project, the Preservation Alternative would have a less-than-significant impact on the District.

#### Impact on Individual Resources

A significant impact to individual historical resources would be avoided under the Preservation Alternative by retention of all 42 Landmarks (like the proposed project) and retention of all 165 Notable Resources (the proposed project would retain 136 Notable Resources). Component Contributors are not considered historical resources, in themselves, under CEQA. Their significance derives from their contribution to the significance of the District. As with the proposed project, demolition of a Component Contributor would not, in itself, result in a significant impact to an individual historical resource, as would demolition of a Landmark or a Notable Resource.

## Transportation and Traffic

All land uses on Mare Island with the Historic Preservation Alternative would generate approximately 10,182 vehicle trips during the p.m. peak hour. This is about 3 percent fewer trips than the 10,445 p.m. peak hour vehicle trips that would be generated by all Mare Island land uses with the proposed project. The reduction in vehicle trips would not be significant enough to eliminate traffic impacts associated with the proposed project. Impacts and mitigation measures would be similar to those identified for the proposed project in Section III.B, Transportation.

## Air Quality

Construction air emissions would be similar to those described for the proposed project, and mitigation measures recommended by the BAAQMD identified in Mitigation Measure C.1 (implement dust control practices, pp. III.C.9 to III.C.10) would reduce significant construction air quality impacts for the Preservation Alternative to less-than-significant levels.

Motor vehicle exhaust from the traffic generated by development under the Preservation Alternative would contain ozone precursors and particulate matter that could cause or contribute to existing violations of ambient air quality standards, as for the proposed project. As with the proposed project, the emissions would exceed BAAQMD thresholds for criteria pollutants. As with the proposed project, the Preservation Alternative would result in considerably less pollutant emissions than were emitted on Mare Island when the Shipyard was in full operation, as shown in the 1998 EIS/EIR (see Table III.C-3). Mitigation Measure C.2 (incorporate design features to reduce traffic-related emissions, pp. III.C.12 to III.C.13) identified for the proposed project would be applicable to the Preservation Alternative. As for the proposed project, because the net emissions increase would likely remain above the significance thresholds, the impact would remain significant and unavoidable.

Motor vehicles would also cause CO emissions. Similar to the proposed project, CO concentrations at all locations would be below the 1-hour and 8-hour California thresholds, and the impact of CO concentrations would remain less than significant.

Emissions from stationary sources on Mare Island and diesel emissions from truck traffic generated by uses on Mare Island would be similar to those described for the proposed project; however, increased impacts could occur with the Preservation Alternative because additional residential units in high-density areas could be exposed to high levels of diesel emissions. Increased residential use, especially in Reuse Areas 2A, 3A, 3B, 4, and 5, would increase the likelihood of adverse health risks and potential nuisance conditions. This impact is characterized as Impact C.4 for the proposed project and, as with the proposed project; Mitigation Measure C.4 (provide a buffer zone between uses with high volumes of diesel truck traffic and sensitive uses

such as schools and residences, p. III.C.15) would remain applicable to the Preservation Alternative.

### **Noise**

Implementation of the Preservation Alternative would generate similar operational and traffic noise as the proposed project. With this alternative, significant noise impacts related to the demolition and construction phases of the development program would be temporary and mitigable. As with the proposed project, locations near construction activities would likely experience noise levels temporarily above the General Plan land use compatibility criteria, and the level of noise would still warrant mitigation, as identified in the 1998 EIS/EIR and in Section III.D, Noise, in this Subsequent EIR.

The intensity of development with this alternative would result in the generation of similar traffic noise levels as the proposed project, but it would result in additional residences being exposed to that noise. Additional residences in high-density reuse areas shown in Table V.B-1 could each be adversely affected by increased traffic noise. For example, additional residences on Railroad Avenue with the Preservation Alternative would likely occur with little setback (in the mixed uses of Reuse Areas 2A, 2B, 3A, 3B, 4, and 5). Additional residences within 50 feet from the centerline of Railroad Avenue, which is expected to be the primary truck route, would be exposed to approximately 70 Ldn, and additional residences along Cedar Avenue (Reuse Area 2B) would experience noticeable noise increases. Because the incremental contribution of the project would create a potentially significant impact, mitigation would be necessary to reduce these impacts to a less-than-significant level. Mitigation Measures D.5.a (use designs and traffic controls to discourage high traffic volumes and speeds, p. III.D.13), D.5b (establish noise monitoring program along the residential portions of Azuar Drive and Walnut Avenue, p. III.D.14), D.5.d1 (develop a noise insulation strategy for planned residential development adjacent to and south of Mare Island Causeway, west of Mare Island Way, p. III.D.14), and D.5.d2 (project sponsor to contribute a fair share of funding for acoustical studies and window replacement for buildings along Tennessee St. between Mare Island Way and Sonoma Boulevard, p. III.D.14) would remain applicable to the Preservation Alternative. Because the Preservation Alternative would create additional residential use in Reuse Areas 2B, 3A, and 5 that would not occur with the proposed project, Mitigation Measure D.5.c would need to be revised as described below.

#### **Mitigation Measure D.5.c (for the Preservation Alternative)**

Provide building construction and noise insulation to achieve interior noise levels of less than 45 dBA Ldn, approximately 25 dBA exterior-to-interior reduction, for high-density residential development in mixed uses of Reuse Areas 2A, 2B, 3A, 3B, 4, and 5.

## Utilities

The Water Supply impacts and mitigation measures for development under the Preservation Alternative would be generally the same as those described for the proposed project.

The Wastewater Collection impacts for development under the Preservation Alternative would be generally the same as those described for the proposed project.

## C. REUSE AREA 1A INCREASED DEVELOPMENT ALTERNATIVE

The Area 1A - Increased Development Alternative would increase the amount of development in Reuse Area 1A, adding a total of about 678,000 sq. ft. non-residential development over that of the proposed project. See **Table V.C-1: Comparison of the Proposed Project to the Area 1A Increased Development Program.**

**Table V.C-1: Comparison of the Proposed Project to the Area 1A Increased Development Program**

AREA 1A	Proposed Project	Increased Devel. Alt.	Difference
Office/R&D.	54,000	54,000	0
Light Indust.	450,000	740,000	+ 290,000
Retail	28,000	81,000	+53,000
Service Commercial	320,000	652,000	+332,000
Warehouse	370,000	371,000	+1,000
Heavy Industry	0	0	0
Edu. /Civic	16,000	16,000	0
Recreational Bldg.	0	2,000	+2,000
Federal	0	0	0
<b>TOTAL</b>	<b>1,238,000</b>	<b>1,916,000</b>	<b>+678,000</b>

Source: City of Vallejo

In all other respects, the Area 1A Increased Development Alternative would resemble the proposed project. Areas 1B through 10A would have the same development program as that of the proposed project, and the Mare Island Specific Plan would be the same (except for the development program for Reuse Area 1A).

## ENVIRONMENTAL ANALYSIS

### Cultural Resources

Only a small portion at the southernmost end of Reuse Area 1A is within the District, and contains one Contributing Resource, the Sentry House and Wall (Resource 491). Like the

proposed project, this resource would be retained. Impacts under this alternative on historical resources would be identical to those described for the proposed project.

### **Transportation and Traffic**

All land uses on Mare Island with the Increased Development Alternative would generate approximately 11,624 vehicle trips during the p.m. peak hour. This is about 11 percent more trips than the 10,445 p.m. peak hour vehicle trips that would be generated by all Mare Island land uses with the proposed project.

Traffic operations with existing traffic plus the Increased Development Alternative were not evaluated. Therefore, there is no direct comparison with project Impacts B.1, B.2 or B.3. Traffic operations for this alternative were evaluated for 2020 cumulative conditions.

Parking, bicycle and pedestrian, transit and rail impacts for the Increased Development Alternative would be similar to those for the proposed project. Impacts B.4, B.5, B.6 and B.7 and the associated mitigation measures would also apply to the Increased Development Alternative.

Intersection operations were evaluated for 2020 conditions with the Increased Development Alternative (Table V.C-2). Figures V-2a and V-2b show the 2020 Future Baseline Plus Increased Density Alternative peak hour volumes, lanes and mitigation for Mare Island and Vallejo, respectively. The Increased Development Alternative would impact the same intersections as the proposed project, and the same mitigation measures would be needed as identified in Impact and Mitigation Measures B.8 and B.9, on pp. III.B.37 to III.B.39. The following revisions/expansions to the mitigation measures needed for the proposed project would be needed for the Increased Density Alternative:

- Mitigation Measure B.8b: Railroad Avenue and G Street (Intersection 4) – The proposed project would require widening to construct a second northbound right-turn lane, a second southbound left-turn lane, a third eastbound through lane, a westbound right-turn lane, and a prohibition on future street or driveway access from G Street east of Railroad Avenue. The Increased Development Alternative would require additional widening to provide a third westbound through lane. This could result in further impacts to Historic Resource 491, as discussed on p. III.B.37.
- Mitigation Measure B.8c: Mare Island Way/Wilson Avenue and Mare Island Causeway/Tennessee Street (Intersection 8) – The proposed project would require widening and restriping to provide two northbound left-turn lanes, a shared left-through lane, a through lane, a right-turn lane, and reconfiguring southbound departure lanes to allow free right-turn movement from the Causeway. The Increased Development Alternative would require additional widening to provide a third westbound through lane.
- Mitigation Measure B.8d: Sonoma Boulevard and Curtola Parkway (Intersection 17) – The proposed project would require widening the northbound approach to provide two northbound left-turn lanes, one through lane and a shared through-right lane. The

Increased Development Alternative would require additional widening of the southbound approach to provide an exclusive left-turn lane in addition to the existing shared left-through and shared through-right lanes.

**Table V.C-2: 2020 Future Intersection Levels of Service with Increased Development Alternative**

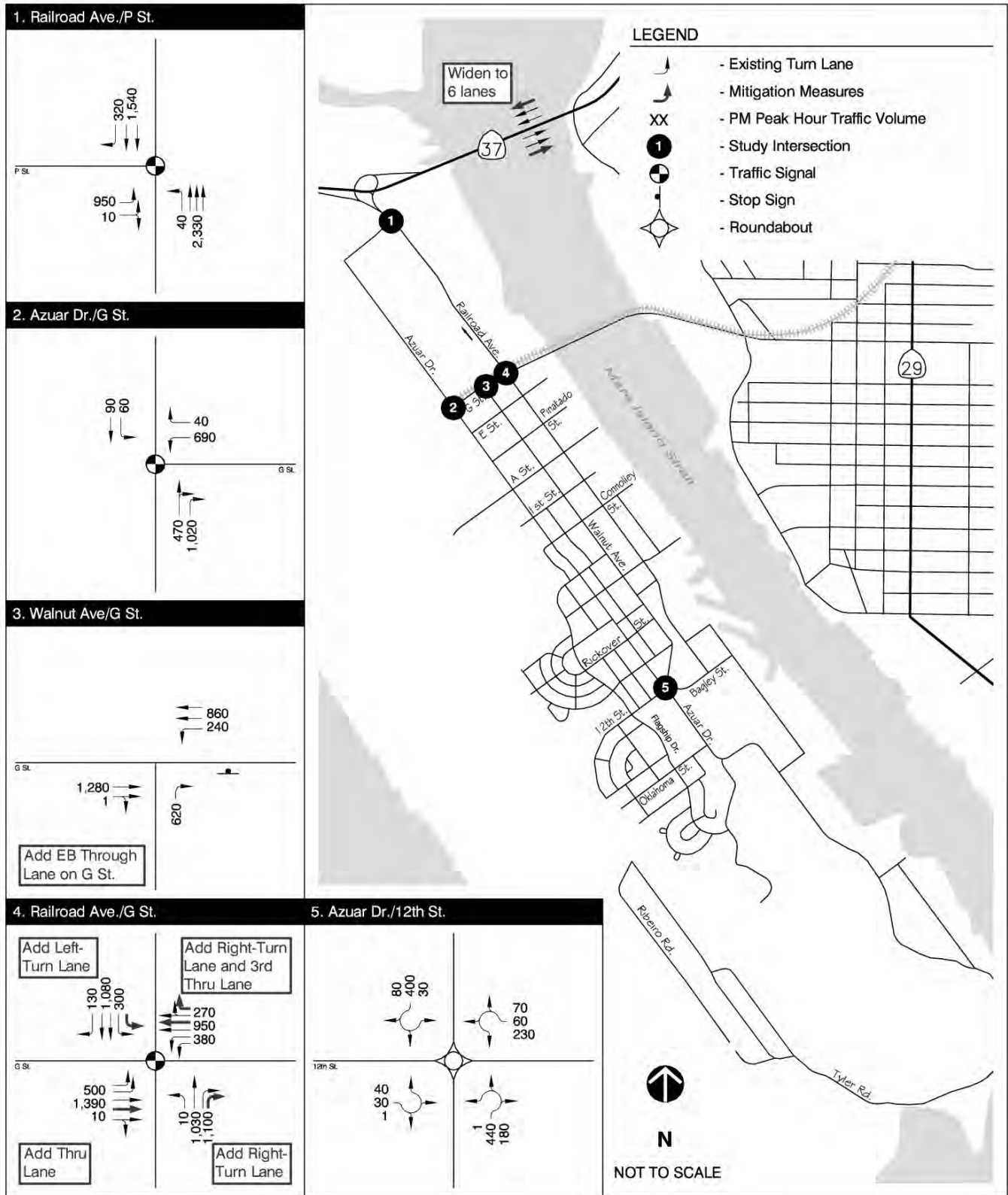
Intersection	Traffic Control	Peak Hour	2020 With Project (2005 Specific Plan)		2020 With Increased Development Alternative	
			Delay	LOS	Delay	LOS
<b>On-Island:</b>						
1. Railroad Ave. & P St.	Signal	P.M.	22	C	29	C
2. Cedar (Azuar) & G St.	Signal	P.M.	24	C	24	C
3. Walnut & G St.	2-way Stop	P.M.	355	F	379	F
4. Railroad Ave. & G St.	Signal	P.M.	174	F	224	F
5. Cedar (Azuar) & 12th St.	Roundabout	P.M.	7	A	7	A
<b>Off-Island:</b>						
6. Wilson Ave. & SR 37 EB Ramps	Signal	P.M.	42	D	63	E
7. Sonoma Blvd. & Redwood St.	Signal	A.M.	20	B	20	B
		P.M.	34	C	34	C
8. Mare Island Way & Tennessee St.	Signal	A.M.	302	F	360	F
		P.M.	276	F	323	F
9. Sonoma Blvd. & Tennessee St.	Signal	P.M.	51	D	49	D
10. Broadway & Tennessee St.	Signal	P.M.	19	B	19	B
11. Tuolumne St. & Tennessee St.	Signal	P.M.	15	B	15	B
12. Tennessee St. & I-80 WB Ramps	2-way Stop	P.M.	22	C	22	C
13. Adm. Calln. Ln. & I-80 EB Ramps	2-way Stop	P.M.	383	F	379	F
14. Humboldt St. & Tennessee St.	Signal	P.M.	40	D	40	D
15. Humboldt St. & I-80 EB Ramps	2-way Stop	P.M.	232	F	236	F
16. Sonoma Blvd. & Georgia St.	Signal	P.M.	22	C	22	C
17. Sonoma Blvd. & Curtola Parkway	Signal	A.M.	62	E	100	F
		P.M.	77	E	100	F
18. Solano Ave. & Curtola Parkway	Signal	P.M.	108	F	114	F
19. Sonoma Blvd. & Solano Ave.	Signal	P.M.	22	C	47	D
20. Sonoma Blvd. & I-80 WB Ramps	Signal	P.M.	10	A	10	B
21. Mare Island Way & Capitol St.	Signal	P.M.	6	A	7	A
22. Mare Island Way & Georgia St.	Signal	P.M.	15	B	13	B

*Notes:* LOS = Level of Service

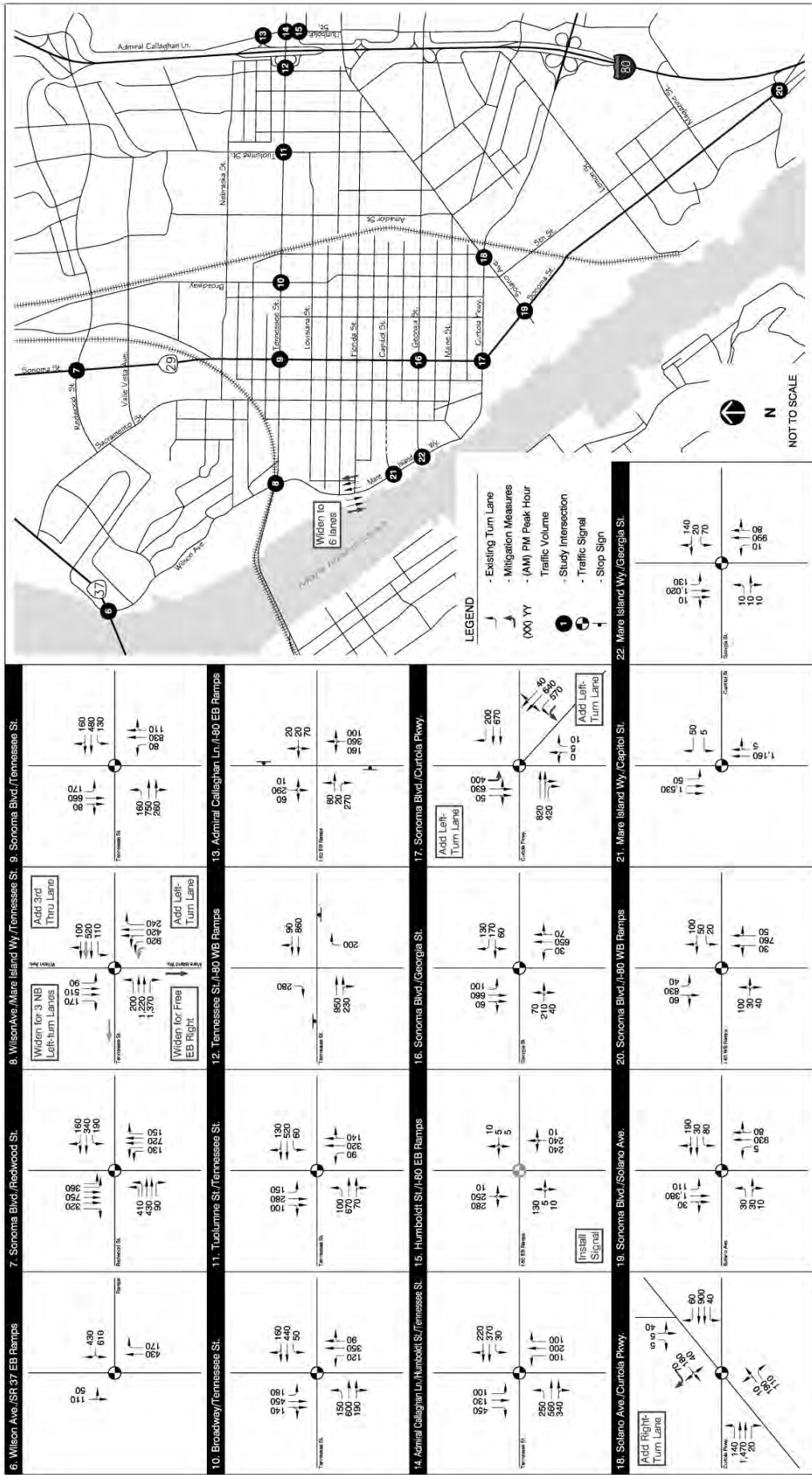
Delay = average stopped delay at signalized intersections, in seconds per vehicle. For unsignalized intersections, the average delay for all movements is listed first and the highest delay for an individual movement at the intersection is listed in parentheses.

*Source:* Dowling Associates, Inc. 2005.





SOURCE: Fehr & Peers



SOURCE: Fehr & Peeters

TURNSTONE CONSULTING

MARE ISLAND AMENDED AND RESTATED SPECIFIC PLAN  
**FIGURE V-2b: 2020 FUTURE BASELINE PLUS INCREASED DENSITY ALTERNATIVE PEAK HOUR VOLUMES, LANES AND MITIGATION- VALLEJO**

Road segment operations were evaluated for 2020 conditions with the Increased Development Alternative (Table V.C-3). The Increased Development Alternative would impact the same road segments as the proposed project. Mitigation for road segment impacts for the Increased Development Alternative would be the same as for the proposed project (Impact and Mitigation Measure B.10 [SR 37 east of Mare Island]).

**Table V.C-3: 2020 Future P.M. Peak Hour Road Segment Levels of Service with 1999 Specific Plan**

Road Segment	Direction	Lanes	2020 with Project (2005 Specific Plan)		2020 With Increased Development Alternative	
			Volume	LOS	Volume	LOS
<b>Freeway Segments:</b>						
I-80 N. of Tennessee	EB	3	5,590	D	5,540	D
	WB	3	5,940	E	5,940	E
SR 37 W. of Fairgrounds	EB	2	4,340	F	4,430	F
	WB	3	3,470	C	3,500	C
SR 37 W. of SR 29	EB	2	3,530	D	3,750	E
	WB	2	2,170	C	2,290	C
SR 37 E. of Mare Island	EB	2	4,560	F	5,050	F
	WB	2	2,830	D	3,080	D
<b>Local Street Segments:</b>						
Curtola Pkwy. W. of Lemon	EB	2	1,600	D	1,530	D
	WB	2	1,030	C	1,050	C
Wilson Ave. N. of Tennessee	NB	2	720	C	740	C
	SB	2	680	C	830	C
Mare Island Way W. of Marin	EB	2	1,350	D	1,410	D
	WB	2	1,300	D	1,360	D
Tennessee St. W. of Tuolumne	EB	2	830	C	830	C
	WB	2	690	C	690	C
Railroad Ave. S. of G St.	NB	3	2,110	D	2,150	D
	SB	2	1,470	D	1,470	D
Azuar S. of 12th St.	NB	2	1,480	D	1,480	D
	SB	2	760	C	780	C

Notes: LOS = Level of Service

Under Solano County's CMP, LOS E or better is considered acceptable for freeways.

Source: Dowling Associates, Inc. 2005.

### Air Quality

Construction air emissions would be similar to those described for the proposed project. As with the proposed project, mitigation measures recommended by the BAAQMD identified in Mitigation Measure C.1 (implement dust control practices, p. III.C.9 to III.C.10) would reduce significant construction air quality impacts from development under the Increased Development Alternative to less-than-significant levels.

Motor vehicle exhaust from the traffic generated by development under the Increased Development Alternative would contain ozone precursors and particulate matter that could cause or contribute to existing violations of ambient air quality standards, as for the proposed project. As shown in Table V.C-4, the Increased Development Alternative would result in greater levels of emissions of ozone precursors and particulate matter than the proposed project (less than 10 percent higher than the proposed project). The emissions amounts would similarly exceed BAAQMD thresholds for criteria pollutants. As with the proposed project, development under the Increased Development Alternative would result in considerably less pollutant emissions than were emitted on Mare Island when the Shipyard was in full operation, as shown in the 1998 EIS/EIR (see Table III.C-3).

**Table V.C-4: Regional Emissions Caused by Development in Alternative C (tons per year)**

<b><u>Pollutants</u></b>	<b><u>2005 Specific Plan</u></b>	<b><u>Increased Development Alt.</u></b>
<b>NO<sub>x</sub></b>	<b>68.5</b>	<b>73.4</b>
<b>PM<sub>10</sub></b>	<b>170.6</b>	<b>180.5</b>
<b>CO</b>	<b>773.5</b>	<b>816.4</b>
<b>VOC</b>	<b>154.4</b>	<b>159.2</b>
<b>SO<sub>2</sub></b>	<b>1.4</b>	<b>1.5</b>

*Notes:* Based on URBEMIS2002 model.

*Source:* URBEMIS2002 Analysis, Turnstone Consulting, 2005.

Mitigation Measure C.2 (incorporate design features to reduce traffic-related emissions, pp. III.C.12 to III.C.13) identified for the proposed project would be applicable to the Increased Development Alternative. As for the proposed project, because the net emissions increase would likely remain above the significance thresholds, the impact would remain significant and unavoidable.

The additional development in Area 1A would result in additional vehicle trips compared to the proposed project. These additional vehicle trips would result in increases in localized CO emissions at nearby intersections. As shown in Table V.C-5, the increased traffic would not result in any exceedances of the California 1-hour or 8-hour standards for CO emissions at any study location. Therefore, as with the proposed project, the alternative would not result in a significant CO impact, and no mitigation measures would be necessary.

Impacts from stationary sources on Mare Island and diesel emissions from truck traffic generated by uses on Mare Island would be similar to but greater than described for the proposed project. Mitigation Measure C.4 (provide a buffer zone between uses with high volumes of diesel truck traffic and sensitive uses such as schools and residences, p. III.C.15) would remain applicable to the Increased Development Alternative.

**Table V.C-5: Localized Carbon Monoxide Concentrations (parts per million)**

	<b>2004 Existing Conditions</b>	<b>2005 Specific Plan</b>	<b>Increased Development Alt.</b>
<b>1-Hour Concentrations</b>			
<b>Location</b>			
Wilson / SR 37 EB Ramps	5.11	5.07	5.14
Wilson / Mare Is Way / Tennessee-Causeway	5.91	7.22	7.44
Sonoma / Tennessee	7.20	6.19	6.18
Sonoma / Curtola	6.53	6.42	6.48
Sonoma / I-80 WB Ramps	5.75	5.59	5.62
Railroad / G St	4.96	7.79	7.97
Azuar / G St	4.63	5.44	5.46
<b>8-Hour Concentrations</b>			
<b>Location</b>			
Wilson / SR 37 EB Ramps	3.83	3.78	3.83
Wilson / Mare Is Way / Tennessee-Causeway	4.39	5.29	5.44
Sonoma / Tennessee	5.29	4.57	4.56
Sonoma / Curtola	4.82	4.73	4.77
Sonoma / I-80 WB Ramps	4.28	4.15	4.17
Railroad / G St	3.73	5.69	5.81
Azuar / G St	3.50	4.04	4.06

*Notes:* Assumes 2020 background CO concentrations of approximately 4.0 ppm (1-hour) and 3.0 ppm (8-hour) based on rollback method (BAAQMD 1999). California Ambient Air Quality Standards for CO: 20 ppm (1-hour) and 9 ppm (8-hour).

*Source:* BAAQMD CEQA Guidelines, Manual Method; Turnstone Consulting, 2005.

## Noise

Construction and operational noise would be the same as or similar to that identified for the proposed project in Section III.D, Noise; mitigation measures identified for the proposed project would be applicable to the Increased Development Alternative and would reduce impacts to less-than-significant levels.

The Increased Development Alternative would result in more vehicle trips than the proposed project and would cause further increases in noise levels above those identified for development under the Mare Island Specific Plan in some locations. Table V.C-6 compares traffic generated noise from the proposed project with traffic-generated noise from the Increased Development Alternative. As shown in the table, noise levels on Mare Island in residential areas would be essentially the same as those shown for the proposed project, as the additional vehicle trips would be generated in Reuse Area 1A, north of the residential areas in the Mare Island Specific Plan. Therefore, noise impacts to residential areas on Mare Island would be the same as those identified in Section III.D, Noise, Impact D.5, and would be significant and unmitigable. Traffic-generated noise adjacent to roadways studied on the mainland would be less than 1 dBA Leq greater during the p.m. peak hour and the day-night average would be less than 1 dBA Ldn greater than shown for the proposed project. This difference between the proposed project and the Increased

**Table V.C-6: Summary of Traffic Noise Modeling Results – Alternative C**

Location	2005 Specific Plan	Increased Development Alt.	2005 Specific Plan	Increased Development Alt.
	p.m. Leq (dBA)	p.m. Leq (dBA)	Ldn (dBA)	Ldn (dBA)
<b>On-Island Roadways</b>				
Walnut Ave. south of G St.	64.1	64.1	64.0	64.0
Azuar Dr. south of A St.	68.3	68.3	68.2	68.2
Flagship Drive. south of Mesa	62.2	62.1	62.1	62.0
<b>Off-Island Roadways</b>				
Curtola Parkway east of Sonoma	67.8	68.0	67.7	67.9
Mare Island Way/Curtola west of Sonoma	68.8	68.7	68.7	68.6
Mare Island Way south of Georgia	68.0	68.1	67.9	68.0
Wilson Ave. north of Tennessee	66.2	66.4	66.1	66.3
Tennessee St. west of Sonoma	67.2	67.3	67.1	67.2
Tennessee St. east of Wilson/Mare Is. Way	68.0	68.3	67.9	68.2
Mare Island Causeway west of Wilson/Mare Is. Way	70.8	71.1	70.7	71.0

*Notes:* Modeling results are for locations 50 feet from roadway centerline; p.m. peak hour traffic (Leq) and average daily (Ldn) with 15 percent of traffic occurring between 10 p.m. and 7 a.m.

*Source:* Turnstone Consulting, 2005.

Development Alternative would not be noticeable; however, the increase compared to existing noise conditions along these roadways would be substantial, as for the proposed project, and the impact would remain significant. Mitigation Measures D.5a through D.5.d.2 (see p. V.17 for a summary of these measures) would remain applicable to the alternative.

### Utilities

The Increased Development Alternative would result in a demand for about 185 ac-ft/yr more water than the demand calculated for the proposed project, resulting in a total water demand for Mare Island of about 3,375 ac-ft/yr. This is an approximate 6% increase. Therefore, this alternative would contribute to further water supply deficits in later years of a series of multiple dry years, and the cumulative impacts described for the proposed project in Impact E.3 would remain applicable to the alternative. Mitigation Measures E.3a or E.3b, either to implement conservation measures or to make water from Lake Curry available for use, identified for the proposed project, would apply to this alternative and would reduce impacts to a less-than-significant level.

The Wastewater Collection impacts for development under the Increased Development Alternative would be generally the same as those described for the proposed project.

#### **D. ENVIRONMENTALLY SUPERIOR ALTERNATIVE**

An EIR is required to identify the environmentally superior alternative from among the range of reasonable alternatives that are evaluated. The *CEQA Guidelines* require that an environmentally superior alternative be designated and states that “if the environmentally superior alternative is the no project alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.”

Based on the review of the alternatives evaluated in this chapter, the Historic Preservation Alternative would be considered environmentally superior to the proposed project due to the reduction in significant impacts to cultural resources.





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## VI. AUTHORS AND PERSONS CONSULTED

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### EIR AUTHORS

City of Vallejo  
555 Santa Clara Street  
Vallejo, CA 94590  
Development Services Department  
Planning Division

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Senior Planner:	Michelle Hightower
Associate Planner:	Katherine Donovan

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Jay Claiborne, Principal

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**APPENDIX A: INITIAL STUDY**

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## NOTICE OF PREPARATION

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**TO:** Whom It May Concern

**SUBJECT:** Notice of Preparation of a Draft Subsequent Environmental Impact Report for the Proposed Mare Island Amended and Restated Specific Plan

This notice is to inform you that the City of Vallejo Development Services Department, Planning Division, the Lead Agency, will prepare a Subsequent Environmental Impact Report (SEIR) for the project identified below:

Project Title: Mare Island Amended and Restated Specific Plan  
Project Applicant/Owner: Lennar Mare Island, LLC, a California corporation  
Project Location: Mare Island, Vallejo, California; Solano County

**Project Description:**

The proposed project is to amend and restate the 1999 *Mare Island Specific Plan* with the 2003 *Mare Island Specific Plan* by adopting a General Plan Amendment and the Amended and Restated Specific Plan. The Amendment generally consists of a development program similar to that in the current 1999 Specific Plan, including an additional 2.7 million sq. ft. of development potential.

**Lead Agency:** City of Vallejo  
Development Services Department, Planning Division  
555 Santa Clara Street - P.O. Box 3068  
Vallejo, CA 94590

**Initial Study:** The detailed project description, location, and the potential environmental effects are contained in the attached Initial Study. The City of Vallejo would like to know your views as to the scope and content that should be included in the SEIR.

**Posting Period:** Due the time limits mandated by State law, your response must be sent at the earliest possible date, but not later than 30 days after receipt of this notice, or September 17, 2003. Comments should be directed to Michelle Hightower, City of Vallejo, Senior Planner at the lead agency's address noted above.

**Public Scoping Meeting:** The City of Vallejo Development Services Department, Planning Division has scheduled a public scoping meeting for the project on Thursday, October 2, 2003, 7:00 P.M. at 375 "G" Street, (Mare Island Marketing Center), Mare Island, Vallejo, CA 94592.

Posting Period: 9/18/03 – 10/18/03

Prepared by:

Michelle Hightower, Senior Planner  
(707) 648-4506



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**CITY OF VALLEJO**  
**INITIAL STUDY**  
**ENVIRONMENTAL CHECKLIST FORM**

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**1. PROJECT TITLE:** Mare Island Specific Plan, Amended and Restated

*(Note that throughout this Initial Study document, the term “Amended and Restated Specific Plan” shall mean the proposed draft Mare Island Specific Plan, Amended and Restated. The term “1999 Specific Plan” shall mean the Mare Island Specific Plan, as adopted on March 10, 1999.)*

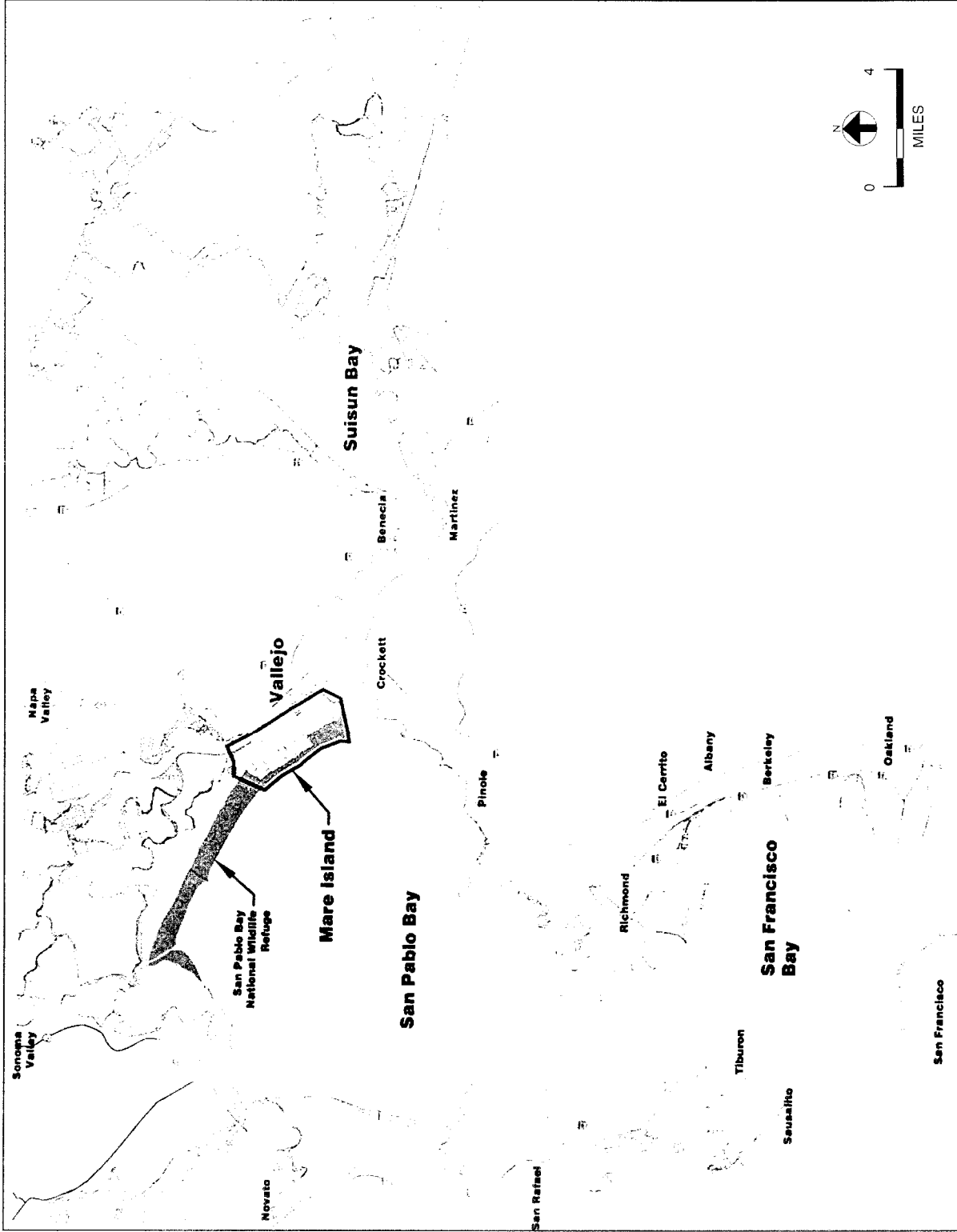
**2. LEAD AGENCY NAME AND ADDRESS:** City of Vallejo Development Services  
Planning Division  
Vallejo City Hall, 2nd Floor  
555 Santa Clara Street  
Vallejo, CA 94590

**3. CONTACT PERSON AND PHONE NUMBER:** Michelle Hightower  
Senior Planner  
(707) 648-4506

**4. PROJECT LOCATION:**

Mare Island Naval Shipyard (“Mare Island”) is located within the incorporated boundaries of the City of Vallejo, in southwestern Solano County, approximately 30 miles northeast of San Francisco. (See Figure 1: Mare Island Regional Location.) The two existing points of access are from State Route 37, the primary route across the North Bay connecting U.S. Route 101 and Interstate 80, and across the Mare Island Causeway from Tennessee Street, one of Vallejo’s main arterials and a primary connection with Interstate 80.

The island is approximately 3.5 miles long by 1 mile wide, comprising approximately 5,250 acres. It is relatively flat, ranging in elevation from sea level to 284 feet above sea level at the southern end with a ridgeline running north-south near the center of the island. The area included in the Amended and Restated Specific Plan (the “Plan Area”) is bordered by the San Pablo National Wildlife Refuge and Route 37 to the north, Mare Island Strait on the east, Carquinez Strait on the south, and San Pablo Bay on the west. The Plan Area includes the Causeway from Mare Island to Tennessee Street, the Main entrance at the Eastern end of the Causeway, the rail spur that extends from the island to the mainland, and a bulkhead extending from Sandy Beach into Mare Island Strait.



SOURCE: SWA

TURNSTONE CONSULTING

MARE ISLAND AMENDED AND RESTATED SPECIFIC PLAN

FIGURE 1: MARE ISLAND REGIONAL LOCATION

5. **PROJECT SPONSOR'S NAME AND ADDRESS:** Lennar Mare Island  
900 Walnut Avenue, Quarters D  
Mare Island, Vallejo, CA 94592  
(707) 562-4000

6. **GENERAL PLAN DESIGNATION:**

Mare Island currently has various General Plan land use designations, including "Employment," "Commercial - General," "Commercial - Waterfront," "Residential - Medium Density," "Open Space - Community Park," and "Open Space - Wetlands."

7. **ZONING:**

The upland portions of the island are zoned MUPD, Mixed Use Planned Development. The wetlands and dredge areas are zoned RC, Resource Conservation.

8. **DESCRIPTION OF THE PROJECT:**

Amend and restate the 1999 *Mare Island Specific Plan* with the 2003 *Mare Island Specific Plan* by adopting a General Plan Amendment, and the Amended and Restated Specific Plan.

**Background**

After presidential approval and congressional acceptance of the closure of Mare Island in October of 1993, the City of Vallejo (the "City") conducted a community - based planning process for Mare Island's reuse that resulted in the *Final Mare Island Reuse Plan* (the "Reuse Plan"). In July of 1994, the Vallejo City Council accepted the Reuse Plan as the guiding document for reuse activities on Mare Island.<sup>1</sup> (Notes appear at end of document.) In November of 1998, the City Council certified the *Final Environmental Impact Statement /Environmental Impact Report for Disposal and Reuse of Mare Island Naval Shipyard* (the "1998 EIS/EIR").<sup>2</sup> The 1998 EIS/EIR identified the significant impacts resulting from the Reuse Plan and mitigation measures that would lessen or avoid significant impacts and considered alternatives to the Reuse Plan. **(See Exhibit 1 to this Initial Study: Mitigation Monitoring and Reporting Program (MMRP) from the 1999 CEQA Documents).**

In March of 1999, the City Council adopted the *Mare Island Specific Plan* (the "1999 Specific Plan").<sup>3</sup> The 1999 Specific Plan incorporated all of the relevant mitigation measures identified in the 1999 CEQA Documents (except those related to impacts resulting from relocation of the rifle range, since this use would not be allowed anywhere on Mare Island under the 1999 Specific Plan). Building upon the Reuse Plan as its conceptual basis, the 1999 Specific Plan included additional detail in describing land use policies, allowable land uses and development standards for urban design. It described the then-existing transportation, infrastructure and community services conditions and made recommendations for improvements that would be required to serve the island through its conversion to civilian uses. The



13 reuse areas identified in the 1999 Specific Plan are based on those of the Reuse Plan. The 1999 Specific Plan also identified wetland and dredge pond areas located on the west side of the island (see Figure 2: 1999 Specific Plan Reuse Areas). It specified allowable land uses and a development program based on a general understanding of existing facilities and resources.

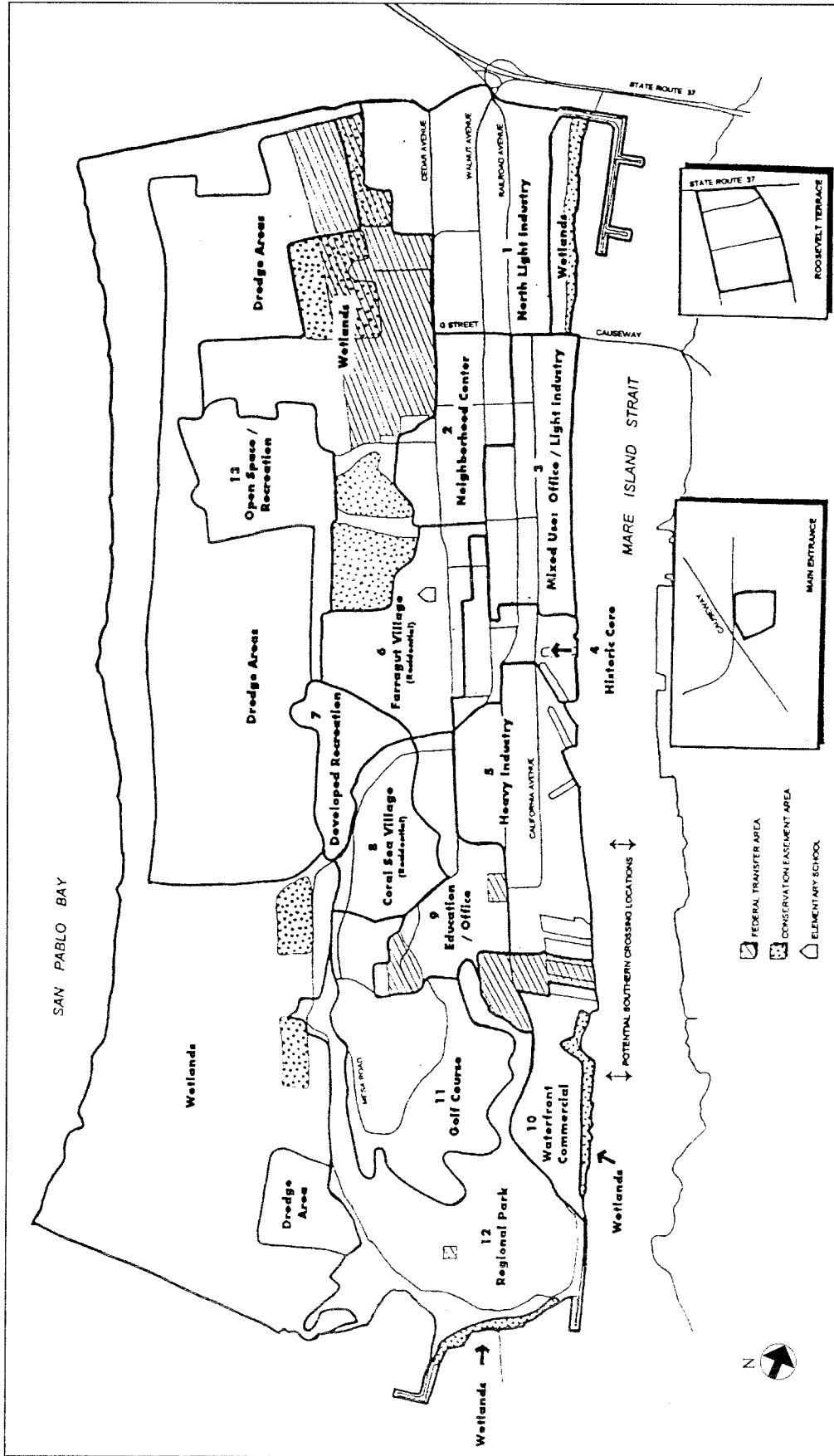
In adopting the 1999 Specific Plan, the City Council approved an *Addendum to the Final Environmental Impact Statement / Environmental Impact Report for Disposal and Reuse of Mare Island Naval Shipyard* (the “1999 Addendum”).<sup>4</sup> In the Addendum, the City of Vallejo Development Services Department determined that the 1999 Specific Plan did not represent a substantial change from the Reuse Plan, that there were no new significant impacts resulting from the project not already analyzed by the 1998 EIS/EIR, and that the 1999 Specific Plan would eliminate, or lessen the significance of, significant impacts identified in the 1998 EIS/EIR. The Addendum was adopted by the Vallejo City Council. Thus, the 1998 EIS/EIR, together with the 1999 Addendum, constitute the environmental review for the 1999 Specific Plan under CEQA (collectively referred to as the “1999 CEQA Documents”).

The City has selected Lennar Mare Island (“Lennar”) as the Master Developer of Reuse Areas 1B through 10A. In March of 2002, the 650-acre “Eastern Early Transfer Parcel” was transferred from the Navy to the City and then to Lennar Mare Island. In addition, most of Reuse Area 10A and the waterfront area will be leased from the California State Lands Commission to the City, which will sublease it to Lennar Mare Island. Reuse Area 1A, currently owned by the City, will be conveyed to a selected private developer and may require separate General Plan and Specific Plan amendments. Ownership of the golf course, Reuse Area 11, has been transferred to a new owner/operator and will continue to be used as a public golf course.

Public entities that own or control property on Mare Island, or will own or control upon completion of the transfer process include: the U.S. Forest Service (building 505 in Reuse Area 9); U.S. Fish and Wildlife Service (a portion of the wetlands area at the northern end of the island); the U.S. Army Reserve (Reuse Area 10B and a building in Reuse Area 9); the Veterans Administration (a building in Reuse Area 3B); the California State Lands Commission (wetlands and dredge disposal areas on the western portion of the island, Reuse Areas 12 and 13; Reuse Area 10A; and the waterfront); the City of Vallejo (an area of wetlands adjacent to Reuse Areas 6 and 2B); and the Vallejo Unified School District (school buildings in Reuse Area 6). Federal and State properties are not subject to local regulatory jurisdiction.

### **Proposed Amended and Restated Specific Plan**

Lennar proposes to amend and restate the adopted 1999 Specific Plan. The proposed *Mare Island Specific Plan, Amended and Restated* (the “Amended and Restated Specific Plan”)<sup>5</sup> if adopted, would replace and supercede the 1999 Specific Plan.<sup>6</sup> The Amended and Restated Specific Plan builds upon,



SOURCE: City of Vallejo

MARE ISLAND AMENDED AND RESTATED SPECIFIC PLAN  
**FIGURE 2: 1999 SPECIFIC PLAN REUSE AREAS**

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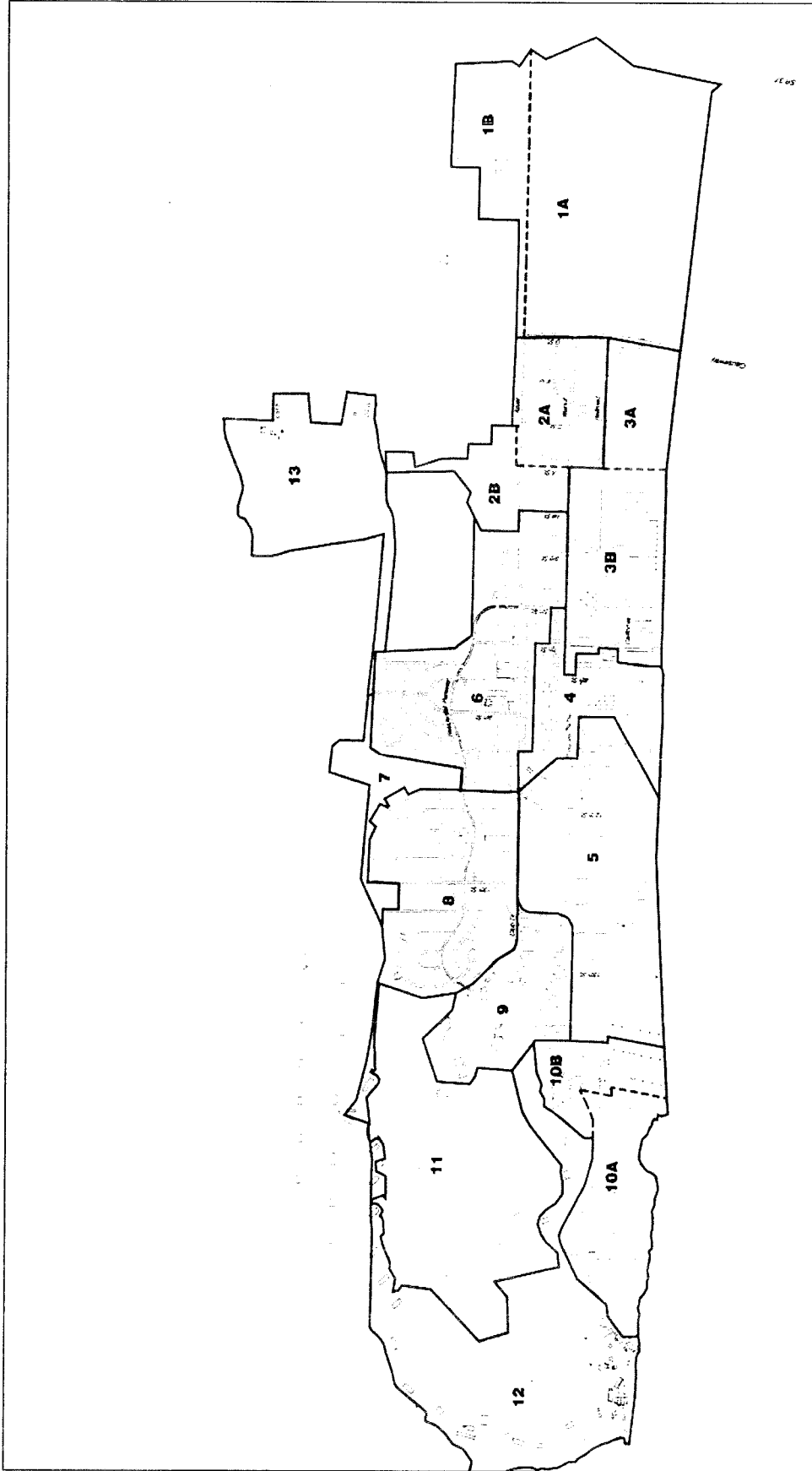
and furthers the general objectives of, the Reuse Plan and the 1999 Specific Plan. The Amended and Restated Specific Plan summarizes the changes and rationale for the changes, as follows:<sup>7</sup>

- (a) State Lands Commission jurisdiction over reuse Area 10A . . . requires changing the land use designation from residential to industrial, and relocating residential to other areas;
- (b) More detailed information on the location of environmental contamination, especially in Reuse Area 2, results in the need to relocate residential uses to more suitable Reuse Areas;
- (c) Updated studies on land use programming, marketing, economic feasibility, employment, housing demand, education and other comparable topics that inform development planning decisions have been conducted;
- (d) Modifications in Reuse Area boundaries, including sub-divisions of several Reuse Areas, are made to provide logical planning units based on more accurate land surveys and to recognize current boundaries for the State Lands Commission, U.S. Fish and Wildlife Service, and other jurisdictional entities;
- (e) More detailed information on, and criteria for, the design of transportation and infrastructure is provided for use in refining Specific Plan concepts; and
- (f) Additional analyses have been conducted on historic and archaeological resources, including a survey of, and guidelines for, the preservation and reuse of historic structures.

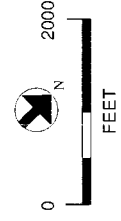
The Plan Area remains largely the same as that of the adopted Reuse Plan and 1999 Specific Plan and considered in the 1999 CEQA Documents. The exceptions are that Roosevelt Terrace, an off-island naval housing complex included in the 1999 Specific Plan is no longer included in the Plan Area and is being developed separately by a private developer. The Plan Area is divided into distinct subareas under the Amended and Restated Specific Plan (“Reuse Areas”). These are based on and are comparable to those of the Reuse Plan and the 1999 Specific Plan (see Figure 3: Amended and Restated Specific Plan Reuse Areas). Reuse Areas 1, 2, 3 and 10 have each been divided into two subareas, “A” and “B.” They retain their original reuse area number for continuity. Minor adjustments to overall acreage figures reflect more accurate land surveys. Additional analysis on historic and archaeological resources has resulted in a larger number of buildings that will require reuse as opposed to demolition, than was planned in the 1999 Specific Plan.

#### **Review of the Amended and Restated Specific Plan under CEQA**

The 1998 EIS/EIR was an integrated environmental review document prepared in accordance with both the National Environmental Policy Act (NEPA) and CEQA to assess the environmental consequences of the Navy’s disposal and the City’s reuse of the Mare Island Naval Shipyard. Implementation of the



SOURCE: SWA



Amended and Restated Specific Plan would not entail any additional Federal action requiring preparation of an Environmental Impact Statement (EIS) under NEPA that is not already covered by the 1998 EIS/EIR. Therefore, no further review in an EIS is required under NEPA.

The City of Vallejo Development Services Department, the lead agency, has determined that a Subsequent EIR is necessary for the Amended and Restated Specific Plan. CEQA Guidelines Section 15162 provides for Subsequent EIRs in any of the following instances:

1. Substantial changes are proposed in the project which will require major revisions of the previous EIR . . . due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR . . . due to involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
3. New information of substantial importance, which as not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted . . .

For the purposes of CEQA and the Subsequent EIR (of which this Initial Study is part), the “project” consists of those aspects of the Amended and Restated Specific Plan not already assessed in the 1999 CEQA Documents that could have physical environmental impacts substantially exceeding or different from those already described in the 1999 CEQA Documents, calling for further analysis in a Subsequent EIR. This Subsequent EIR also revisits those topics of the 1999 CEQA Documents that must be either updated due to changed circumstances, or reanalyzed due to new information that has become available since the 1998 EIS/EIR certification and 1999 Addendum. The 1999 CEQA Documents continue to adequately address impacts of Mare Island reuse, where such impacts have not changed significantly under the Amended and Restated Specific Plan (e.g., Geology). These are identified under the discussion of impacts in this Initial Study.

### **Project Characteristics**

Summarized below are aspects of the Amended and Restated Specific Plan that could have physical environmental impacts that may substantially exceed or differ from those already described in the 1999 CEQA Documents or where changed circumstances or new information since the time of the 1999 CEQA Documents call for further analysis in a Subsequent EIR of which the Initial Study is a part.

- Development Program Changes

Table 1: Amended and Restated Specific Plan Development Program by Reuse Area: Changes from the 1999 CEQA Documents, below, summarizes the Amended and Restated Specific Plan’s

TABLE 1: AMENDED AND RESTATED SPECIFIC PLAN (2003 SP) DEVELOPMENT PROGRAM BY REUSE AREA: CHANGES FROM THE 1998 EIS/EIR <sup>a</sup>

REUSE AREA	Resid. (D.U) <sup>b</sup>	Park/ Rec./ Cons./ (Acres)	Non-Residential (Square Feet)							Federal (as noted) <sup>c</sup>	Total Non-Residential	
			Mixed Use			Heavy Industry	Education / Civic	Warehouse	Retail			Light Ind.
			Office/R&D	Light Ind.	Retail							
1	1998 EIS/EIR	80	56,600	566,000	42,100	1,285,100	0	16,200	0	1,966,000		
	2003 SP	0	54,000	450,000	<sup>d</sup> 348,000	370,000	0	16,000	0	1,238,000		
	1A	0	25,000	175,000	0	320,000	180,000	0	0	700,000		
	1B	0	79,000	625,000	348,000	690,000	180,000	16,000	0	1,938,000		
Change	-80	+22,400	+59,000	+305,900	-595,100	+180,000	-200	0	0	-28,000		
2	1998 EIS/EIR	83	234,300	0	40,000	0	131,200	0	0	405,500		
	2003 SP	100	285,000	100,000	50,000	0	135,000	0	0	570,000		
	2A	0	335,000	165,000	0	0	0	0	0	500,000		
	2B	0	620,000	265,000	50,000	0	135,000	0	0	1,070,000		
Change	+17	+385,700	+265,000	+10,000	0	0	+3,800	0	0	+664,500		
3	1998 EIS/EIR	0	371,000	690,000	0	0	0	0	<sup>e</sup> 61,000	1,122,000		
	2003 SP	0	320,000	160,000	10,000	110,000	0	0	0	600,000		
	3A	129	364,000	690,000	5,000	215,000	0	15,000	<sup>e</sup> 61,000	1,350,000		
	3B	129	684,000	850,000	15,000	325,000	0	15,000	61,000	1,950,000		
Change	+129	+313,000	+160,000	+15,000	+325,000	0	+15,000	0	0	+828,000		
4	1998 EIS/EIR	25	0	0	5,000	0	0	30,100	0	35,100		
	2003 SP	47	120,000	50,000	70,000	0	0	70,000	0	310,000		
	Change	+22	+120,000	+50,000	+65,000	0	0	+39,900	0	+274,900		
	1998 EIS/EIR	0	0	419,500	0	0	934,300	0	0	1,353,800		
5	2003 SP	0	60,000	515,000	15,000	0	1,290,000	0	0	1,880,000		
	Change	0	+60,000	95,500	+15,000	0	+355,700	0	0	+526,200		
	1998 EIS/EIR	222	0	0	40,000	0	0	0	<sup>f</sup> 81,000	121,000		
	2003 SP	610	0	0	7,000	0	0	22,000	81,000	110,000		
Change	+388	0	0	-33,000	0	0	+22,000	0	-11,000			
7	1998 EIS/EIR	0	0	0	0	0	0	0	0	0		
	2003 SP	0	0	0	0	0	0	0	0	0		
	Change	0	0	0	0	0	0	0	0	0		
	1998 EIS/EIR	270	0	0	27,100	0	0	0	0	27,100		
8	2003 SP	514	20,000	0	0	385,000	0	15,000	0	420,000		
	Change	+244	+20,000	0	-27,100	+385,000	0	+15,000	0	+392,900		

(Continued on next page)

TABLE 1 (Continued from previous page)

REUSE AREA	Resid. (D.U) <sup>b</sup>	Park/ Rec./ Cons./ (Acres)	Non-Residential ( Square Feet)										Total Non-Residential
			Mixed Use					Heavy Industry	Education / Civic	Federal (as noted) <sup>c</sup>	Total Non-Residential		
			Office/R&D	Light Ind.	Retail	Warehouse							
9	1998 EIS/EIR	50	8	113,000	387,700	1,500	0	0	457,500	<sup>e</sup> 175,000	1,134,700		
	2003 SP	0	0	35,000	0	0	0	0	545,000	<sup>e</sup> 175,000	755,000		
	Change	-50	-8	-78,000	-387,700	-1,500	0	0	+87,500	0	-379,700		
10	1998 EIS/EIR	750	9	0	0	20,000	0	0	0	<sup>h</sup> 91,000	111,000		
	2003 SP	0	9	0	370,000	0	0	130,000	0	0	500,000		
	Change	0	0	0	0	0	0	+130,000	0	<sup>h</sup> 91,000	91,000		
11	1998 EIS/EIR	-750	0	0	+370,000	-20,000	0	0	0	0	+480,000		
	2003 SP	0	172	0	0	0	0	0	3,000	0	3000		
	Change	0	172	0	0	3,000	0	0	0	0	3000		
12	1998 EIS/EIR	6	11	0	0	0	0	0	-3000	0	0		
	2003 SP	0	187	0	0	0	0	0	1,250	0	1,250		
	Change	-6	+176	0	0	0	0	0	-1,250	0	-1,250		
13	1998 EIS/EIR	0	92	0	0	0	0	0	0	0	0		
	2003 SP	0	92	0	0	0	0	0	0	0	0		
	Change	0	0	0	0	0	0	0	0	0	0		
Wetlands	1998 EIS/EIR	0	32	0	0	0	0	0	0	<sup>i</sup> 20,000	20,000		
	2003 SP	0	32	0	0	0	0	0	0	<sup>i</sup> 20,000	20,000		
	Change	0	0	0	0	0	0	0	0	0	0		
Dredge	1998 EIS/EIR	0	0	0	0	0	0	0	0	0	0		
	2003 SP	0	0	0	0	0	0	0	0	0	0		
	Change	0	0	0	0	0	0	0	0	0	0		
Roosevelt Terrace <sup>j</sup>	1998 EIS/EIR	300	0	0	0	0	0	0	0	0	0		
	2003 SP	0	0	0	0	0	0	0	0	0	0		
	Change	-300	0	0	0	0	0	0	0	0	0		
Main Gate / Rail Spur	1998 EIS/EIR	0	0	26,200	0	0	0	0	0	0	26,200		
	2003 SP	0	0	0	0	0	0	0	0	0	0		
	Change	0	0	-26,200	0	0	0	0	0	0	-26,200		
PLAN AREA TOTALS	1998 EIS/EIR	1,786	446	801,100	2,063,200	175,700	1,285,100	934,300	639,250	428,000	6,326,650		
	2003 SP	<sup>i</sup> 1,400	602	1,618,000	2,675,000	508,000	1,400,000	1,600,000	818,000	428,000	9,047,000		
	CHANGE	<sup>i</sup> -386	+156	+816,900	+611,800	+332,300	+114,900	+665,700	+178,750	0	+2,720,350		

(Continued on next page)

**TABLE 1** (Continued from previous page)

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**Notes:**

- <sup>a</sup> This table is compiled from the following sources: the 1998 EIS/EIR, Table 2-1 (p. 2-8); the Amended and Restated Specific Plan, Table 3-2 (p. 69, see the Qualifying Notes on p. 70 which also apply to this table); and the Amended and Restated Specific Plan, Section 3.5, “Land Use Program By Reuse Area” (pp. 67-80).
- <sup>b</sup> Dormitory units are not included in the Amended and Restated Specific Plan
- <sup>c</sup> With the exception of the Veterans Administration Clinic, federal tenants were not included in the 1998 EIS/EIR Reuse Plan development program. Likewise, federal tenants are not part of the Amended and Restated Specific Plan development program. Although not part of the project to be analyzed under CEQA, federal tenants are included in this table because they are located within the Plan Area and are part of the overall land use setting of Mare Island. Since they are added to both the 1998 EIS/EIR and the Amended and Restated Specific Plan they do not contribute to the total net change in non-residential land uses from the Reuse Plan to the 2003 Specific Plan.
- <sup>d</sup> Comprised of 320,000 sq. ft. of Service Commercial and 28,000 sq. ft. of Retail.
- <sup>e</sup> Veterans Administration Clinic
- <sup>f</sup> As part of a public benefit transfer from the Navy to the Department of Education, the Vallejo Unified School District will continue to maintain and operate school buildings in Reuse Area 6.
- <sup>g</sup> Comprised of 120,000 sq. ft. US Forest Service, and 55,000 sq. ft. US Army Reserve Barracks
- <sup>h</sup> U.S. Army Reserve
- <sup>i</sup> U.S. Fish and Wildlife Service
- <sup>j</sup> Roosevelt Terrace, located off-island, is no longer part of the Plan Area under the 2003 Specific Plan, accounting for 300 of the 380 total fewer dwelling units under the 2003 Specific Plan.



development program by Reuse Area and compares it with the development program assessed in the 1999 CEQA Documents. The Amended and Restated Specific Plan includes an increase of about 2.72 million square feet of non-residential development over the approximately 5.90 million square feet of non-residential development envisioned by the Reuse Plan and assessed in the 1999 CEQA Documents and the approximately .43 million square feet occupied by federal tenants. Under the Amended and Restated Specific Plan, the largest increase would occur in Mixed Use space (which includes Office, Light Industrial, Retail and Warehouse-type uses). There would also be increases in Heavy Industry and Civic/Education space.

The number of dwelling units proposed for Mare Island remains substantially the same under the Amended and Restated Specific Plan as that considered in the 1999 CEQA Documents (300 off-island dwelling units, considered in the 1999 CEQA Documents for Roosevelt Terrace, are no longer within the Plan Area under the Amended and Restated Specific Plan).

At present, Mare Island is developed with structures totaling approximately 7.9 million square feet of industrial, office, educational, commercial, recreational, cultural, institutional use space and residential units. Many of the structures are vacant. The Amended and Restated Specific Plan development program includes demolition of some existing buildings. These demolitions are accounted for in the square footage totals. However, it retains more historic resources than were anticipated to be retained under the 1999 Specific Plan. In addition, the Amended and Restated Specific Plan development program corrects errors in the 1999 Specific Plan's accounting of building square footage.

- Changes to Allowable Land Uses and Location of Land Uses

Land use categories under the Amended and Restated Specific Plan are generally consistent in substance with the 1999 Specific Plan. The primary change is the introduction of a Mixed Use land use category. This category includes office / research and development, light industrial, retail commercial, and on-site warehousing associated with other uses on the same or proximate site.<sup>8</sup>

The locations of land uses in the Amended and Restated Specific Plan development program are similar to those envisioned by the Reuse Plan and the 1999 Specific Plan, and considered in the 1999 CEQA Documents. However, changes in the nature and intensity of the development program are proposed in the Amended and Restated Specific Plan. Reuse Area 10A calls for Mixed Use light industrial and heavy industrial uses rather than the residential and retail uses envisioned by the Reuse Plan and 1999 Specific Plan and considered in the 1999 CEQA Documents. State Lands Commission jurisdiction over Reuse Area 10A requires changing the land use designation from residential to industrial, and redistributing residential to other areas (primarily areas 3, 6 and 8). The general area encompassed by Reuse Area 2 under the Reuse Plan is changed to 2A (Town Center), and 2B (West Business Park) under the Amended and Restated Specific Plan. Due to more detailed information on the location of environmental contamination, residential uses are excluded

from Reuse Area 2B under the Amended and Restated Specific Plan and relocated to more suitable Reuse Areas. As with the 1999 Specific Plan, Reuse Area 4 (the Historic Core) under the Amended and Restated Specific Plan is envisioned as a visitor-oriented area in an historic setting with retail and civic uses. Under the Amended and Restated Specific Plan, the area would also include Mixed Use office and light industrial uses.

- New Technical Analysis Available Since 1998 EIS/EIR Certification and 1999 Addendum

The Amended and Restated Specific Plan incorporates the *Mare Island Utility Reuse Plan* (the “MIURP”).<sup>9</sup> The MIURP, as recently revised and updated, analyzes the development program of the Amended and Restated Specific Plan and discusses changed conditions, new information and upgraded facilities that have occurred since EIR certification.

More recent information relating to analysis of impacts to Biological Resources, available since the 1998 EIS/EIR certification and the 1999 Addendum, is included in the Wetlands Delineation, July 2001.<sup>10</sup> The Wetlands Delineation identifies the potential extent of waters of the United States, including wetlands, along the western edge of Mare Island.

The Amended and Restated Specific Plan includes more recent and detailed transportation information and criteria for the design of street improvements in the *Mare Island Transportation Evaluation Report*,<sup>11</sup> November 2001, and *Typical Street Cross Sections*, February 2002.<sup>12</sup>

The Amended and Restated Specific Plan includes additional information in a *Revised Predictive Archaeological Model for Mare Island*,<sup>13</sup> based on the results of monitoring the former base’s clean-up activities. It identifies and describes archaeological features that occur or are likely to occur on Mare Island. An *Archaeological Treatment Plan for Mare Island*<sup>14</sup> describes the appropriate treatment measures for each of the archaeological features identified in the predictive archaeological model.

- New Cultural Resources Chapter and Historic Guidelines

The Amended and Restated Specific Plan includes a new Cultural Resources chapter that provides standards procedures for ensuring that the historic character of Mare Island is preserved while allowing for reuse of Mare Island. The Amended and Restated Specific Plan incorporates proposed *Mare Island Historic Resources Project Guidelines* (“Historic Guidelines”)<sup>15</sup> as a tool for implementing the preservation and reuse policies of the Cultural Resources chapter of the Amended and Restated Specific Plan. The purposes of the proposed Historic Guidelines are to:

- Explain the City’s preservation and reuse goals and objectives;
- Detail the regulatory framework for preservation and reuse;
- Define key terms and concepts, including the concept of project site;
- Provide standards for treatment of historic resources;

- Provide District and Area review criteria;
- Identify Design Guidelines which ensure that infill development is compatible with the District;
- Define a review process which ensures that no significant impact occurs to the District or to the Landmarks within the District;
- Catalogue the resources, their characteristics, designation status, and proposed treatment;
- Evaluate the consistency of the current development plan with the review criteria.<sup>16</sup>

New Urban Design Guidelines in the Amended and Restated Specific Plan are also intended to ensure that new construction would be compatible with the historic setting of Mare Island.

## **9. SURROUNDING LAND USES AND SETTING:**

The Vallejo waterfront parallels the eastern side of Mare Island across Mare Island Strait. North of the Causeway, along the waterfront, is River Park. A marina, a yacht club, and a ferry terminal occupy the waterfront south of the Causeway. Professional buildings, city buildings, and Waterfront Memorial Park line the east side of Mare Island Way. Further east, residential areas overlook the strait. The waterfront across the strait from the southern portion of Mare Island is occupied by industrial uses. The Vallejo Sanitation and Flood Control District wastewater treatment plant is located at this portion of the waterfront. Across Carquinez Strait, to the south of Mare Island are industrial uses, and residential areas further south and east of Interstate 80.

## **10. CITY APPROVALS**

The following discretionary City approvals are required for the Amended and Restated Specific Plan:

- Certification of this Subsequent EIR which would satisfy the requirements of CEQA for the proposed actions listed below.
- Approval of a General Plan Amendment to provide for the Amended and Restated Specific Plan for Mare Island;
- Approval of the 2003 Mare Island Specific Plan, Amended and Restated, and Appendices which include the Mare Island Utility Reuse Plan and the Mare Island Historic Resources Project Guidelines.

## **11. OTHER PUBLIC AGENCIES WHOSE APPROVALS ARE REQUIRED:**


- Bay Conservation and Development Commission
- Vallejo Sanitation and Flood Control District
- California State Lands Commission

**ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:** The environmental factors checked below (  ) would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the following checklist.

	Aesthetics		Hazards & Hazardous Materials		Public Services
	Agriculture Resources		Hydrology/Water Quality		Recreation
<input type="checkbox"/>	Air Quality		Land Use/Planning	<input type="checkbox"/>	Transportation/Traffic
	Biological Resources		Mineral Resources	<input type="checkbox"/>	Utilities/Service Systems
<input type="checkbox"/>	Cultural Resources	<input type="checkbox"/>	Noise	<input type="checkbox"/>	Mandatory Findings of Significance
	Geology/Soils		Population/Housing		

**DETERMINATION:** On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	
I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described herein have been added to the project and agreed to by the project sponsor or revisions in the project have been made by or agreed to by the project sponsor. A MITIGATED NEGATIVE DECLARATION will be prepared.	
I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.	
I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. A SUBSEQUENT ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.	<input type="checkbox"/>
I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	

  
 \_\_\_\_\_  
 Signature

9/12/03  
 \_\_\_\_\_  
 Date

Michelle D. Hightower  
 Printed Name

City of Vallejo  
 For

<b>Evaluation of Environmental Impacts Issues and Supporting Information Sources</b>	<b>Potentially Significant Impacts</b>	<b>Less than Significant Mitigation Incorporated</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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I. AESTHETICS. Would the Project:

a) Have a substantial adverse effect on a scenic vista?			<input type="checkbox"/>	
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The 1999 CEQA Documents describe the existing visual setting of Mare Island and identifies visual and scenic resources in the Plan Area.<sup>17</sup> Since the 1998 EIS/EIR certification and 1999 Addendum the visual setting of the Plan Area has not substantially changed.

Like the 1999 Specific Plan, the contemplated development under the Amended and Restated Specific Plan incorporates all of the relevant mitigation measures in the 1999 CEQA Documents and Mitigation Monitoring and Reporting Plan (MMRP) related to effects on aesthetics and scenic resources.<sup>18</sup> These measures include using existing roads and trails in upland open space areas, designing trails to avoid steep slopes and to blend with existing natural features, and relocating an existing equestrian facility to avoid areas of high viewer sensitivity. Like the 1999 Specific Plan, implementation of these measures under the Amended and Restated Specific Plan would reduce potentially significant impacts on Aesthetics and Scenic Resources to less-than-significant levels. Additionally, the Amended and Restated Specific Plan does not call for the construction of a southern crossing over Mare Island Strait, eliminating this identified significant unmitigable impact.

Nonsignificant impacts on Aesthetic and Scenic Resources identified in the 1999 CEQA Documents<sup>19</sup> would be substantially the same for development under the Amended and Restated Specific Plan. Nonsignificant impacts identified in the 1999 CEQA Documents include visual effects from infill, redevelopment and expansion activities, and golf course expansion. The nonsignificant impact relating to Roosevelt Terrace would be eliminated, since Roosevelt Terrace is no longer included in the Specific Plan area. Increased non-residential development under the Amended and Restated Specific Plan development program would occupy and reuse existing buildings and would also entail increased infill construction and building intensity on Mare Island. However, like the development program analyzed in the 1999 CEQA Documents, the Amended and Restated Specific Plan development scheme would not significantly alter the visual character of the historic housing or lowland open space scenic resource areas. Development program changes in location and intensity of land uses are not of a nature or magnitude that would cause any new significant adverse impacts, or cause a nonsignificant impact on aesthetic and scenic resources, identified in the 1999 CEQA Documents, to become a significant impact. Therefore, further discussion of this topic is not necessary in a Subsequent EIR.

*(Note that the Amended and Restated Specific Plan's Urban Design Guidelines relating to impacts of alteration or new construction on historic architectural resources will be discussed in the context of the Cultural Resources section of this Initial Study and in a Subsequent EIR.)*

b) Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway			<input type="checkbox"/>	
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Route 37, which runs through the northern end of Mare Island, has been listed as eligible for a State Scenic Highway designation.<sup>20</sup> However, development under the Amended and Restated Specific Plan would not damage scenic resources within the eligible state scenic highway viewshed.

<b>Evaluation of Environmental Impacts Issues and Supporting Information Sources</b>	<b>Potentially Significant Impacts</b>	<b>Less than Significant Mitigation Incorporated</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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c) Substantially degrade the existing visual character or quality of the site and its surroundings?			<input type="checkbox"/>	
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*(See the discussion for Item "1a" above for a discussion of the project's impacts relating to visual quality.)*

Additionally, the Amended and Restated Specific Plan builds upon the 1999 Specific Plan's Urban Design Policies and Guidelines. The Amended and Restated Specific Plan's Urban Design Guidelines include greater specificity than the 1999 Specific Plan to better ensure that the unique historic and natural visual character of Mare Island is enhanced and preserved. Therefore, further discussion of this topic is not necessary in a Subsequent EIR.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			<input type="checkbox"/>	
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The following Amended and Restated Specific Plan Guidelines for exterior lighting would govern all new development.<sup>21</sup>

“Modest light levels should be used where possible. . .”

“Light fixtures should be shielded or diffused to avoid glare to motorists, pedestrians and residents.”

Implementation of these guidelines would reduce any potentially significant impacts related to light and glare, to less-than-significant levels. Therefore, further discussion of this topic is not necessary in a Subsequent EIR.

**2. AGRICULTURE RESOURCES:** In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:

a) 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?				<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				<input type="checkbox"/>
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?				<input type="checkbox"/>

The project would not call for the conversion of any land from agricultural to non-agricultural use. The Plan Area has no agricultural zoning and no Williamson Act contracts. Additionally, the project would not increase development pressure on agricultural lands by extending infrastructure into agricultural areas. Therefore, the project would have no impact on agricultural resources. Therefore, further discussion of this topic is not necessary in a Subsequent EIR.

<b>Evaluation of Environmental Impacts Issues and Supporting Information Sources</b>	<b>Potentially Significant Impacts</b>	<b>Less than Significant Mitigation Incorporated</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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3. **AIR QUALITY:** Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>			
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>			
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>			
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>			
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>			

The 1999 CEQA Documents conclude that the only potentially significant air quality impacts from the Reuse Plan would be fugitive dust emissions caused by construction activities and that these could be mitigated through the use of best management practices recommended by the Bay Area Air Quality Management District (“BAAQMD”). The mitigation measures identified in the MMRP for construction-related air quality impacts remain relevant and would continue to mitigate these impacts, except that the construction-related impacts of the southern crossing would no longer apply to the Amended and Restated Specific Plan.

An updated assessment of air quality impacts under the Amended and Restated Specific Plan is called for in light of changes in the regulatory setting since the 1998 EIS/EIR certification and the 1999 Addendum, an expanded development program under the Amended and Restated Specific Plan, more detailed project information, and an updated traffic analysis. Therefore, air quality impacts under the Amended and Restated Specific Plan will be discussed in a Subsequent EIR.

**4. BIOLOGICAL RESOURCES.**

The currently proposed Amended and Restated Specific Plan Amendment would result in minor modifications to the previous Reuse Area boundaries, relocation of some of the planned land uses, introduction of a new land use classification (Mixed Use), and an increase in the total development within the previously established project footprint. The increase in development is due to higher density non-residential uses, including multiple floor levels within the respective Reuse Areas, and would not affect biological resources. The previously proposed Reuse Area boundaries are slightly changed, resulting in an overall area increase of approximately 4 acres. This is due to a more detailed and accurate survey conducted by Lennar Mare Island after being selected as the developer than was available when the Reuse Plan was assessed in the 1999 CEQA Documents; therefore the area change would not include new properties on the island that could have special status species or habitat, and would not result in new impacts on biological resources.

The current evaluation focuses on the changes to the Reuse Plan, since the 1998 EIS/EIR certification and 1999 Addendum, and concludes that those changes would not alter conclusions regarding impacts to biological resources and mitigation measures planned to reduce impacts. The biological setting information in the 1999 CEQA Documents was

<b>Evaluation of Environmental Impacts Issues and Supporting Information Sources</b>	<b>Potentially Significant Impacts</b>	<b>Less than Significant Mitigation Incorporated</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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verified by LFR biologists during a site visit conducted on February 14, 2003.<sup>22</sup> Specifically, the wetland areas and other potentially affected sensitive habitat areas were assessed and validated.

The nature of the environmental setting for the proposed project is consistent with what has been previously described in Section 3.6 of the 1998 EIS/EIR. A large portion of the waterfront on the eastern side of Mare Island has been previously developed with structures and with landscaped areas supporting mostly non-native plants and providing little habitat for wildlife. The remaining open space areas include large areas of natural habitats including brackish and salt marsh wetlands, grasslands, and woodlands. These vegetation communities were previously described in the biological resources setting section of the 1998 EIS/EIR.

New information has become available regarding resources since 1998 EIS/EIR certification and 1999 Addendum. A jurisdictional wetland delineation was prepared in 2001;<sup>23</sup> this document has been reviewed. To determine whether any additional species not addressed in the 1999 CEQA Documents have been listed or designated as sensitive, or if any new populations were discovered in the project area, the California Department of Fish and Game Natural Diversity Database, and the U.S. Fish and Wildlife Service Special Status Species Database for the Mare Island Quadrangle were reviewed.<sup>24,25</sup>

Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?			□	
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The updated California Natural Diversity Database (CNDDDB) review identified three additional endangered, threatened or rare species reported as occurring in the Mare Island quadrangle that were not previously identified in the 1999 CEQA Documents. These are the California red-legged frog (*Rana aurora draytonii*), the Monarch butterfly (*Danaus plexippus*), and the fragrant fritillary (*Fritillaria liliacea*). There is no suitable habitat for these species in the project area so no new significant impact would result under the Amended and Restated Specific Plan.

The following potential impact on sensitive species was identified as significant (less than significant with mitigation) in the 1998 EIS/EIR (Table 4-12, p. 4-52): “Potential disturbance of wetlands, rare plants (Mason’s lilaeopsis), and endangered animals (salt marsh harvest mouse, California clapper rail) from construction of a southern crossing in Reuse Area 10. “

The southern crossing in Reuse Area 10 has been eliminated, implementing biological resources mitigation measure 1b, so this former significant impact would not occur under the currently proposed project.

Potential impacts to sensitive species that the 1999 CEQA Documents determined to be less than significant included the following:

- Impacts on endangered fish (Delta smelt, Sacramento splittail, winter-run Chinook) from use of dry docks, dredging, and pile driving.
- Impacts on salt marsh harvest mouse and clapper rail from residents and domestic and feral predators;
- Impacts on non-listed species (marsh gumplant, Mexican free-tailed bat, salt marsh wandering shrew etc.),



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Impacts on the endangered fish would remain less than significant without mitigation because (as was the case in the 1999 CEQA Documents) the City of Vallejo will protect the delta smelt and Sacramento splittail during the re-development process as part of the project. Prior to transferring or leasing the dry docks or any other area where in-water activities may adversely affect delta smelt or Sacramento splittail, the State Lands Commission or the City will inform the future owner or user that Federally listed endangered or threatened fish species occasionally occur in the vicinity of Mare Island Naval Shipyard. Such future users may need to obtain Endangered Species Act incidental take permits from the U.S. Fish and Wildlife Service, National Marine Fisheries Service (NMFS), and California Department of Fish and Game.

Impacts on salt marsh harvest mouse and clapper rail remain less than significant, despite the increased density of development, because of the following mitigation measures, which remain unchanged in the project description. The Navy, the City of Vallejo and other future owners will ensure that a detailed, active, annual, predator management plan for all portions of Mare Island Naval Shipyard is prepared and implemented as part of the development process. The Navy will develop a detailed plan to manage public access in and adjacent to clapper rail and salt marsh harvest mouse habitat. The City of Vallejo has established restrictions in the Mitigation Monitoring and Reporting Plan adopted with the 1999 Specific Plan that limit the number of cats and dogs allowed in each residential unit on Mare Island and will prohibit unleashed dogs and cats outside property lines of individual units (1998 EIS/EIR, p. 4-53).

Impacts on non-listed species other than the bat will remain less-than-significant without mitigation because the original conclusions of the 1999 CEQA Documents remain unchanged. In summary, the conclusions are that these species are not listed as endangered or threatened, a substantial number of individuals would not be destroyed, and no migration corridors would be affected. Impacts on the Mexican free-tailed bat would remain less-than-significant because that species is common and widespread, not considered threatened, endangered or sensitive, and non-sensitive bats can be removed from Mare Island buildings under health regulations without extensive environmental documentation.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?			□	
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The project site includes some areas of coast live oak woodlands and coastal sage scrub. No riparian habitat would be affected by the proposed project. The conclusions of the 1999 CEQA Documents remain unchanged: potential impacts to oak woodland and coastal scrub communities in Reuse Area 12 from direct removal, soil compaction, and vandalism are less-than-significant without mitigation. Impacts are considered less-than-significant because these communities are not listed as sensitive in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

c) 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?		□		
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The 1999 CEQA Documents concluded that development under the Reuse Plan could potentially affect wetlands during construction activities on adjacent sites. The project site includes specific areas that have been mapped as

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federally protected wetlands as defined by Section 404 of the Clean Water Act.<sup>26</sup> However, the development would occur outside the mapped wetland boundaries and no direct impacts to wetlands should occur as a result of this project. These areas will be avoided and/or protected during and following proposed construction activities, including implementation of Stormwater Pollution Prevention Plans as called for in Water Resources Mitigation Measures 1a and 1b in the 1998 EIS/EIR, adopted in the MMRP. The potential for indirect impacts from adjacent construction activities remains less-than-significant with mitigation. As described in the 1998 EIS/EIR, Biological Resources Mitigation Measure 2b, 2c, and 2d consist of implementing practices that do not allow construction or staging to occur in wetland areas, that prohibit access into wetlands, and that restrict all vehicle and pedestrian traffic to existing roads and trails.

d) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				□
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The proposed project is not anticipated to conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

**5. CULTURAL RESOURCES.** Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	□			
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The Amended and Restated Specific Plan includes a new Cultural Resources chapter that provides standards procedures for ensuring that the historic character of Mare Island is preserved while allowing for reuse of Mare Island. The Amended and Restated Specific Plan incorporates, as part of the project, proposed *Mare Island Historic Resources Project Guidelines* (the "Historic Guidelines"). The Historic Guidelines would be a tool for implementing the preservation and reuse policies of the Cultural Resources chapter of the Amended and Restated Specific Plan. The Historic Guidelines establish a classification system and allowable treatments for each class of historic architectural resource. These treatments include preservation, rehabilitations, restoration, reconstruction, relocation and demolition. Impacts of development under the Historic Guidelines on historic resources were not evaluated in the 1999 CEQA Documents and will be evaluated in a Subsequent EIR. The Subsequent EIR will also evaluate the impact of the Amended and Restated Specific Plan development program and utilities upgrades under the MIURP on historic architectural resources and will consider new provisions in the Amended and Restated Specific Plan Urban Design Guidelines intended to ensure that new construction would be compatible with the historic architectural setting on Mare Island.

*(Note that for the purposes of this Initial Study, the term "historic architectural resources" is used to distinguish these historical resources from "archaeological resources" which may also be "historical resources" under CEQA. Archaeological resources are discussed separately below. )*

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?			□	
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			□	
d) Disturb any human remains, including those interred outside of formal cemeteries?			□	

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The Amended and Restated Specific Plan includes additional information in a *Revised Predictive Archaeological Model for Mare Island*<sup>27</sup> that updates a 1995 predictive model, based on the results of monitoring the former military base's cleanup activities. The new predictive model identifies and describes archaeological features that occur or are likely to occur on Mare Island that have the potential to yield important information regarding Mare Island's history and prehistory. These were mapped based on physical evidence and historical records, and include remnants of early industrial technology and shipbuilding, seawalls, ship berths, building foundations and domestic refuse. The predictive model also identifies potential areas of high and medium prehistoric archaeological sensitivity.

The Amended and Restated Specific Plan includes an *Archaeological Treatment Plan for Mare Island*.<sup>28</sup> The treatment plan describes various treatment measures including archival research, recordation, archaeological fieldwork (including trenching, surface clearing, and hand excavation), analysis and reporting, Native American coordination and treatment of human remains, archeological monitoring, public interpretation, and provisions for discovery of new subsurface features not already identified. The treatment plan also recommends appropriate treatments for each of the historic era archeological resources and areas of prehistoric archaeological sensitivity identified in the predictive archaeological model. Implementation of the measures set forth in the *Archaeological Treatment Plan for Mare Island*, which are included as part of the project, would reduce potentially significant impacts of reuse and redevelopment of Mare Island under the Amended and Restated Specific Plan to less-than-significant levels. Therefore, further discussion of this topic is not necessary in a Subsequent EIR.

**6. GEOLOGY AND SOILS.** Would the project

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			<input type="checkbox"/>	
ii) Strong seismic ground shaking?			<input type="checkbox"/>	
iii) Seismic-related ground failure, including liquefaction?			<input type="checkbox"/>	
iv) Landslides?			<input type="checkbox"/>	
b) Result in substantial soil erosion or the loss of topsoil?			<input type="checkbox"/>	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			<input type="checkbox"/>	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			<input type="checkbox"/>	

The 1999 CEQA Documents describe in detail the geologic setting of Mare Island. It addressed seismicity, soils, liquefaction potential and slope stability, and erosion.<sup>29</sup> Since 1998 EIS/EIR certification and the 1999 Addendum, the geologic setting of the Plan Area has not substantially changed. The 1999 CEQA Documents identify significant impacts of the Reuse Project relating to geology and soils including dam failures, structural damage during an earthquake, liquefaction and slope failure. The 1999 CEQA Documents also identify mitigation measures that would reduce these impacts to less-than-significant levels.<sup>30</sup> Development under the Amended and Restated Specific Plan

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would have substantially the same impacts on geology and soils as those identified by the 1999 CEQA Documents if unmitigated. Like the 1999 Specific Plan, the contemplated development under the Amended and Restated Specific Plan incorporates all of the mitigation measures relating to geology and soils identified in the 1999 CEQA Documents and the Mitigation Monitoring and Reporting Plan (MMRP). Development program changes in location and intensity of land uses under the Amended and Restated Specific Plan are not of a nature or magnitude that would cause any new significant impact on geology and soils not already identified in the 1999 CEQA Documents. Like the 1999 Specific Plan, implementation of these measures under the Amended and Restated Specific Plan would reduce potentially significant impacts relating to geology and soils to less-than-significant levels. Therefore, further discussion of this topic is not necessary in a Subsequent EIR.

**7. HAZARDS AND HAZARDOUS MATERIALS.** Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			<input type="checkbox"/>	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			<input type="checkbox"/>	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			<input type="checkbox"/>	

The 1999 CEQA Documents describe preclosure conditions and the regulatory setting relating to hazardous materials on Mare Island.<sup>31</sup> The 1999 CEQA Documents list the expected hazardous materials that would be used, stored, disposed of and generated by various land use categories envisioned by the Reuse Plan.<sup>32</sup> It concludes that no significant environmental impacts related to hazardous materials would result from the reuse of Mare Island because activities envisioned and allowed under the Reuse Plan would generate, use, store and dispose of significantly less hazardous materials than preclosure activities, and because such activities would be subject to all applicable federal, state and local regulations governing hazardous materials. Adherence to applicable regulations and management practices governing hazardous materials would reduce potentially significant impacts of development under the Reuse Plan to less-than-significant levels.

Although the intensity of uses envisioned under the Amended and Restated Specific Plan development program would increase beyond the development program assessed in the 1999 CEQA Documents, the types and nature of land uses envisioned under the Amended and Restated Specific Plan are essentially the same. As with the 1999 Specific Plan assessed in the 1999 CEQA Documents, adherence to applicable regulations and management practices governing hazardous materials would reduce potentially significant impacts of development under the Amended and Restated Specific Plan to less-than-significant levels. Therefore, further discussion of this topic is not necessary in a Subsequent EIR.

Hazards resulting from reuse of contaminated sites are discussed under item “d)” below.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			<input type="checkbox"/>	
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<b>Evaluation of Environmental Impacts Issues and Supporting Information Sources</b>	<b>Potentially Significant Impacts</b>	<b>Less than Significant Mitigation Incorporated</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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The 1999 CEQA Documents identify and describe 24 hazardous materials sites on Mare Island, based on a 1994 Interim Site Description Report by the Navy.<sup>33</sup> It also discusses hazardous materials issues on Mare Island including asbestos, polychlorinated biphenyls (PCBs), underground and aboveground storage tanks, pesticides, lead, radioactive wastes, biohazards and explosives, and describes the federal and state regulatory context that governs cleanup of hazardous materials on Mare Island.<sup>34</sup>

Former military base properties that contain contamination by hazardous materials may only be transferred once remediation is complete, or if the conditions of “early transfer” are met (see 42 U.S.C. Section 9620(h)(3)) including the following: that the EPA and the state concur that the property is suitable for transfer for the use intended by the transferee, and that the intended use is consistent with protection of human health and the environment; that the transfer agreement contains restrictions on the use of the property to ensure the protection of human health and the environment and to ensure that required remedial investigations, cleanup, and oversight activities will not be disrupted; and that assurances are provided that necessary cleanup action will be taken, and schedules identified for investigation and completion of all necessary response action.<sup>35</sup> Investigation and cleanup of hazardous wastes on Mare Island has been underway since the early 1980’s and is expected to be completed within the next 4 to 5 years. The lead oversight agency for the cleanup of the Master Developer portion of the island is the California Department of Toxic Substances Control. The cleanup is also subject to ongoing oversight by a citizen’s Restoration Advisory Board, established by the Navy in 1994.

Although the intensity of uses envisioned under the Amended and Restated Specific Plan development program would increase beyond the development program assessed in the 1999 CEQA Documents, the impacts of development under the Amended and Restated Specific Plan would be essentially the same as those assessed in the 1999 CEQA Documents. All areas that would receive residential development redistributed under the Amended and Restated Specific Plan would be cleaned to residential standards. As with the 1999 Specific Plan assessed in the 1999 CEQA Documents, compliance with rigorous federal and state requirements governing hazardous materials cleanup and siting of land uses on Mare Island, as well as regulatory and community oversight, will ensure that the redevelopment of Mare Island would not create any significant hazards relating to reuse of hazardous materials sites. Therefore, further discussion of this topic in a Subsequent EIR is not necessary.

e) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>			
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The City of Vallejo has adopted an “Emergency Operations Plan” which provides for the City’s prompt and effective response in a crisis situation. Development under the Amended and Restated Specific Plan would increase the numbers of employees and visitors on Mare Island and could increase traffic congestion to and from Mare Island on the Mare Island Causeway and at the State Route 37 Interchange. No southern crossing is proposed under the Amended and Restated Specific Plan. Increased traffic congestion at the two access points to Mare Island could slow emergency response or evacuation in a crisis situation. This impact will be assessed in a Subsequent EIR in the context of transportation and traffic impacts.

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**8. HYDROLOGY AND WATER QUALITY.** Would the project:

Violate any water quality standards or waste discharge requirements?			<input type="checkbox"/>	
b) 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)?			<input type="checkbox"/>	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?			<input type="checkbox"/>	
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			<input type="checkbox"/>	
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			<input type="checkbox"/>	
f) Otherwise substantially degrade water quality?			<input type="checkbox"/>	
g) 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?			<input type="checkbox"/>	
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?			<input type="checkbox"/>	
i) 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?			<input type="checkbox"/>	
j) Inundation by seiche, tsunami, or mudflow?			<input type="checkbox"/>	

The 1999 CEQA Documents describe in detail the water resources setting of Mare Island including surface water resources (such as bays rivers and ponds) and ground water, addressed water resource issues such as surface and ground water supply, flooding, surface and ground water quality and dredging.<sup>36</sup> It also described the regulatory setting related to water quality issues. Since the 1998 EIS/EIR, certification and 1999 Addendum, the water resources setting of the Plan Area has not substantially changed.

The 1999 CEQA Documents identify the following significant impacts of the Reuse Project relating to water resources: erosion and sedimentation of Mare Island Strait, exposure of persons to flood hazards, and release of contaminated sediments through dredging activity. The 1999 CEQA Documents identify mitigation measures that would reduce these impacts to less-than-significant levels.<sup>37</sup> Development under the Amended and Restated Specific Plan would have substantially the same impacts on water resources as those identified by the 1999 CEQA Documents if unmitigated. However, like the 1999 Specific Plan, the contemplated development under the Amended and Restated Specific Plan incorporates all of the mitigation measures relating to water quality in the 1999 CEQA Documents and the Mitigation Monitoring and Reporting Plan (MMRP).

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Development program changes in location and intensity of land uses under the Amended and Restated Specific Plan are not of a nature or magnitude that would cause any new significant impact on water quality not already identified in the 1999 CEQA Documents. The Amended and Restated Specific Plan incorporates the Mare Island Utility Reuse Plan (MIURP) which proposes stormwater infrastructure improvements to accommodate additional development proposed under the Amended and Restated Specific Plan and to comply with stricter Regional Water Quality Control Board requirements for stormwater that have been implemented since the 1999 CEQA Documents. Implementation of the stormwater measures of the MMRP and MIURP would reduce potentially significant impacts on hydrology and water quality to less-than-significant levels. Therefore, further discussion of this topic in a Subsequent EIR is not necessary.

**9. LAND USE AND PLANNING.** Would the project:

a) Physically divide an established community?				<input type="checkbox"/>
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The development and reuse of the former Mare Island Naval Base for civilian uses is intended to create a “vibrant civilian employment center and balanced new neighborhood for the City of Vallejo.”<sup>38</sup> As such, it would serve to unite Mare Island with the rest of the City. Under the Amended and Restated Specific Plan, proposed vehicular, bicycle and pedestrian corridors would promote interconnectedness between neighborhoods and areas of Mare Island. Proposed Urban Design guidelines would promote visual interconnectedness and continuity between areas of Mare Island. The project overall would have no adverse impact relating to dividing an established community.

b) 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?			<input type="checkbox"/>	
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The Amended and Restated Specific Plan, and redevelopment and reuse of Mare Island under the Amended and Restated Specific Plan are intended to further the objectives of the Vallejo General Plan. Among these objectives are the following:

*Urban Design, Goal 1, Policy 1: Use a specific plan and area plans as the development guide for the reuse of Mare Island.*

*Urban Design, Goal 2, Policy 1: Each neighborhood should have variation in textures of development, thorough variation in dwelling types, in intensities of development and the patterning of uses and open areas.*

*Urban Design, Goal 2, Policy 3: Respect the character of older development nearby in the design of new buildings, including bulk and texture.*

*Waterfront Development Goal: To have a waterfront devoted exclusively to water oriented uses, including industrial, residential, commercial and open space uses, that permit public access.*

*Land Use Compatibility and Density, Goal 2: To have a range of residential densities.*

*Commercial Development, Goal 5: To have neighborhood convenience centers to serve new and existing residential areas.*

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*Industrial Development, Goal 1: To maintain Mare Island as an economic asset – particularly in terms of industrial development – for the community.*

*Industrial Development, Goal 2: To have a higher percentage of residents working in Vallejo.*

*Industrial Development, Goal 3: To insure compatibility between industrial land uses and uses of lesser intensity.*

*Industrial Development, Goal 4: To maximize potential of industrially-zoned lands for the fostering of new and innovative industrial development.*

*Industrial Development, Goal 4, Policy: Use the Planned Development approach in those areas where industrial uses will be compatible with accessory residential and/or commercial uses.*

*Non-Motorized Transportation, Goal 1: To have facilities that encourage greater use of bicycles for recreation, community and shopping.*

*Balanced Neighborhoods Goal: Develop a balanced residential environment with access to employment opportunities, community facilities, and adequate public and commercial services.*

*Historic Preservation Goal: Preserve and improve historically and architecturally significant structures and neighborhoods.*

*Educational Facilities, Goal 4: Enable the development community to build quality projects in Vallejo while still providing adequate school facilities to serve those new projects.*

*Other Services Goal: To provide an efficient and financially sound system of urban services to protect the health, safety and general welfare of Vallejo Area residents.*

*Air Quality, Goal 1, Policy 2: Balance jobs and housing in future development to provide Vallejo residents the opportunity to work within Vallejo, and reduce long distance commuting both to and from Vallejo. Jobs and housing should be balanced both in numbers and in salary range/housing cost.*

*Air Quality, Goal 2, Policy 2: Promote mixed land use development. The provision of commercial services such a day care, restaurants, banks and stores near to employment centers can reduce trip generation by promoting pedestrian travel. Providing neighborhood commercial and park uses within residential developments can reduce short auto trip generation by making pedestrian and bicycle trips feasible.*

*Fish and Wildlife Resources Goal: To protect valuable fish and wildlife habitats.*

The project proposes amendments to the Vallejo General Plan. However, these amendments do not reflect any substantive departure from existing General Plan goals and policies. Rather, the proposed General Plan amendments are intended to further the existing General Plan’s broad goals and policies by providing greater specificity and by updating the language of the General Plan to better reflect current conditions in relation to Mare Island.



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c) Conflict with any applicable habitat conservation plan or natural communities conservation plan?				<input type="checkbox"/>
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The Plan Area does not include any area that is subject to a habitat conservation plan or natural communities conservation plan. Therefore, no conflicts would result from development under the Amended and Restated Specific Plan and further discussion of this topic in a Subsequent EIR is not necessary.

**10. MINERAL RESOURCES.** Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				<input type="checkbox"/>
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b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				<input type="checkbox"/>
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The Plan Area does not contain any known important mineral resources. Therefore, no conflicts would result from development under the Amended and Restated Specific Plan and further discussion of this topic in a Subsequent EIR is not necessary.

**11. NOISE.** Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>			
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b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>			
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c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>			
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d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>			
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The 1999 CEQA Documents identify noise sources on Mare Island, describes applicable state noise levels and land use compatibility guidelines, and cites Vallejo General Plan policies relating to noise.<sup>39</sup> The 1999 CEQA Documents identify the following significant impacts of the Reuse Project relating to noise: temporary noise impacts from demolition and construction activities; temporary noise impacts from construction of the southern crossing bridge; noise/land use compatibility conflicts from relocation of the rifle range to the proposed regional park and from industrial operations; and traffic noise.<sup>40</sup> The 1999 CEQA Documents identify mitigation measures that would reduce these impacts to less-than-significant levels. Like the 1999 Specific Plan, the contemplated development under the Amended and Restated Specific Plan would incorporate all of the mitigation measures relating to noise in the 1999 CEQA Documents and the Mitigation Monitoring and Reporting Plan (MMRP). Like the 1999 Specific Plan, no rifle range would be allowed anywhere on Mare Island. Additionally, under the Amended and Restated Specific Plan, the southern crossing bridge is not proposed eliminating noise impacts from bridge construction and bridge traffic altogether.

<b>Evaluation of Environmental Impacts Issues and Supporting Information Sources</b>	<b>Potentially Significant Impacts</b>	<b>Less than Significant Mitigation Incorporated</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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While more buildings would be constructed under the Amended and Restated Specific Plan, the types of construction and equipment would be the same as described in the 1999 CEQA Documents. Therefore, construction noise impacts would remain the same as those identified in the 1999 CEQA Documents and mitigation measures in the MMRP would continue to reduce impacts from construction to less-than-significant levels. Further discussion of construction noise in a Subsequent EIR is not necessary. An updated assessment of traffic noise impacts under the Amended and Restated Specific Plan is called for in light of an expanded development program under the Amended and Restated Specific Plan, more detailed project information, and an updated traffic analysis. Therefore, traffic noise impacts under the Amended and Restated Specific Plan will be discussed in a Subsequent EIR.

**12. POPULATION AND HOUSING.** Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			<input type="checkbox"/>	
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The 1999 CEQA Documents analyzed employment, population, and housing impacts of the Reuse Plan in the Socioeconomics section. It compared the projected employment and population resulting from the Reuse Plan with anticipated growth in Vallejo's Sphere of Influence and region (within Napa and Solano Counties). Mare Island is developed with structures totaling about 7.9 million sq. ft. of nonresidential space. Approximately 3 million square feet of this existing non-residential space on Mare Island is leased and occupied by about 70 businesses, employing around 1,500 persons.<sup>41</sup>

The residential component of the Amended and Restated Specific Plan development program calls for substantially the same amount of residential units on Mare Island (up to 1,400 units) as analyzed by the 1999 CEQA Documents for Mare Island. Population increase in the region, beyond that already projected by the 1999 CEQA Documents, would result from persons and their families attracted to the area by the additional job opportunities created by the Amended and Restated Specific Plan. The Amended and Restated Specific Plan envisions an additional 2.72 million sq. ft. of nonresidential, employment-generating space beyond the 5.9 million sq. ft. contemplated in the Reuse Plan and 1999 Specific Plan, and assessed in the 1999 CEQA Documents. The Amended and Restated Specific Plan would result in the creation of about 5,450 additional jobs, attracting about 12,040 additional residents to Solano and Napa counties by the year 2020, beyond the 9,669 new Mare Island jobs and 21,327 new residents attracted to the region by those jobs, already projected by the 1999 CEQA Documents.<sup>42</sup>

As stated in the 1999 CEQA Documents, a population increase in itself is not considered an adverse environmental impact.<sup>43</sup> Rather, impacts of population growth are embodied in physical environmental consequences such as those related to traffic, air quality, public services, utilities and infrastructure. These are discussed under each environmental topic in this Initial Study, or will be addressed in a Subsequent EIR.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?			<input type="checkbox"/>	
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?			<input type="checkbox"/>	

The 1999 CEQA Documents identify 483 dwelling units and approximately 2000 dormitory beds existing on Mare Island at the time of that analysis.<sup>44</sup> These have been largely vacated since base closure. The former residential areas

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of Farragut Village and Coral Sea Village have been, or will soon be, demolished. These areas would become new housing developments under the Amended and Restated Specific Plan. Construction and development under the Amended and Restated Specific Plan would not necessitate any displacement of persons. Residential development under the Amended and Restated Specific Plan is limited to 1,400 dwelling units by the development agreement between the City and Lennar Mare Island. Implementation of the Amended and Restated Specific Plan would not necessitate the construction of any off-island replacement housing. Therefore further discussion of housing displacement in a Subsequent EIR is not necessary.

**13. PUBLIC SERVICES.** Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government 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 public services:

a) Fire protection?			<input type="checkbox"/>	
b) Police protection?			<input type="checkbox"/>	
c) Schools?			<input type="checkbox"/>	
d) Parks?			<input type="checkbox"/>	
e) Other public facilities?			<input type="checkbox"/>	

The "Affected Environment" chapter of the 1998 EIS/EIR (3.3 Public Services and 3.2 Socioeconomics) describes law enforcement, fire protection, schools, recreation, medical and emergency medical facilities and services at the former Mare Island Naval Shipyard and in Vallejo. The "Environmental Consequences" chapter of the 1998 EIS/EIR identifies significant impacts related to the increased demand for these public services, resulting from the increase in the numbers of residents, workers and visitors on Mare Island. The 1999 CEQA Documents also identified mitigation measures that would reduce significant impacts related to public services to less-than-significant levels, including busing students to off-island schools, and adopting funding mechanisms for expansion of public services.

Additional employees and visitors to Mare Island resulting from the proposed increases in the Amended and Restated Specific Plan development program, could require more public service personnel than called for by the Reuse Plan development program. However, the impacts and mitigation measures identified in the 1999 CEQA Documents for the Reuse Plan would be essentially the same for the Amended and Restated Specific Plan. The Amended and Restated Specific Plan, like the 1999 Specific Plan, incorporates the mitigation measures called for in the 1999 CEQA Documents relating to public services. It includes additional detail as to how public services on Mare Island would be provided and financed. The City of Vallejo has implemented a Mello-Roos Community Facilities District for Mare Island, which took effect on July 1, 2002. The district enables the City to finance, among other municipal services, police, fire and maintenance of streets and infrastructure through levy of special taxes from Mare Island property owners. (Recreational facilities are discussed under item "14" below.)

<b>Evaluation of Environmental Impacts Issues and Supporting Information Sources</b>	<b>Potentially Significant Impacts</b>	<b>Less than Significant Mitigation Incorporated</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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<b>14. RECREATION.</b>				
a) Would the project increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				<input type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			<input type="checkbox"/>	

Mare Island has extensive existing recreational facilities and open space areas. Reuse of Mare Island for civilian use under the Amended and Restated Specific Plan would expand public access to recreational opportunities by reuse of these existing facilities and would create new public parks and open space that would serve the neighborhood and region. The development of parks and open space would enhance the environmental quality of Mare Island and would exceed the City's standards for park dedication (the Amended and Restated Specific Plan would provide around 28 acres of neighborhood parks, while City standards would call for 19.5 acres, at a ratio of 4.25 acres per 1,000 population).

The Pacific Sports Center, opened in 1999, is the largest indoor sports facility in Northern California, serving the City and region. Impacts of construction or expansion of additional sports and fitness recreational facilities on Mare Island are assessed generally in this Initial Study within the scope of anticipated commercial and institutional development under the Amended and Restated Specific Plan.

No negative impacts relating to recreational facilities would result from the Amended and Restated Specific Plan. Therefore, further discussion of this issue in a Subsequent EIR is not necessary.

<b>15. TRANSPORTATION/TRAFFIC.</b> Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>			
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>			
c) Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>			
d) Result in inadequate emergency access?	<input type="checkbox"/>			
e) Result in inadequate parking capacity?	<input type="checkbox"/>			
f) Conflict with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>			

The 1999 CEQA Documents describe the transportation/traffic setting of Mare Island existing at that time, including regional and local access routes; circulation on Mare Island (including traffic volumes, intersection Levels of Service [LOS], and problem areas); parking; transit; bicycle and pedestrian system; truck and rail system; and plans and

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regulations relating to transportation. The 1999 CEQA Documents identified significant transportation/traffic impacts of the Reuse Project, including increased traffic congestion and safety hazards from increased truck and rail traffic; and short term construction impacts on traffic congestion.<sup>45</sup> The 1999 CEQA Documents identified mitigation measures that would reduce these impacts to less-than-significant levels.

An updated assessment of transportation/traffic impacts under the Amended and Restated Specific Plan is called for in light of changes in the Amended and Restated Specific Plan and information available since the 1998 EIS/EIR certification and 1999 Addendum. These include changes in the development program under the Amended and Restated Specific Plan, more detailed project information relating to the location and nature of uses, more detailed information relating to proposed roadway improvements, and the elimination of the proposed southern crossing bridge from the project. These changes may result in transportation/traffic impacts that are different in nature and degree than those described in the 1999 CEQA Documents. In addition, Vallejo has completed a new citywide traffic model that was not available when the 1999 CEQA Documents was certified. Therefore, transportation/traffic impacts under the Amended and Restated Specific Plan will be analyzed for the Subsequent EIR.

**16. UTILITIES AND SERVICE SYSTEMS.**

The Mare Island Utility Reuse Plan (MIURP), which is currently under review as part of the Amended and Restated Specific Plan, updates the Mare Island Reuse Infrastructure Study (MIRIS) prepared in 1997 as part of the City's Reuse Plan, and the adopted 1999 Specific Plan. The MIURP proposes infrastructure changes to accommodate additional development proposed by Lennar Mare Island, and to account for new information available since the MIRIS was completed and facilities upgrades that have occurred since 1999. The upgrades by the City of Vallejo include construction of a new water storage tank and water mains connecting the tank to existing supply lines, repair or replacement of several sewage pump stations, and cleanout of some existing storm drain lines. Details on the remaining upgrades are still being developed. Therefore, these will be discussed in the Subsequent EIR. Potential effects of utilities upgrades on historic resources will be also be evaluated in the Subsequent EIR in the context of discussion of historic resources.

Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>			
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The Vallejo Sanitation and Flood Control District (VSFCD) provides wastewater treatment services to Mare Island. Municipal agencies are required to comply with Regional Water Quality Control Board (RWQCB) wastewater treatment requirements, and the Vallejo Sanitary Flood Control District operates the wastewater treatment plant in southern Vallejo under an NPDES permit issued by the RWQCB in April 2000.<sup>46</sup>

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>			
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When the 1999 CEQA Documents were prepared, the Mare Island's water distribution system provided water to all users on the island, including drinking water, irrigation, industrial, and fire suppression needs, supplied by the City of

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Vallejo water system. The 1998 EIS/EIR concluded that the potable water system (much of which is still serving the island), was in fair condition.<sup>47</sup> In addition, at the time of the 1998 EIS/EIR the internal fire protection system on Mare Island did not meet Vallejo water storage requirements. The 1998 EIS/EIR concluded that Mare Island would not be able to meet Vallejo water storage requirements at full buildout of the Reuse Plan. Under the Reuse Plan, water demands at buildout were found to be equivalent to system capacity, leaving no surplus for fire flow or emergency use.

Most of the conditions described in the 1999 CEQA Documents related to water supply facilities are still applicable to the island today. Mare Island continues to receive potable water from Vallejo through two transmission mains located at the northern and southern ends of the island, and much of the distribution infrastructure remains outdated. In February of 2002, Lennar Mare Island submitted the MIURP for the proposed development on Mare Island. Since certification of the 1998 EIS/EIR, water storage facilities on the island have been replaced by one 5.7-million gallon tank connected to the rest of the water distribution system by two 20-inch water mains, located near the southern end of Club Drive. The proposed potable water and firefighting water systems are under review as part of the Amended and Restated Specific Plan.

The wastewater collection system on Mare Island is similarly inadequate and in need of upgrade and repair. The 1999 CEQA Documents found that Mare Island's wastewater collection system was in poor condition due to significant inflow and infiltration problems resulting from age, lack of maintenance, and material failures due to ground subsidence. Under a wastewater discharge permit signed with the VSFCDC in June 1994, Mare Island was permitted to discharge sanitary waste into the VSFCDC collection system. Except for a few changes, much of the island's wastewater distribution infrastructure is the same as in 1998. Sanitary sewage is not treated on Mare Island. Sewage is collected on Mare Island by gravity sewers and lift stations, and pumped to the mainland through an 18-inch main running along the causeway and terminating in the VSFCDC wastewater treatment plant on the southern Vallejo waterfront.<sup>48</sup>

The 1999 CEQA Documents noted that implementation of the Reuse Plan would increase wastewater generation on Mare Island, resulting in an exceedence of system capacity, and a significant but mitigable environmental impact. The 1998 EIS/EIR included a mitigation measure involving "assessing the existing portions of the collection system and improve(ing) as necessary where significant increases in population would result from proposed development." The 1998 EIS/EIR concluded that implementation of this mitigation measure would reduce the wastewater impact to a less than significant level.<sup>49</sup> The assessment is occurring as part of the evaluation of the Amended and Restated Specific Plan as part of the MIURP. This topic will be discussed in the Subsequent EIR

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			□	
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According to the 1999 CEQA Documents the stormwater system on Mare Island was able to drain most parts of the naval base without flooding. The system collects surface water runoff and conveys it to the Mare Island Strait through outfall pipes. The capacity of the system varies depending on the tidal stage in the strait. The system received no routine maintenance under Navy auspices, and repairs were made only when necessary. The system consists of a network of catch basins, pipes, manholes, pump stations, and outfalls with flapper valves.<sup>50</sup> The pipes range from 3 to 54 inches with an 80-inch drainage tunnel north of Dry Dock 1.

The major problems in the system include the presence of contaminants in sediment found in pipelines and manholes. In addition, many of the outfall flapper valves are in need of replacement, and many of the pipelines are undersized and do not meet the VSFCDC minimum stormwater pipe diameter of 12 inches. The 1999 CEQA Documents concluded that

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stormwater runoff would increase as Reuse Areas 1, 2, 3, 6, and 10 were developed with impervious parking lots and roads, adding to the load of a stormwater system already inadequate to handle the existing runoff from developed areas in a major storm. The 1999 CEQA Documents recommended implementing the proposed capital improvements in a manner that corresponded to planned Island development, including replacing undersized pipes with sizes required by the VSFC. The 1998 EIS/EIR concluded that this would eliminate any impacts resulting from inadequate stormwater drainage, and that no additional mitigation was required.<sup>51</sup>

The MIURP takes into account the recommendations of the 1999 CEQA Documents as well as changes that have occurred since certification. The MIURP details what has already been done to improve stormwater drainage on the island, as well as the planned improvements to serve development under the Amended and Restated Specific Plan. In 2000 some of the existing pipes on the island were jetted and cleared of sediments by the City of Vallejo. At this time, several plugged manholes and pipes were discovered by the City's contractor. These plugged sites will be removed and replaced during the reconstruction of the stormwater system.<sup>52</sup> Aside from the improvements mentioned above, the stormwater system on the island is essentially the same as it was at the 1998 EIS/EIR certification and the 1999 Addendum.

Improvements will include removal of two stormwater lift stations in Reuse Area 1, and replacement of existing stormwater collection pipes. To bring the stormwater system up to the necessary capacity, about 4,170 feet of collector pipe will be replaced throughout Areas 1, 2, and 3 with collectors ranging in size from 18 to 24 inches.<sup>53</sup> Substantial improvements will also be needed in Areas 5 and 9. These include: construction of 42, 54, and 60-inch trunk lines under 15<sup>th</sup> Street; construction of 18, 24, 27, 36, and 42-inch collectors and trunk lines along Railroad Avenue; and construction of a 33-inch collector under the seawall in Reuse Area 5.<sup>54</sup> The final improvement involves creation of four concrete-lined collector channels in Area 10. Two 3-foot by 4-foot channels, 1,500 feet long will be installed under Blake Avenue. A 2-foot-by-3-foot channel will be 1,300 feet long under Railroad Avenue, and a 400-foot long, 4-foot-by-5-foot channel will extend from Blake Avenue to the Mare Island Strait.<sup>55</sup> The combination of these four channels will form a consolidated outfall for this area, alleviating current capacity shortfalls.

Most of the planned improvements (See 16 b.) involve replacement of 5 to 30 percent of the Island's aging storm sewers. Stormwater related repairs will also include the replacement of two existing pumps at lift station SDPS-13, serving the small hospital complex in Reuse Area 9, and the removal of two stormwater outfalls along the seawall between A and B Streets. The final two changes involve installation of a new interceptor line to capture and divert stormwater discharge, and the construction of a stormwater monitoring station in conjunction with ongoing outfall consolidation.<sup>56</sup>

Although the current stormwater system on Mare Island is in need of repair, appropriate solutions have either been carried out or have been detailed in the MIURP. No significant impacts related to stormwater drainage would result from the development program after the specifications in the MIURP and the Amended and Restated Specific Plan are carried out. Therefore, a discussion of stormwater in the Subsequent EIR is not required.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>			
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The 1998 EIS/EIR contains no information about water supply. Therefore, water supply will be discussed in the Subsequent EIR. Pursuant to SB 610, the Subsequent EIR will provide written confirmation from Vallejo's water supplier that the City has sufficient assured supply over the next 20 years to serve the planned 2.7 million square feet of additional building area.

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e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			<input type="checkbox"/>	
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The Vallejo Sanitation and Flood Control District (VSFCD) provides wastewater treatment for Mare Island sanitary flows under a 1994 agreement. The Vallejo wastewater treatment plant capacity is about 30 million gallons per day (mgd) during dry weather, with a permitted operating level at about 15.5 mgd. A new treatment facility completed in 1991 provides wet weather capacity of up to 60 mgd. The existing wastewater treatment facilities served Mare Island when it was in full operation, before base closure occurred; the VSFCD provided the Navy with a capacity to treat and dispose of up to 2.5 mgd. This capacity was transferred to the City of Vallejo for Mare Island as part of the base transfer.<sup>57</sup> When in full operation, Mare Island employed over 15,000 people and housed over 1,200 people in about 480 residential units and military dormitories. Employment projected for buildout of the Amended and Restated Specific Plan would be up to about 12,500 jobs; up to 4,000 people would live on the island. These estimates total approximately 3,000 more jobs which is consistent with the number of residents as analyzed in the 1999 CEQA Documents. The employed population would be smaller and the resident population would be slightly larger than when the Naval Shipyard was in operation. Therefore, the overall change would not result in substantially greater wastewater flows, and would not be expected to exceed the capacity of the wastewater treatment facilities.

The flow volumes from Mare Island continue to be affected by substantial amounts of infiltration and inflow, particularly during wet weather. Improvements planned as part of the development program in the Amended and Restated Specific Plan and MIURP will substantially reduce the amount of infiltration and inflow and thus will reduce wet weather flows from the island that have been accommodated at the wastewater treatment plant in the past. Therefore, development under the Amended and Restated Specific Plan would not result in a determination of inadequate capacity at the wastewater treatment plant.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			<input type="checkbox"/>	
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At the time of the 1999 CEQA Documents, solid waste on Mare Island was transported to a transfer station at the old American Canyon Landfill site, and then shipped to a landfill in Roosevelt, Washington. According to the 1998 EIS/EIR, in 1993 Mare Island generated 5,500 tons of municipal solid waste, and recycled 5,060 tons. This high rate of recycling (nearly 50 percent) was attributed to the high quantity of scrap metal generated at the Mare Island industrial complex. Prior to 1995, solid waste on Mare Island was transported off base by a private contractor (Industrial Carting). Under Naval auspices, Mare Island complied with all Federal, state, and local environmental laws to reduce solid waste. In addition, the island operated a comprehensive recycling program serving residential, commercial and industrial needs. After transfer of the island to the City of Vallejo, tenants were required to arrange their own solid waste disposal. Since transfer of control to Vallejo, the City's franchises for solid waste collection and recycling have been extended to Mare Island.<sup>58</sup>

The 1999 CEQA Documents noted that the change in land uses from industrial to residential/commercial could result in a shift in the composition of solid waste generated on the island. The 1999 CEQA Documents concluded that this would be a less than significant impact, and there would be no significant impacts related to solid waste management.<sup>59</sup> Although the specifics of the reuse plans for Mare Island have changed since the 1999 CEQA Documents, impacts to solid waste would remain less than significant. Solid waste generated on the island may change in composition, but it would not increase in volume in comparison to the period of naval control. The solid waste facilities currently servicing the island will be sufficient to meet its needs under redevelopment, and there will be no significant impacts with development under the Amended and Restated Specific Plan.



<b>Evaluation of Environmental Impacts Issues and Supporting Information Sources</b>	<b>Potentially Significant Impacts</b>	<b>Less than Significant Mitigation Incorporated</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
g) Comply with federal, state, and local statutes and regulations related to solid waste?			<input type="checkbox"/>	
<p>The City of Vallejo currently provides, and will continue to provide solid waste services under the terms of the Amended and Restated Specific Plan. City agencies are required to comply with all federal, state, and local solid waste statutes. Therefore, there will be no significant solid waste impacts from the project.</p>				
<b>17. MANDATORY FINDINGS OF SIGNIFICANCE.</b>				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a threatened, rare or endangered species or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>			
<p>Development under the Amended and Restated Specific Plan would have no significant unmitigable impacts related to biological resources as discussed in the Biological Resources section of this Initial Study. Environmental impacts to historical resources are identified in this Initial Study as "Potentially Significant" and will be assessed in the Subsequent EIR.</p>				
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>			
<p>Development under the Amended and Restated Specific Plan could contribute to cumulative traffic and air quality impacts in the Bay Area. These will be discussed in the Subsequent EIR.</p>				
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>			
<p>Environmental impacts identified in this Initial Study as "Potentially Significant" relating to transportation/traffic, air quality, noise, and utilities will be assessed in a Subsequent EIR.</p>				

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## SUPPORTING INFORMATION SOURCES

*All Supporting Information Sources are available for review, by appointment, at the City of Vallejo (Development Services, Planning Division; Vallejo City Hall, 2nd Floor; 555 Santa Clara Street; Vallejo, CA 94590).*

<sup>1</sup> City of Vallejo, *Final Mare Island Reuse Plan*, July 1994 (“Reuse Plan”).

<sup>2</sup> City of Vallejo, *Final Environmental Impact Statement / Environmental Impact Report for Disposal and Reuse of Mare Island Naval Shipyard*, November 17, 1998 (“1998 EIS/EIR”).

<sup>3</sup> City of Vallejo, *Mare Island Specific Plan*, March 1999 (“1999 Specific Plan”).

<sup>4</sup> City of Vallejo, *Addendum to the Final Environmental Impact Statement / Environmental Impact Report for Disposal and Reuse of Mare Island Naval Shipyard*, February 1999 (1999 Addendum).

<sup>5</sup> City of Vallejo, *Mare Island Specific Plan, Amended and Restated*, draft dated March 12, 2003 (Amended and Restated Specific Plan).

<sup>6</sup> Amended and Restated Specific Plan.

<sup>7</sup> Amended and Restated Specific Plan, pp. 1-2.

<sup>8</sup> Amended and Restated Specific Plan, Section 3.2 Land Use Categories, pp. 53-55.

<sup>9</sup> LFR, *Mare Island Utility Reuse Plan Update*, February, 2002 ( the “MIURP”).

<sup>10</sup> LSA Associates, Inc., *Delineation of Waters of the United States on the Western Edge of Mare Island Near Vallejo, California*, July 30, 2001.

<sup>11</sup> Fehr & Peers Associates, *Revised Final Report, Lennar Mare Island Specific Plan, Mare Island Transportation Evaluation Report*, November 2001.

<sup>12</sup> Korve Engineering, *Lennar Mare Island, Typical Street Cross Sections*, February 2002.

<sup>13</sup> Par Environmental Services, Inc., *Revised Predictive Archaeological Model for Mare Island*, October 2000.

<sup>14</sup> Par Environmental Services, Inc., *Archaeological Treatment Plan for Mare Island*, November 2000.

<sup>15</sup> City of Vallejo, *Mare Island Historic Resources Project Guidelines*, draft dated April 2003 (“Historic Guidelines”).

<sup>16</sup> Historic Guidelines, pp.4-5.

<sup>17</sup> 1998 EIS/EIR, Section 3.5 Aesthetics and Scenic Resources.

<sup>18</sup> 1998 EIS/EIR, Section 4.5 Aesthetics and Scenic Resources.

<sup>19</sup> 1998 EIS/EIR, Section 4.5 Aesthetics and Scenic Resources, p. 4-48.

<sup>20</sup> 1998 EIS/EIR, Section 3.5 Aesthetics and Scenic Resources, p. 3-68

<sup>21</sup> Amended and Restated Specific Plan, Section 4.6.2 Exterior Lighting, p. 93.

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- <sup>22</sup> LFR, Updated Biological Evaluation for Mare Island, February 2003.
- <sup>23</sup> LSA Associates, Inc., *Delineation of Waters of the United States on the Western Edge of Mare Island near Vallejo, California*, July 30, 2001.
- <sup>24</sup> California Department of Fish and Game, California Natural Diversity Data Base Report for the Mare Island Quadrangle. December 2002.
- <sup>25</sup> United States Fish and Wildlife Service, United States Fish and Wildlife Service Special Status Species Data Base for the Mare Island Quadrangle. December 2002.
- <sup>26</sup> LSA Associates, Inc., *Delineation of Waters of the United States on the Western Edge of Mare Island near Vallejo, California*, July 30, 2001.
- <sup>27</sup> Par Environmental Services, Inc., *Revised Predictive Archaeological Model for Mare Island*, October 2000.
- <sup>28</sup> Par Environmental Services, Inc., *Archaeological Treatment Plan for Mare Island*, November 2000.
- <sup>29</sup> 1998 EIS/EIR, Section 3.8 Geology and Soils.
- <sup>30</sup> 1998 EIS/EIR, Section 4.8 Geology and Soils.
- <sup>31</sup> 1998 EIS/EIR, Section 3.13 Hazardous Materials and Waste.
- <sup>32</sup> 1998 EIS/EIR, Section 4.13 Hazardous Materials and Waste, Table 4-29, p. 4-144.
- <sup>33</sup> 1998 EIS/EIR, Section 3.13 Hazardous Materials and Waste, pp. 3-184 - 3-190.
- <sup>34</sup> 1998 EIS/EIR, Section 3.13 Hazardous Materials and Waste, p. 3-190 – 3-205.
- <sup>35</sup> 1998 EIS/EIR, Section 4.13 Hazardous Materials and Waste, p. 4-141 – 4-142.
- <sup>36</sup> 1998 EIS/EIR, Section 3.7, Water Resources.
- <sup>37</sup> 1998 EIS/EIR, Section 4.7 Water Resourced.
- <sup>38</sup> Amended and Restated Specific Plan, p. 1.
- <sup>39</sup> 1998 EIS/EIR, Section 3.11 Noise
- <sup>40</sup> 1998 EIS/EIR, Section 4.11 Noise.
- <sup>41</sup> Lennar Mare Island, *Progress Report*, Fall 2002. p.1.
- <sup>42</sup> 1998 EIS/EIR, Section 4.2 Socioeconomics, p. 4-19.
- <sup>43</sup> 1998 EIS/EIR, Section 4.2 Socioeconomics, p.4-6.
- <sup>44</sup> 1998 EIS/EIR, Section 3.2 Socioeconomics, p.3-20.
- <sup>45</sup> 1998 EIS/EIR, Section 2.9 Traffic and Circulation.
- <sup>46</sup> Regional Water Quality Control Board, San Francisco Bay Region, National Pollution Discharge Elimination System Permit CA 0037699, issued April 19, 2000.

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<sup>47</sup> 1998 EIS/EIR, pp. 3-162 to 3-166.

<sup>48</sup> 1998 EIS/EIR, 1998, p. 3-166.

<sup>49</sup> 1998 EIS/EIR, p. 4-133.

<sup>50</sup> 1998 EIS/EIR, p. 3-173.

<sup>51</sup> 1998 EIS/EIR, p. 4-134.

<sup>52</sup> MIURP, p. 27.

<sup>53</sup> MIURP, p. 41.

<sup>54</sup> MIURP, pp. 41-43.

<sup>55</sup> MIURP, p. 44.

<sup>56</sup> MIURP, pp. 45-47.

<sup>57</sup> Rolf Ohlemutz, District Engineer, Vallejo Sanitary and Flood Control District, telephone conversation with Turnstone Consulting, July 15, 2003.

<sup>58</sup> 1998 EIS/EIR, p. 3-168.

<sup>59</sup> 1998 EIS/EIR, p. 4-136.



## EXHIBIT 1

### MITIGATION MONITORING AND REPORTING PROGRAM MARE ISLAND REUSE PROJECT

February 1999

This Mitigation Monitoring and Reporting Program is for the Mare Island Reuse Project ("Project") as described below. This Program shall be considered the conditions of approval for the Project. Full descriptions of the significant impacts and their mitigating measures are included in the Final Environmental Impact Statement / Environmental Impact Report for the Disposal and Reuse of Mare Island Naval Shipyard ("EIS/EIR"). In addition, other measures identified in the reuse planning process are included herein as Project conditions.

#### PROJECT DESCRIPTION

The Project has four components: (1) amendment of the *Vallejo General Plan Land Use Map*; (2) approval of the Mare Island Specific Plan; (3) amendment of the Zoning Ordinance to impose zoning designations on Mare Island; and (4) approval of the Mare Island Specific Plan as the Planned Development Master Plan. A complete description of each of the Project components is included in the Planning Commission staff report, dated March 1, 1999.

#### *Amendment of the General Plan - General Plan Amendment #98-02*

All of Mare Island is currently designated on the *Vallejo General Plan Land Use Map* as "Employment". The off-island Main Entrance is currently designated as "Commercial - General". The off-island Roosevelt Terrace is currently designated as "Residential - High Density".

The Project proposes to change the single on-island designation to "Employment", "Commercial - General", "Commercial - Waterfront", "Residential - Medium Density", "Open Space - Community Park" and "Open Space - Wetlands". These designations are consistent with the general areas delineated in the Reuse Plan. The current General Plan designations of the off-island Main Entrance and Roosevelt Terrace will not change.

#### *Approval of the Mare Island Specific Plan - Specific Plan #98-01*

The *Mare Island Specific Plan* ("Specific Plan") describes the reuse of the island and off-island sites consistent with the Reuse Plan. There are 13 reuse areas, designated wetlands and dredge areas. The Specific Plan also shows four federal to federal transfer areas and conservation easements. The elements are:

- Introduction — vision for Mare Island and reuse goals;
- Plan Background — island's setting and history and the relationship of the Plan to the *Vallejo General Plan*;
- Land Use — policies and typical and allowed land uses in each reuse area;
- Urban Design — policies and general standards for development;
- Transportation;

- Infrastructure;
- Other Services; and
- Implementation — subsequent land use procedures, parcelization and financing alternatives.

*Amendment of the Zoning Ordinance - Zoning Map Amendment #98-02*

Mare Island has never been zoned by the City since it was an active federal facility and not subject to local land use authority. Therefore, the amendment of the Zoning Ordinance is to impose new zoning designations on the island. The upland portions of the island will be zoned MUPD, Mixed Use Planned Development. The wetlands and dredge areas will be zoned RC, Resource Conservation. The amendment also rezones one of the off-island sites, Roosevelt Terrace, from HDR, High Density Residential, to PDR, Planned Development Residential. The zoning of the Main Entrance will remain MUPD, Mixed Use Planned Development.

*Approval of the Planned Development Master Plan - Planned Development #98-04*

Pursuant to Sections 16.116.020 and 16.116.035 of the *Vallejo Municipal Code*, the Specific Plan will serve as the *Mare Island Planned Development Master Plan* ("Master Plan"). The approval of the Master Plan will be by ordinance so the Specific Plan / Master Plan will serve as the zoning document for Mare Island.

**PROJECT IMPACTS AND MITIGATION MEASURES**

The impacts and mitigation measures listed below are summaries of the significant impacts and mitigation measures discussed in the EIS/EIR. The full descriptions contained in the EIS/EIR shall be used for the implementation of mitigation measures.

**Land Use**

- ***Impact 1: Area 10 will be developed with residential and retail uses adjacent to the Regional Park.***

**Mitigation:**

Reduce or change the development in this area to be more compatible with public open space.

**Mitigation Responsibility:** Project developer<sup>1</sup>

**Implementation Responsibility:** City of Vallejo

**Implementation Timing:** Prior to approval of any unit plans in Area 10.

- ***Impact 2: A southern crossing could conflict with the future residential and open space uses and the existing sensitive habitat at the southern end of the island.***

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<sup>1</sup> The term "project developer" as used throughout this Mitigation and Monitoring Program refers to any party or parties who will undertake a reuse project on Mare Island. The project developer could be a private developer, public agency, non-profit organization and/or individual.

Mitigation:

- Do not construct a southern crossing at this location.

Or

- Design a southern crossing to minimize impacts by careful siting and providing adequate noise attenuation and visual buffers, and comply with all environmental requirements...

Mitigation Responsibility: Project developer

Implementation Responsibility: City of Vallejo; responsible state and/or federal agencies

Implementation Timing: Prior to approval of plans for a southern crossing.

- ***Impact 4:** Reuse and development in various areas could interfere with or require the removal of dredge slurry pipelines.*

Mitigation:

Design all development plans in Areas 3, 4, 5, 10 and 12 to allow continued pipeline transfer of dredge material to dredge disposal areas.

Mitigation Responsibility: Project developer

Implementation Responsibility: City of Vallejo

Implementation Timing: Prior to approval of any unit plans or public improvements in Areas 3, 4, 5, 10 or 12.

- ***Impact 5:** Construction of a southern crossing could result in demolition or relocation of existing structures off-island and could substantially alter the land use pattern and physical arrangement off-island.*

Mitigation:

Design a southern crossing to minimize displacement of existing structures and provide noise attenuation and visual buffers to reduce impacts to off-island areas.

Mitigation Responsibility: Project developer

Implementation Responsibility: City of Vallejo; responsible state and/or federal agencies

Implementation Timing: Prior to approval of plans for a southern crossing

Socioeconomics

- ***Impact 1:** The additional students generated by the reuse of Roosevelt Terrace will exceed the capacity of Federal Terrace School.*

Mitigation:

- Construct a new school.



Or

- Add portable classrooms.

Or

- Bus students to less crowded schools.

Mitigation Responsibility: Project developer

Implementation Responsibility: Vallejo City Unified School District

Implementation Timing: Resolution of mitigation prior to the issuance of residential building permits

- ***Impact 2: Additional students generated by reuse will exceed the capacity of the Mare Island Elementary School.***

Mitigation:

- Construct a new school.

And/or

- Add portable classrooms.

And/or

- Bus students to less crowded schools.

Mitigation Responsibility: Project developer

Implementation Responsibility: Vallejo City Unified School District

Implementation Timing: Resolution of mitigation prior to the issuance of residential building permits

### Public Services

- ***Impact 1: There will be a substantial increase in demand for police services generated by the increase in population on the island.***

Mitigation:

Adopt mechanisms to fund increased police staffing.

Mitigation Responsibility: City of Vallejo

Implementation Responsibility: City of Vallejo

Implementation Timing: As demands for police service warrant

- ***Impact 2: There will be a substantial increase in demand for fire services generated by the increase in population on the island.***

**Mitigation:**

Adopt mechanisms to fund increased fire staffing.

**Mitigation Responsibility:** City of Vallejo

**Implementation Responsibility:** City of Vallejo

**Implementation Timing:** As demands for fire services warrant

- ***Impact 3: There will be a substantial increase in demand for emergency medical services generated by the increase in population on the island.***

**Mitigation:**

- Update the emergency medical service agreements with ambulance companies.
- Integrate the fire station on the island with the Council's emergency medical response system.
- Adopt mechanisms to fund increased emergency medical services.

**Mitigation Responsibility:** City of Vallejo

**Implementation Responsibility:** City of Vallejo

**Implementation Timing:** As demands for emergency medical services warrant

**Aesthetics and Scenic Resources**

- ***Impact 1: A southern crossing will be prominently visible from on and off the island.***

**Mitigation 1:** The following mitigation measures are hereby adopted and will be implemented as part of the Project as provided by the Mitigation Monitoring and Reporting Program:

- Design a crossing to avoid disturbing the existing landscape to the greatest extent practical.
- Design a bridge using materials to minimize its visual contrast with the surrounding landscape.
- Design lighting to keep glare to a minimum.

**Mitigation Responsibility:** Project developer

**Implementation Responsibility:** City of Vallejo; responsible state and/or federal agencies

**Implementation Timing:** Prior to approval of plans for a southern crossing

- ***Impact 2: New trails in the upland open space areas could result in visible scarring.***

**Mitigation:**

- Use existing roads for trails to the extent possible.

- Do not locate trails on steep slopes that will require extensive cut and fill.
- Design the trails to blend with the existing natural features.

Mitigation Responsibility: Project developer

Implementation Responsibility: City of Vallejo; Greater Vallejo Recreation District; responsible state and/federal agencies

Implementation Timing: Prior to approval of any improvement plans for Area 12

- ***Impact 3: The equestrian facility will be relocated to an area with high viewer sensitivity.***

Mitigation:

- Do not locate the equestrian facility to the upland open space area.
- Or
- Do not locate the equestrian facility on sideslopes, hilltops or ridgelines. Locate it at the base of the hills, and design the site with minimal disturbance of the existing landscaping.

Mitigation Responsibility: Project developer

Implementation Responsibility: City of Vallejo; Greater Vallejo Recreation District; responsible state and/or federal agencies

Implementation Timing: Prior to approval of improvement plans for Area 12

### Biological Resources

- ***Impact 1: Construction of a southern crossing in Area 10 could disturb the habitat of Mason's Illaeopsis, the salt marsh harvest mouse and California clapper rail.***

Mitigation:

- Develop mitigation requirements for impacts to sensitive habitat in consultation with the U.S. Fish and Wildlife Service and the Department of Fish and Game.

Or

- Do not locate a southern crossing in Area 10.

Mitigation Responsibility: Project developer

Implementation Responsibility: City of Vallejo; responsible state and/or federal agencies

Implementation Timing: Prior to approval of plans for a southern crossing

- ***Impact 2: Construction in areas adjacent to wetlands could affect the wetland communities.***

Mitigation:

- Secure a permit from the Army Corps of Engineers for any fill placed in a wetland.
- Do not allow construction or staging in wetland areas.
- Prohibit access to wetlands.
- Restrict all vehicular and pedestrian traffic to existing roads and trails.

Mitigation Responsibility: Project developer

Implementation Responsibility: City of Vallejo; responsible state and/or federal agencies

Implementation Timing: Prior to approval of plans for development adjacent to wetlands

▪ Other Measures

- Implement an active predator management program and a human access management program in and adjacent to clapper rail and salt marsh harvest mouse habitat.
- Establish covenants, conditions and restrictions ("CC&Rs") to limit the number of cats and dogs allowed in each residential unit and to prohibit unleashed dogs and cats outside property lines of individual units.
- Inform owners and/or users of dry docks that endangered or threatened fish species occur in the vicinity of Mare Island and that permits from state and federal resource agencies may be required.
- Consult with U.S. Fish and Wildlife Service prior to the use of dredge areas.

Water Resources

- ***Impact 1: Grading, demolition and construction could result in soil disturbance and increased erosion / sedimentation in Mare Island Strait.***

Mitigation:

- Develop erosion control plans consistent with the SWPPP prior to any site clearing or grading.
- Install erosion control where necessary prior to October 15<sup>th</sup> to remain until April 15<sup>th</sup>.
- Include a best management practices ("BMP") program for stormwater collection.
- Focus the BMP program on containing and controlling land use activities to prevent the generation of pollutants that might affect water quality, preventing and controlling stormwater runoff, and retaining and treating runoff on-site.
- Give nonstructural BMPs preference over structural BMPs where appropriate.
- Use management measures and practices in the BMP program identified by the Environmental Protection Agency in the Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters and the California Stormwater Best Management Practice Handbook.

- Develop the BMP program to be consistent with the requirements of the State Water Resources Control Board and the Regional Water Quality Control Board.

Mitigation Responsibility: Project developer

Implementation Responsibility: City of Vallejo; Vallejo Sanitation and Flood Control District; responsible state and/or federal agencies

Implementation Timing: Prior to approval of grading, demolition and construction plans.

- ***Impact 2: Development in flood zones could expose island residents and workers to flood hazards.***

Mitigation:

- Implement the following measures:
  - Protect new development at sites below 10 feet MSL by raising the base level of the site to a minimum of 10 feet MSL.
  - Comply with the City's Flood Protection Ordinance.
  - Map all 100-year flood plains as part of the FIRM process.
  - Include an adequate setback along the eastern waterfront to allow the future construction of a berm or seawall.
  - Provide sufficiently wide rights of way for levees on the upland side so that no fill for levee widening is placed in the bay.

Or

- Locate new development outside the 100-year flood zone unless measures are taken to raise these areas above the 100-year flood zone.

Mitigation Responsibility: Project developer

Implementation Responsibility: City of Vallejo; Vallejo Sanitation and Flood Control District; responsible state and/or federal agencies

Implementation Timing: Prior to approval of improvement plans

- ***Impact 3: Contaminated sediments could be exposed through berthfront dredging of Mare Island Strait.***

Mitigation:

If contaminants are found to be soluble or at insoluble concentrations capable of causing unacceptable water column effects, special precautions and measures will be adopted prior to undertaking dredging.

Mitigation Responsibility: Project developer

Implementation Responsibility: City of Vallejo; responsible state and/or federal agencies

Implementation Timing: Prior to dredging

Geology and Soils

- ***Impact 1: Dam failures due to structural weakness or erosion will cause downslope flooding.***

Mitigation:

Implement periodic inspections of the dams for structural soundness by a qualified geotechnical engineer.

Mitigation Responsibility: Project developer

Implementation Responsibility: City of Vallejo

Implementation Timing: Ongoing

- ***Impact 2: Structural damage will result from ground shaking during a large earthquake.***

Mitigation:

- Conduct earthquake vulnerability studies for buildings that will be reused.
- Design construction to meet existing seismic requirements.
- Evaluate infrastructure links to the mainland for vulnerability to earthquakes.
- Develop a seismic contingency plan for restoring essential services to the island.

Mitigation Responsibility: Project developer

Implementation Responsibility: City of Vallejo

Implementation Timing: Prior to occupancy of existing buildings and prior to issuance of building permits for new construction

- ***Impact 3: There are areas with a high potential for liquefaction.***

Mitigation:

- Evaluate the foundations and design of existing structures to determine whether or not retrofitting these structures will be economically feasible.
- Design new structures to meet current building codes.
- Replace buildings that cannot be made adequately safe.

Mitigation Responsibility: Project developer

Implementation Responsibility: City of Vallejo

Implementation Timing: Prior to occupancy of existing buildings and prior to issuance of building permits for new construction

- **Impact 4:** *There is the potential for slope failure in Areas 9, 11 and 12.*

**Mitigation:**

Perform a thorough geologic investigation of any new construction site in Areas 9, 11 and 12 to determine suitability for construction and any further mitigation needed against potential slope failure.

**Mitigation Responsibility:** Project developer

**Implementation Responsibility:** City of Vallejo.

**Implementation Timing:** Prior to issuance of building permits or approval of improvement plans

**Traffic and Circulation**

- **Impact 1:** *The increase in truck traffic will affect on- and off-island roadways.*

**Mitigation:**

Monitor truck traffic, and limit or restrict such traffic during commute periods if there are significant impacts to on- and off-island roadways.

**Mitigation Responsibility:** City of Vallejo

**Implementation Responsibility:** City of Vallejo

**Implementation Timing:** Ongoing

- **Impact 2:** *Many on-island roadways are not designed to accommodate truck traffic which will result in safety hazards.*

**Mitigation:**

- Modify on-island intersections to Vallejo industrial standards.
- Construct all new roadways or widen all existing roadways adjacent to activities generating truck traffic to Vallejo standards.
- Construct all new driveways or reconstruct all existing driveways, as needed, to be used for truck traffic to Vallejo standards.
- Widen or construct all roadways between the island access points and areas of industrial / warehouse uses to Vallejo standards.

**Mitigation Responsibility:** Project developer

**Implementation Responsibility:** City of Vallejo

**Implementation Timing:** Prior to approval of improvement plans

- **Impact 3:** *Truck loading and unloading movements will result in safety hazards.*

**Mitigation:**

Reposition loading bays, as needed, to prevent trucks from disrupting the flow of traffic.

**Mitigation Responsibility:** Project developer

**Implementation Responsibility:** City of Vallejo

**Implementation Timing:** Prior to approval of unit plans

- ***Impact 4: New rail use on the island and the Causeway will result in safety and operational hazards.***

**Mitigation:**

- Protect all island at-grade railroad crossings on and off the island with the appropriate combination of gates and flashing lights.
- Close the Causeway to auto or truck traffic when being used by a train.
- Restrict trains during peak periods.

**Mitigation Responsibility:** City of Vallejo

**Implementation Responsibility:** City of Vallejo

**Implementation Timing:** Ongoing

- ***Impact 5: Traffic volumes from temporary construction, demolition and clean-up activities could affect on- and off-island street systems.***

**Mitigation:**

Monitor construction, demolition and clean-up traffic volumes and restrict activities to off-peak hours if necessary.

**Mitigation Responsibility:** City of Vallejo

**Implementation Responsibility:** City of Vallejo

**Implementation Timing:** Ongoing

**Air Quality**

- ***Impact 1: Building demolition, renovation and construction activities will result in temporary dust generation.***

**Mitigation:**

- Use mowing rather than discing for weed control to minimize ground disturbance.
- Seed and water inactive portions of construction sites to maintain a grass cover.
- Minimize the area disturbed by clearing, earthmoving or excavation activities.



- Prevent excessive dust generation by using water or dust control solutions on all unpaved areas subject to vehicle traffic, grading or excavation.
- Ensure that any petroleum-based dust control products used on the site meet BAAQMD regulations for cutback asphalt paving materials.
- Halt all site clearing, grading, earthmoving and excavation activities during periods of sustained strong winds (hourly average wind speeds of 20 mph or greater).
- Sweep streets adjacent to construction sites as necessary to remove accumulated dust and soil.
- Maintain properly all construction vehicles and avoid excessive idling.

Mitigation Responsibility: Project developer

Implementation Responsibility: City of Vallejo

Implementation Timing: Ongoing

- ***Impact 2: Construction of a southern crossing will result in temporary dust generation.***

Mitigation:

- Use mowing rather than discing for weed control to minimize ground disturbance.
- Seed and water inactive portions of constructions sites to maintain a grass cover.
- Minimize the area disturbed by clearing, earthmoving or excavation activities.
- Prevent excessive dust generation by using water or dust control solutions on all unpaved areas subject to vehicle traffic, grading or excavation.
- Ensure that any petroleum-based dust control products used on the site meet BAAQMD regulations for cutback asphalt paving materials.
- Halt all site clearing, grading, earthmoving and excavation activities during periods of sustained strong winds (hourly average wind speeds of 20 mph or greater).
- Sweep streets adjacent to construction sites as necessary to remove accumulated dust and soil.
- Maintain properly all construction vehicles and avoid excessive idling.

Mitigation Responsibility: Project developer

Implementation Responsibility: City of Vallejo; responsible state and/or federal agencies

Implementation Timing: Ongoing through construction

## Noise

- ***Impact 1: Demolition and construction activities could cause temporary disturbances to adjacent land uses.***

**Mitigation:**

Limit construction activities to normal work hours (7:00 am to 6:00 pm), Monday through Saturday, with no construction on Sundays or federal holidays.

**Mitigation Responsibility:** Project developer

**Implementation Responsibility:** City of Vallejo

**Implementation Timing:** Ongoing during construction

- ***Impact 2: Temporary noise from the construction of a southern crossing could affect on- and off-island residential areas.***

**Mitigation:**

- Minimize construction noise impacts by properly selecting site location and by coordinating bridge construction with adjacent residential areas on and off the island.

Or

- Identify locations in facility design and route selection studies that place bridge abutments and access roadways in commercial or industrial areas on and off the island.

Or

- Coordinate the phasing of residential development in Area 10 with design and construction of a southern crossing.

Or

- Limit heavy construction and pile drive use to normal daytime work hours.

**Mitigation Responsibility:** Project developer

**Implementation Responsibility:** City of Vallejo; responsible state and/or federal agencies

**Implementation Timing:** Ongoing through construction

- ***Impact 4: Industrial uses could generate noise levels incompatible with adjacent noise sensitive land uses.***

**Mitigation:**

Perform noise evaluations of heavy industrial operations prior to approval to ensure that site location and design features will avoid future noise problems.

**Mitigation Responsibility:** Project developer

**Implementation Responsibility:** City of Vallejo

**Implementation Timing:** Prior to approval of new industrial uses

- **Impact 5:** *Noise levels will increase at Railroad Avenue and 8<sup>th</sup> Street and along Cedar Avenue.*

**Mitigation:**

Use roadway designs and traffic controls to discourage high traffic volumes along Cedar Avenue in Farragut Village.

**Mitigation Responsibility:** Project developer

**Implementation Responsibility:** City of Vallejo

**Implementation Timing:** Prior to approval of improvement plans

**Utilities**

- **Impact 1:** *Sanitary waste levels will equal or slightly exceed system capacity.*

**Mitigation:**

Assess the existing portions of the collection system and improve as necessary where significant increases in population will result from new development.

**Mitigation Responsibility:** Project developer

**Implementation Responsibility:** City of Vallejo; Vallejo Sanitation and Flood Control District

**Implementation Timing:** Prior to approval of improvement plans

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**APPENDIX B: LENNAR DEVELOPMENT PLAN**

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## INTRODUCTION

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Implementation of the land use development program for Reuse Areas 1B through 10B by the master developer has been planned conceptually to accommodate a set of physical considerations. These considerations are the subject of various sections of the Specific Plan, including improvements to the network of existing streets, appropriate reuse of individual buildings significant to the integrity of the Historic District, support parking and laydown areas and public area open space and streetscape improvements. In addition, appropriate land areas for housing to provide the identified maximum number of new homes for on-Island residents (1400 units) is provided.

The preliminary design for the Master Development Plan, illustrated in Figure E.1, is based on a careful inventory of existing buildings and site conditions and assumes that all parking is provided by surface lots. It seeks to optimize the reuse of existing buildings and to protect the integrity of the Historic District, as guided by Specific Plan goals and policies. The Preliminary Master Development Plan illustration is a diagram of an initial set of site design concepts for how to best integrate the projected development program (Table 3.2 of the Specific Plan) into the existing fabric of the Reuse Areas under the ownership of the Master Developer, as authorized by the Development Agreement. The one exception is that the major portion of Reuse Area 9 is to be master planned by Touro University. Only a small portion of Reuse Area 9 which will remain part of the Master Developer Plan Area is shown as part of the Preliminary Master Development Plan.

The accompanying table E.1 provides a preliminary tabulation of the projected square footages for the reuse of existing buildings and for new construction by the Master Developer. The square footages given for new construction are to be understood only as generalized target numbers used for planning purposes. The actual building square footages, both for reuse and for new construction, will be established as part of the design development phase of individual projects, which are to be submitted as Unit Plans. Therefore, actual individual building square footages for reuse development or for new construction, when submitted for City review, may differ somewhat from that given in Table E.1. However, building square footage development totals for all projects within each Reuse Area will not exceed the total building square footages in Table E.1, which are consistent with the land use development program totals for each Reuse Area in Table 3.2 of the Specific Plan.

Some identified demolitions may not be required and efforts will be made through the project design process to reduce the number of demolitions shown in Table E.1. These demolitions are also found as part of the List of Recommended Actions and Treatments attached to the Catalogue of Historic Resources (Appendix B.3). For a discussion of the process for demolition approvals, see Section 8.2.3 of the Historic Guidelines (Appendix B.1).



**Table E.1  
 MASTER DEVELOPER  
 PRELIMINARY DEVELOPMENT PLAN TABULATIONS**

Area	Building Number & Function	Historic Bldg. Classification	Existing (Sq Ft)	Reuse Sq Ft Subtotal	New (Sq Ft)	New Sq Ft Subtotal	Demolition	Total	Land Use	Comments
1B	Northwest Industrial Area									
1B	625 (Utility)	NA	63,437	63,437						Telephone Bldg. (980 sf)
1B	759	NA	120,000	120,000					HEAVY INDUSTRIAL HEAVY INDUSTRIAL	
	<i>Subtotal</i>			183,437				183,437	HEAVY INDUSTRIAL	
1B	627 (Warehouse)	NA	245,435	245,435				245,435	WAREHOUSE WAREHOUSE	
	<i>Subtotal</i>			245,435				245,435	WAREHOUSE	
1B	751 (Warehouse)	NA	234,168	234,168				172,733	LIGHT INDUSTRIAL	Ground floor only
	<i>Subtotal</i>			234,168				61,435	WAREHOUSE	Mezzanine only usable for warehouse
1B	ADDITIONS TO BLDGS				36,960			36,960	LIGHT INDUSTRIAL LIGHT INDUSTRIAL	
	<i>Subtotal</i>				36,960			36,960	LIGHT INDUSTRIAL	
	<b>AREA TOTAL</b>			<b>663,040</b>		<b>36,960</b>		<b>700,000</b>		

**Table E.1  
MASTER DEVELOPER  
PRELIMINARY DEVELOPMENT PLAN TABULATIONS**

Area	Building Number & Function	Historic Bldg. Classification	Existing (Sq Ft)	Reuse Sq Ft Subtotal	New (Sq Ft)	New Sq Ft Subtotal	Demolition	Total	Land Use	Comments
2A	Town Center									
2A	459 (Barracks)	notable	41,194	41,194					OFFICE/R&D	
2A	543 (D-Barracks)	notable	47,485	47,485					OFFICE/R&D	
	<i>Subtotal</i>			88,679				88,679	OFFICE/R&D	
2A	NEW BLDG 2A				45,000				OFFICE/R&D/LIGHT INDUSTRIAL	
2A	NEW BLDG 2B				45,000				OFFICE/R&D/LIGHT INDUSTRIAL	
2A	NEW BLDG 2C				45,000				INDUSTRIAL	
2A	NEW BLDG 2D				45,000				OFFICE/R&D/LIGHT INDUSTRIAL	
2A	NEW BLDG 2E				45,000				OFFICE/R&D/LIGHT INDUSTRIAL	
2A	NEW BLDG 2F				45,000				OFFICE/R&D/LIGHT INDUSTRIAL	
2A	NEW BLDG 2G				30,076				INDUSTRIAL	
	<i>Subtotal</i>					300,076				
										Assume 2/3 Office/R&D and 1/3 Light Industrial - see below
										Office/R&D portion - 2/3 of above subtotal
										Light Industrial portion - 1/3 of above subtotal
2A	523 (Sports Facility)	unclassified, non-contrib	59,866	59,866					OFFICE/R&D	
2A	545 (Recreation Facility)	notable	71,379	71,379					LIGHT INDUSTRIAL	
	<i>Subtotal</i>			131,245						
2A	NEW RETAIL				50,000				CIVIC/EDUCATIONAL	Sports Center
2A	NEW APTS				50,000				CIVIC/EDUCATIONAL	Rockman Center
	<i>Subtotal</i>					50,000				
2A	527 (Warehouse)	notable	114,328	114,328					COMMERCIAL	Neighborhood retail
2A	639 (Utility)	unclassified	811	811			114,328		COMMERCIAL	Neighborhood retail
2A	861 (Utility)	unclassified	1,792	1,792			811		RESIDENTIAL	100 du total (new apartments)
2A	559 (Hobby Shop)	component	21,120	21,120			1,792			1941, Type L (rep.); delers street network, site access, housing
2A	657 (Submarine Teaching)	component	7,165	7,165			21,120			Corination facility (6 11 sf)
2A	749 (Post Office)	component	2,706	2,706			1,792			Sewer pump station 4 (1792 sf)
2A	761 (Stores)	component	6,025	6,025			7,165			1941, Type O (rep.), delers street network, new building site, parking
2A	769 (Electrical Distribution)	component	589	589			2,706			1944, Type P (non-rep.), delers; new building site, parking
							6,025			1944, Type Q (non-rep.), delers parking
							589			1942, Type E (rep.), delers parking



**Table E.1  
MASTER DEVELOPER  
PRELIMINARY DEVELOPMENT PLAN TABULATIONS**

Area	Building Number & Function	Historic Bldg. Classification	Existing (Sq Ft)	Reuse Sq Ft Subtotal	New (Sq Ft)	New Sq Ft Subtotal	Demolition	Total	Land Use	Comments
2B	West Business Park 535 (Public Works Shops)	notable	49,866	20,000			29,866	20,000	LIGHT INDUSTRIAL LIGHT INDUSTRIAL	1941 - Type O (rep). Partial Demolition & Relocation, delets street
	<i>Subtotal</i>			20,000						
2B	NEW BLDG 2H NEW BLDG 2J			45,000	45,000				OFFICE/R&D/LIGHT OFFICE/R&D/LIGHT	
2B	NEW BLDG 2K			45,000	45,000				OFFICE/R&D/LIGHT	
2B	NEW BLDG 2L			95,000	95,000				INDUSTRIAL OFFICE/R&D/LIGHT INDUSTRIAL	
2B	NEW BLDG 2M			95,000	95,000				OFFICE/R&D/LIGHT INDUSTRIAL	
2B	NEW BLDG 2N			95,000	95,000				OFFICE/R&D/LIGHT INDUSTRIAL	
2B	NEW BLDG 2P			60,000	60,000				OFFICE/R&D/LIGHT INDUSTRIAL	
	<i>Subtotal</i>				480,000					Assume 2/3 Office/R&D and 1/3 Light Industrial - see below Office/R&D portion - 2/3 of above subtotal Light Industrial portion - 1/3 of above subtotal
2B	409 (Scrap Metal Warehouse)	component	6,000				6,000		OFFICE/R&D LIGHT INDUSTRIAL	1921 - Type K (rep), delets new building site, parking
2B	455 (Storage)	component	31,160				31,160			1929 - Type L (rep), delets new building site, site access, parking
2B	489 (Warehouse)	component	28,800				28,800			1936 - Type L (rep), delets new building site, site access, parking
	<b>AREA TOTAL</b>			<b>20,000</b>		<b>480,000</b>	<b>65,960</b>	<b>500,000</b>		

**Table E.1  
MASTER DEVELOPER  
PRELIMINARY DEVELOPMENT PLAN TABULATIONS**

Area	Building Number & Function	Historic Bldg. Classification	Existing (Sq Ft)	Reuse Sq Ft Subtotal	New (Sq Ft)	New Sq Ft Subtotal	Demolition	Total	Land Use	Comments
3A	Waterfront Business Campus									
3A	NEW BLDG 3A				125,000				OFFICE/R&D/LIGHT INDUSTRIAL	
3A	NEW BLDG 3B				90,000				OFFICE/R&D/LIGHT INDUSTRIAL	
3A	NEW BLDG 3C				80,000				OFFICE/R&D/LIGHT INDUSTRIAL	
3A	NEW BLDG 3D				80,000				OFFICE/R&D/LIGHT INDUSTRIAL	
3A	NEW BLDG 3E				55,000				OFFICE/R&D/LIGHT INDUSTRIAL	
3A	NEW BLDG 3F				47,487				OFFICE/R&D/LIGHT INDUSTRIAL	
	<i>Subtotal</i>					477,487				Assume 2/3 Office/R&D and 1/3 Light Industrial - see below Office/R&D portion - 2/3 of above subtotal
								318,325	OFFICE/R&D	
								159,162	LIGHT INDUSTRIAL	Light Industrial portion - 1/3 of above subtotal
3A	NEW BLDG 3X				112,500				WAREHOUSE	Potential replacement for Building 599
								112,500	WAREHOUSE	
3A	NEW BLDG 3S				4,000				COMMERCIAL	
	<i>Subtotal</i>					4,000		4,000	COMMERCIAL	
3A	485 (Administration)	notable	3,400	3,400					COMMERCIAL	Visitor's Center
3A	487 (Molton Picture Exchange)	notable	2,613	2,613					COMMERCIAL	Retail
3A	491 (Infrastructure)	undclassified, non-contrib								Entry wall
3A	Causeway	notable	NA						INFRASTRUCTURE	
3A	Quay	notable	NA						INDUSTRIAL	
	<i>Subtotal</i>							6,013	COMMERCIAL	
3A	599 (Metal Storehouse)	notable	110,000				110,000			1942 Type O (rep); delers site access; parking
3A	461 (Battery Repair Shop)	component	39,847				39,847			1932 Type M (rep); delers site street network; site access; parking
3A	471 (Diesel Fuel Storage)	component	362				362			1834 Type P (non rep); delers new building site
3A	515 (Submarine Service Bldg)	component	9,615				9,615			1941 Type O (rep); delers new building site
3A	541 (Electrical Substation)	component	1,584				1,584			1941 Type E (rep); delers new building site
3A	689 (Submarine Repair Bldg)	component	14,494				14,494			1943 Type O (rep); delers parking
3A	693 (Fuel Oil Pumphouse/Storage)	component	248				248			1943 Type E (rep); delers parking
3A	757 (Torpedo Storehouse)	component	6,375				6,375			1942 Type J (rep); delers site access; parking
3A	845 (Diesel Oil Pumphouse)	component	186				186			1944 Type E (rep); delers parking
3A	S11-01 (Bomb Shelter)	component	1,960				1,960			1942 Type F (rep); delers parking
3A	S11-04 (Bomb Shelter)	component	1,960				1,960			1942 Type F (rep); delers parking
	<b>AREA TOTAL</b>			<b>6,013</b>		<b>593,987</b>		<b>600,000</b>		

**Table E.1  
MASTER DEVELOPER  
PRELIMINARY DEVELOPMENT PLAN TABULATIONS**

Area	Building Number & Function	Historic Bldg. Classification	Existing (Sq Ft)	Reuse (Sq Ft)	New (Sq Ft)	New Sq Ft. Subtotal	Demolition	Total	Land Use	Comments
3B	Waterfront Mixed-Use									
3B	117 (Warehouse)	unclassified, non-contrib	17,000	17,000					OFFICE/R&D	Building also contains Light Industry
3B	229 (US Med Supply Depot)	notable	39,800	39,800				OFFICE/R&D		
3B	437 (Dispensary)	component	15,114	15,114				OFFICE/R&D		
3B	521 (Administrative Offices)	notable	76,342	76,342				OFFICE/R&D		
3B	Quay (Quay/Walls/Berth)	notable	NA	NA						
	Subtotal			148,256				148,256	OFFICE/R&D	
3B	NEW BLDG 3H				45,000				OFFICE/R&D/LIGHT INDUSTRIAL	
3B	NEW BLDG 3J				45,000				OFFICE/R&D/LIGHT INDUSTRIAL	
3B	NEW BLDG 3K				45,000				OFFICE/R&D/LIGHT INDUSTRIAL	
3B	NEW BLDG 3L				45,000				OFFICE/R&D/LIGHT INDUSTRIAL	
3B	NEW BLDG 3M				18,000				OFFICE/R&D/LIGHT INDUSTRIAL	
3B	NEW BLDG 3N				55,000				OFFICE/R&D/LIGHT INDUSTRIAL	
3B	NEW BLDG 3O				25,000				OFFICE/R&D/LIGHT INDUSTRIAL	
	Subtotal					278,000				Assume 2/3 Office/R&D and 1/3 Light Industrial - see below Office/R&D portion - 2/3 of above subtotal Light Industrial portion - 1/3 of above subtotal
3B	73 (Storage)	notable	10,800	10,800					LIGHT INDUSTRIAL	
3B	101 (Shop)	notable	26,640	26,640					LIGHT INDUSTRIAL	
3B	103 (Disbursing Office)	notable	5,156	5,156					LIGHT INDUSTRIAL	
3B	111 (Storage)	notable	11,340	11,340					LIGHT INDUSTRIAL	
3B	117 (Warehouse)	unclassified, non-contrib	42,000	42,000					LIGHT INDUSTRIAL	
3B	121 (Power Plant)	notable	50,713	50,713					LIGHT INDUSTRIAL	
3B	165 (Shop)	notable	15,550	15,550					LIGHT INDUSTRIAL	
3B	207 (Storage)	notable	50,000	50,000					LIGHT INDUSTRIAL	
3B	221 (Storage)	notable	64,000	64,000					LIGHT INDUSTRIAL	
3B	223 (Storage)	notable	18,000	18,000					LIGHT INDUSTRIAL	
3B	253 (Supply Dept.)	notable	56,514	56,514					LIGHT INDUSTRIAL	Building also contains Office/R&D
3B	273 (Storage)	notable	43,680	43,680					LIGHT INDUSTRIAL	
	Subtotal			394,393				394,393		
3B	NEW BLDG 3I				40,000				LIGHT INDUSTRIAL	
3B	NEW BLDG 3U				40,000				LIGHT INDUSTRIAL	
3B	NEW BLDG 3V				20,000				LIGHT INDUSTRIAL	
	Subtotal					100,000				
3B	483 (Storage)	notable	360,000	360,000					WAREHOUSE	5 floor bldg (3 floors warehouse, 2 floors light indus )

**Table E.1  
MASTER DEVELOPER  
PRELIMINARY DEVELOPMENT PLAN TABULATIONS**

Area	Building Number & Function	Historic Bldg. Classification	Existing (Sq Ft)	Reuse (Sq Ft)	New (Sq Ft)	New Sq Ft. Subtotal	Demolition	Total	Land Use	Comments
3B	127 (Fire Station)	unclassified, non-contrib. component	16,900	16,900				144,000	LIGHT INDUSTRIAL	5 floor bldg. (3 floors warehouse, 2 floors light indus.)
3B	605 (Telephone Exchange)		9,700	0					CIVIC/EDUCATIONAL	Fire Station Telephone Utility, retained with no identified reuse
	<i>Subtotal</i>			16,900				16,900	CIVIC/EDUCATIONAL	
3B	NEW BLDG. 3R				6,500	6,500			COMMERCIAL	
	<i>Subtotal</i>				6,500	6,500			COMMERCIAL	
3B	77 (Ordnance Storage)	notable	40,000	du					RESIDENTIAL	
3B	86 (Foundry)	landmark	34,370	du					RESIDENTIAL	
3B	87 (Machine Shop)	landmark	30,150	du					RESIDENTIAL	
3B	89 (Boiler Shop)	landmark	12,100	du					RESIDENTIAL	
3B	91 (Boiler Shop)	landmark	11,000	du					RESIDENTIAL	
3B	271 (Shop)	notable	63,576	du					RESIDENTIAL	
3B	89 (Supply Warehouse)	landmark	64,205	du					RESIDENTIAL	
3B	71 (Storage)	notable	66,000	du					RESIDENTIAL	
3B	141 (Coal Shed)	landmark	6,834	du					RESIDENTIAL	
3B	143 (Coal Shed)	landmark	5,900	du					RESIDENTIAL	
3B	145 (Coal Shed)	landmark	6,834	du					RESIDENTIAL	
3B	147 (Coal Shed)	landmark	7,500	du					RESIDENTIAL	
3B	149 (Coal Shed)	landmark	9,588	du					RESIDENTIAL	
3B	151 (Coal Shed)	landmark	11,348	du					RESIDENTIAL	
3B	153 (Coal Shed)	landmark	8,230	du					RESIDENTIAL	
3B	155 (Coal Shed)	landmark	6,045	du					RESIDENTIAL	
3B	163 (Coal Shed)	landmark	10,500	du					RESIDENTIAL	
3B	VA Clinic	unclassified non-contrib	?	NA					OUTPARCEL	City property, leased to VA
3B	215 (Storage)	notable	12,669				12,669			1918, Type J (rep), detels landmark reuse, street access, parking
3B	227 (Storage)	notable	9,954				9,954			1916, Type K (rep), detels site access, parking, housing
3B	227A (Shop Stores, Warehouse)	notable	5,145				5,145			1941, Type K (rep), detels site access, parking, housing
3B	237 (Storage)	notable	63,400				63,400			1918, Type L (rep), detels site access, parking, housing
3B	257 (Storage)	notable	36,000				36,000			1911, Type L (rep), detels site access, parking, housing
3B	417 (Med Supply Depot)	notable	23,850				23,850			1922, Type R (non-rep), detels parking
3B	569 (Police Station)	notable	13,069				13,069			1942, Type Q (non-rep), detels landmark reuse, street network, site access
3B	77A (Latrine)	component	284				284			1906, Type G (rep), detels street network, parking
3B	96 (Lumber Shed)	component	14,335				14,335			1898, Type J (rep), detels street network, parking
3B	100 (Lumber Shed)	component	18,300				18,300			1902, Type K (rep), detels parking
3B	100A (Shed)	component	1,100				1,100			1940, Type E (rep), detels parking
3B	102 (Lumber Shed)	component	18,000				18,000			1902, Type K (rep), detels parking
3B	115 (Electric Shop)	component	8,750				8,750			1901, Type O (rep), detels street network, site access, parking
3B	125 (Admin Bldg/Vault)	component	476				476			unknown date, Type E (non-rep), detels parking
3B	213 (Storage)	component	18,208				18,208			1917, Type L (rep), detels new bldg site, parking
3B	225 (Painting & Finishing)	component	14,100				14,100			1916, Type J (rep), detels site access, parking

**Table E.1  
MASTER DEVELOPER  
PRELIMINARY DEVELOPMENT PLAN TABULATIONS**

Area	Building Number & Function	Historic Bldg. Classification	Existing (Sq Ft)	Reuse Sq Ft Subtotal	New (Sq Ft)	New Sq Ft Subtotal	Demolition	Total	Land Use	Comments
3B	239 (Storage Supply Depot)	component	3,250				3,250			1918: Type J (rep); delers street network, parking
3B	251 (Shop)	component	1,800				1,800			1918: Type E (rep); delers parking
3B	259 (Storage)	component	24,200				24,200			1911: Type K (rep); delers new bldg site, parking
3B	281 (Lairme)	component	1,100				1,100			1918: Type G (rep); delers parking
3B	373 (Storage)	component	19,568				19,568			1920: Type L (rep); delers street network
3B	387 (Storage/Offices)	component	31,120				31,120			1920: Type L (rep); delers parking
3B	469 (Paint Storage)	component	124				124			1933: Type E (rep); delers parking
3B	483 (Electrical Substation)	component	150				150			1936: Type E (rep); delers parking
3B	507 (Lumber Storage)	component	27,784				27,784			1938: Type L (rep); delers street network, parking
3B	603 (Lairme)	component	1,168				1,168			1942: Type G (rep); delers new building site
3B	607 (Storage)	component	7,920				7,920			1942: Type L (rep); delers site access, parking
3B	631 (Disbursing Office)	component	6,002				6,002			1941: Type Q (non-rep); delers site access, parking
3B	801 (Electric Substation)	component	4,176				4,176			1940: Type E (rep); delers parking
3B	855 (Electric Shop)	component	2,236				2,236			1925: Type O (rep); delers parking
3B	S22-01	component	432				432			1942: Type F (rep); delers street network
<b>AREA TOTAL</b>										
						<b>919,549</b>			<b>384,500</b>	<b>1,304,049</b>

**Table E.1  
MASTER DEVELOPER  
PRELIMINARY DEVELOPMENT PLAN TABULATIONS**

Area	Building Number & Function	Historic Bldg. Classification	Historic (Sq Ft)	Existing (Sq Ft)	Reuse (Sq Ft)	New (Sq Ft)	New Sq Ft Subtotal	Demolition	Total	Land Use	Comments
4	Historic Core										
4	47 (Admin B)	landmark	26,940	26,940	26,940					OFFICE/R&D	
4	47A (Admin & Office)	notable	13,800	13,800	13,800					OFFICE/R&D	
4	C (Officer's Quarters)	landmark	7,358	7,358	7,358					OFFICE/R&D	Mansion (Captains Row)
4	D (Officer's Quarters)	landmark	7,358	7,358	7,358					OFFICE/R&D	Mansion (Captains Row)
4	E (Officer's Quarters)	landmark	7,358	7,358	7,358					OFFICE/R&D	Mansion (Captains Row)
4	G (Officer's Quarters)	landmark	2,680	2,680	2,680					OFFICE/R&D	Mansion (Captains Row)
4	H (Officer's Quarters)	landmark	7,358	7,358	7,358					OFFICE/R&D	Mansion (Captains Row)
4	J (Officer's Quarters)	landmark	7,358	7,358	7,358					OFFICE/R&D	Mansion (Captains Row)
4	K (Officer's Quarters)	landmark	7,358	7,358	7,358					OFFICE/R&D	Mansion (Captains Row)
4	L (Officer's Quarters)	landmark	7,358	7,358	7,358					OFFICE/R&D	Mansion (Captains Row)
4	M (Officer's Quarters)	landmark	7,358	7,358	7,358					OFFICE/R&D	Mansion (Captains Row)
4	N (Officer's Quarters)	landmark	7,358	7,358	7,358					OFFICE/R&D	Mansion (Captains Row)
4	O (Officer's Quarters)	landmark	7,358	7,358	7,358					OFFICE/R&D	Mansion (Captains Row)
4	A-1 (Garage)	notable	610	610	610					PARKING	
4	A-J (Greenhouse/Shed)	notable	207	207	207					RES/GARDEN	
4	B-G (Garage)	notable	416	416	416					PARKING	
4	E-D (Storage)	notable	170	170	170					STORAGE	
4	H-B (Garage)	notable	400	400	400					PARKING	
4	K-L (Garage)	notable	593	593	593					PARKING	
4	A-A (Detached Quarters)	notable	672	672	672					RESIDENTIAL	
4	C-A (Quarters)	notable	700	700	700					RESIDENTIAL	
4	E-F (Quarters)	notable	985	985	985					RESIDENTIAL	
4	J-E (Quarters)	notable	640	640	640					RESIDENTIAL	
4	E-C (Quarters)	notable	1,200	1,200	1,200					RESIDENTIAL	
4	Farragut Plaza (Plaza Landscape)	notable	NA	NA	NA					OPEN SPACE	
4	Officer's Row (Row Landscape)	notable	NA	NA	NA					OPEN SPACE	
4	Allden Park & Bandshell (Landscape)	notable	NA	NA	NA					OPEN SPACE	
	<i>Subtotal</i>				117,000				117,000		
4	116 (Shop)	notable	29,000	29,000	29,000					LIGHT INDUSTRIAL	
4	164 (Shop)	notable	7,400	7,400	7,400					LIGHT INDUSTRIAL	
	<i>Subtotal</i>				36,400				36,400		
4	46 (Smithery)	landmark	49,710	49,710	49,710					CIVIC/EDUCATIONAL	MIHPF Museum
4	104 (St. Peter's Chapel)	landmark	3,218	3,218	3,218					CIVIC/EDUCATIONAL	Chapel
4	Chapel Park (Park Landscape)	notable	NA	NA	NA					OPENS/SPACE	
4	110 (Pumphouse)	notable	2,516	2,516	2,516					CIVIC/EDUCATIONAL	Utility - Drydock Pumphouse
4	235 (Offices/Printing Plant)	notable	7,800	7,800	7,800					CIVIC/EDUCATIONAL	Toilets (1,122 sf); retained with no development reuse
4	624 (Latrine)	component	1,122	0	0					CIVIC/EDUCATIONAL	Utility (743 sf); retained with no development reuse
4	634 (Lunch/Locker Room)	component	743	0	0					CIVIC/EDUCATIONAL	Utility - Pumphouse (795 sf); retained with no development reuse
4	854 (Pumphouse)	component	795	0	0					CIVIC/EDUCATIONAL	Utility - Electrical; retained with no development reuse
4	1336 (?)	undclassified, non-contrib.	?	?	?					CIVIC/EDUCATIONAL	MIHPF Museum
4	A (Officer's Quarters)	landmark	10,401	10,401	10,401					CIVIC/EDUCATIONAL	MIHPF Museum
4	B (Officer's Quarters)	landmark	7,358	7,358	7,358					CIVIC/EDUCATIONAL	MIHPF Museum
4	DD I (Dry Dock)	landmark	NA	NA	NA					CIVIC/EDUCATIONAL	
4	56 (Bandstand)	notable	304	304	0					CIVIC/EDUCATIONAL	

**Table E-1  
MASTER DEVELOPER  
PRELIMINARY DEVELOPMENT PLAN TABULATIONS**

Area	Building Number & Function	Historic Bldg. Classification	Existing (Sq Ft)	Reuse Sq Ft Subtotal	New (Sq Ft)	New Sq Ft Subtotal	Demolition	Total	Land Use	Comments
	Subtotal:									
4	45 (School for Apprentices)	notable	8,200	8,200					COMMERCIAL	Visitor-Serving Retail on ground floor, live-work above
4	50 (Shop)	notable	8,450	8,450					COMMERCIAL	Visitor-Serving Retail
4	52 (Shop)	notable	21,000	21,000					COMMERCIAL	Visitor-Serving Retail
4	56 (unknown)	undclassified non-contrib	6,270	6,270					COMMERCIAL	Visitor-Serving Retail
4	65 (School for Apprentices)	notable	16,600	16,600					COMMERCIAL	Visitor-Serving Retail on ground floor, live-work above
4	99 (Fire House)	notable	1,900	1,900					COMMERCIAL	Visitor-Serving Retail on ground floor, live-work above
4	99A (Fire House Garage)	notable	1,840	1,840					COMMERCIAL	Visitor-Serving Retail on ground floor, live-work above
	Subtotal:									
4	255 (Transformer)	component	144						FEATURE	Interpretative Program
4	S33-10 (Bomb Shelter)	component	988						FEATURE	Interpretative Program
4	S33-13 (Bomb Shelter)	component	1,960						FEATURE	Interpretative Program
4	S33-15 (Bomb Shelter)	component	1,310						FEATURE	Interpretative Program
4	S33-17 (Bomb Shelter)	component	1,960						FEATURE	Interpretative Program
4	S33-20 (Bomb Shelter)	component	1,960						FEATURE	Interpretative Program
4	Ways 1 (Ways)	notable	NA						FEATURE	Interpretative Program
4	Ways 2 (Ways)	notable	NA						FEATURE	Interpretative Program
4	Quay (Quay)	notable	NA						FEATURE	Interpretative Program
4	F52 (Ferry Slip)	notable	NA						INFRASTRUCTURE	Transportation Service
	Subtotal:									
4	NEW BLDG 4A			10,000		10,000		10,000	COMMERCIAL	Visitor-Serving Retail on ground floor, live-work above
	Subtotal:									
4	65 (School for Apprentices)	notable	16,600						RESIDENTIAL	Visitor-Serving Retail on ground floor, live-work above
4	99 (Fire House)	notable	1,900						RESIDENTIAL	Visitor-Serving Retail on ground floor, live-work above
4	99A (Fire House Garage)	notable	1,840						RESIDENTIAL	Visitor-Serving Retail on ground floor, live-work above
	Subtotal:									
4	108 (Storage)	notable	21,600				21,600		COMMERCIAL	1911, Type R (non-rep), delers landmark reuse, laydown area, hazardous materials require demolition
4	116 (Shop)	notable	5,000				5,000		COMMERCIAL	1905, Type O (rep), delers pedestrian access, demo limited to south lean-to
4	334 (Offices)	notable	22,585				22,585		COMMERCIAL	1918, Type P (non-rep), delers landmark reuse, site access laydown area
	Subtotal:									
4	C-J (Garage)	notable	460				460		COMMERCIAL	1930, Type B (rep), delers landmark reuse, housing
4	D-G (Garage)	notable	800				800		COMMERCIAL	1943, Type B (rep), delers landmark reuse, housing
4	G-B (Garage)	notable	760				760		COMMERCIAL	1934, Type B (rep), delers landmark reuse, housing
	Subtotal:									
4	H-C (Garage)	notable	216				216		COMMERCIAL	1944, Type B (rep), delers landmark reuse, housing
4	H-D (Garage)	notable	168				168		COMMERCIAL	1919, Type B (rep), delers landmark reuse, housing
4	J-E (Garage)	notable	640				640		COMMERCIAL	1900, Type B (rep), delers landmark reuse, housing
4	516 (Electrical Substation)	component	3,784				3,784		COMMERCIAL	1943, Type E (rep), delers laydown area, hazardous materials require demolition
	Subtotal:									
4	632 (Welding Material Issue Sta)	component	812				812		COMMERCIAL	1933, Type E (rep), delers public plaza
4	834 (Electrical Distributor)	component	400				400		COMMERCIAL	1942, Type E (rep), delers laydown area, parking
4	S23-01 (Bomb Shelter)	component	988				988		COMMERCIAL	1942, Type F (rep), delers street network, park open space
4	S23-02 (Bomb Shelter)	component	646				646		COMMERCIAL	1942, Type F (rep), delers street network, park open space

**Table E.1  
MASTER DEVELOPER  
PRELIMINARY DEVELOPMENT PLAN TABULATIONS**

Area	Building Number & Function	Historic Bldg. Classification	Existing (Sq Ft)	Reuse Sq Ft Subtotal	New (Sq Ft)	New Sq Ft Subtotal	Demolition	Total	Land Use	Comments
4	S33-11 (Bomb Shelter)	component	665				665			1942, Type F (rep); delers street network, park open space
4	S33-12 (Bomb Shelter)	component	1,635				1,635			1942, Type F (rep); delers street network, park open space
4	S33-14 (Bomb Shelter)	component	1,310				1,310			1942, Type F (rep); delers street network, park open space
4	S33-16 (Bomb Shelter)	component	1,310				1,310			1942, Type F (rep); delers street network, parking
4	S33-18 (Bomb Shelter)	component	1,960				1,960			1942, Type F (rep); delers street network, parking
4	S33-19 (Bomb Shelter)	component	988				988			1942, Type F (rep); delers street network, park open space
4	S33-21 (Bomb Shelter)	component	1,960				1,960			1942, Type F (rep); delers park open space
4	S33-22 (Bomb Shelter)	component	1,960				1,960			1942, Type F (rep); delers park open space
4	S33-23 (Bomb Shelter)	component	988				988			1942, Type F (rep); delers street network, park open space
4	S33-24 (Bomb Shelter)	component	2,064				2,064			1942, Type F (rep); delers street network, park open space
4	S33-25 (Bomb Shelter)	component	988				988			1942, Type F (rep); delers park open space
4	S33-26 (Bomb Shelter)	component	1,960				1,960			1942, Type F (rep); delers park open space
4	S33-27 (Bomb Shelter)	component	1,960				1,960			1942, Type F (rep); delers park open space
4	S33-28 (Bomb Shelter)	component	1,310				1,310			1942, Type F (rep); delers street network, park open space
4	S33-29 (Bomb Shelter)	component	1,950				1,950			1942, Type F (rep); delers park open space
4	S33-30 (Bomb Shelter)	component	1,635				1,635			1942, Type F (rep); delers park open space
<b>AREA TOTAL</b>				<b>301,323</b>		<b>10,000</b>		<b>311,323</b>		



**Table E.1  
MASTER DEVELOPER  
PRELIMINARY DEVELOPMENT PLAN TABULATIONS**

Area	Building Number & Function	Historic Bldg. Classification	Existing (Sq Ft)	Reuse Sq Ft/Subtotal	New (Sq Ft)	New Sq Ft. Subtotal	Demolition	Total	Land Use	Comments
5	Waterfront Industrial Park									
5	112 (office)	unclassified, non-contrib	24,000	24,000					OFFICE/R&D	Portion of Building 112 building also contains Heavy Industrial
5	746 (lab)	unclassified, non-contrib	28,272	28,272					OFFICE/R&D	
	<i>Subtotal</i>			52,272				52,272		
5	88 (Stable)	landmark	14,210	14,210				14,210	COMMERCIAL	
	<i>Subtotal</i>			14,210				14,210	COMMERCIAL	
5	105 (Shop)	notable	37,400	37,400					LIGHT INDUSTRIAL	
5	105A (Shop)	notable	12,294	12,294					LIGHT INDUSTRIAL	
5	114 (Mill)	notable	38,877	38,877					LIGHT INDUSTRIAL	
5	150 (Offices)	unclassified, non-contrib	9,000	9,000					LIGHT INDUSTRIAL	Work facility/offices (south of DD 2)
5	542 (Saw Dust Storage)	notable	361	361					LIGHT INDUSTRIAL	
5	670 (Production Shop)	notable	8,601	8,601					LIGHT INDUSTRIAL	
	<i>Subtotal</i>		9,400	9,400					LIGHT INDUSTRIAL	
5	674 (Production Shop)	notable	8,804	8,804					LIGHT INDUSTRIAL	
5	676 (Pattern Production)	notable	126,852	126,852					LIGHT INDUSTRIAL	
5	688 (Valve Testing)	notable	15,284	15,284					LIGHT INDUSTRIAL	
	<i>Subtotal</i>		12,025	12,025					LIGHT INDUSTRIAL	Laundry facility
5	750 (Warehouse?)	unclassified, non-contrib	60,000	60,000					LIGHT INDUSTRIAL	
5	1338 (Outbuilding)	unclassified, non-contrib	6,180	6,180					LIGHT INDUSTRIAL	XXT outbdg
5	DD3 (Drydock)	notable	N/A	N/A					N/A	
5	D04 (Drydock)	notable	N/A	N/A					N/A	Barge serving
5	Quay (Quay)	notable	N/A	N/A					N/A	Transportation serving
5	B&Z (Bus Shelter)	component	1,128	0				345,078		
	<i>Subtotal</i>		1,128	345,078				345,078		
5	NEW BLDG. 5A			80,000					LIGHT INDUSTRIAL	Replaces Building 738
5	NEW BLDG. 5B			90,000					LIGHT INDUSTRIAL	
5	NEW BLDG. 5C			75,000					LIGHT INDUSTRIAL	
	<i>Subtotal</i>			245,000				245,000		
5	112	unclassified, non-contrib	127,000	127,000					HEAVY INDUSTRIAL	Portion of Building 112 building also contains Office/R&D sq. footage per arch. Study
5	118 (Shop)	notable	45,000	45,000					HEAVY INDUSTRIAL	
5	126	unclassified, non-contrib	130,400	130,400					HEAVY INDUSTRIAL	
5	362 (Subassembly)	notable	30,600	30,600					HEAVY INDUSTRIAL	
5	366 (Forge Shop)	notable	84,135	84,135					HEAVY INDUSTRIAL	
	<i>Subtotal</i>		89,800	89,800					HEAVY INDUSTRIAL	
5	390 (Shipping Shop)	notable	183,535	183,535					HEAVY INDUSTRIAL	
5	678 (Foundry)	notable	107,599	107,599					HEAVY INDUSTRIAL	
5	680 (Machine and Optical Shop)	notable	257,750	257,750					HEAVY INDUSTRIAL	
5	742 (Ordnance Machine Shop)	notable	142,524	142,524					HEAVY INDUSTRIAL	Demo to small lean-to (3,000 sf) along eastern edge, remaining 95,524 sf retained but not used?
	<i>Subtotal</i>		105,600	1,263,943				1,263,943	HEAVY INDUSTRIAL	

**Table E.1  
MASTER DEVELOPER  
PRELIMINARY DEVELOPMENT PLAN TABULATIONS**

Area	Building Number & Function	Historic Bldg. Classification	Existing (Sq Ft)	Reuse (Sq Ft)	New (Sq Ft)	New Sq Ft Subtotal	Demolition	Total	Land Use	Comments
	840 (Electrical Substation)	unclassified, non-contrib	?	0						Utility - Sewer Pump Station; retained with no identified development reuse
	914 (Sewer Pump Station)	unclassified, non-contrib	?	0						Utility - Sewer Pump Station; retained with no identified development reuse
5	113 (Storage)	notable	21,130				21,130			1899; Type L (rep); delers site access; parking
5	206 (Rodman Annex Rec Center)	notable	17,900				17,900			1917; Type R (non-rep); delers landmark reuse; street access; parking
5	208 (School for Apprentices)	notable	24,846				24,846			1917; Type R (non-rep); delers landmark reuse; street access; parking
5	109 (Pumphouse #2)	component	2,000				2,000			1940; Type E (rep); delers laydown area
5	180 (Scrap Brass Bins)	component	1,881				1,881			1916; Type K (rep); delers laydown area; parking
5	302 (Offices)	component	2,650				2,650			1917; Type R (non-rep); delers saydown area; parking
5	300A (Women's Latrine)	component	521				521			1942; Type G (rep); delers laydown area; parking
5	562 (Transformer House)	component	144				144			1927; Type E (rep); delers laydown area; site access; parking
5	702 (Pig Metal Storage)	component	7,500				7,500			1941; Type L (rep); delers parking
5	720 (Finger Piers Service Bldg)	component	6,147				6,147			1941; Type R (non-rep); delers laydown area; parking
5	728 (Electrical Distribution)	component	780				780			1941; Type E (rep); delers laydown area; parking
5	728A (Storage)	component	1,802				1,802			1943; Type K (rep); delers laydown area; parking
5	730 (Electrical Distribution)	component	1,620				1,620			1941; Type E (rep); delers laydown area; parking
5	732 (Electric Distribution Center)	component	3,094				3,094			1941; Type E (rep); delers laydown area; parking
5	738 (Propeller Shop)	component	20,395				20,395			1942; Type O (rep); delers new building site
5	742A (Ordnance Machine Shop)	component	1,452				1,452			1942; Type G (rep); delers steel network
5	766 (Office/Latrine)	component	4,200				4,200			1942; Type G (rep); delers laydown area; parking
5	768 (Storage)	component	8,000				8,000			1942; Type K (rep); delers laydown area; parking
5	804 (Wire and Fuel Testing)	component	1,386				1,386			1943; Type O (rep); delers landmark reuse; parking
5	810 (Paint/Rubber Factory)	component	3,525				3,525			1943; Type O (rep); delers landmark reuse; parking
5	822 (Power Station)	component	2,340				2,340			1942; Type E (rep); delers laydown area; parking
5	828 (Power Station)	component	2,706				2,706			1942; Type E (rep); delers site access; laydown area; parking
5	830 (Electrical Substation)	component	1,155				1,155			1942; Type G (rep); delers street network
5	858 (Latrine)	component	462				462			1942; Type H (non-rep); delers street network; condition precludes relocation
5	853 (Bus Shelter)	component	1,128				1,128			1942; Type H (non-rep); delers street network; condition precludes relocation
5	FA-04 (First Aid Station)	component	1,947				1,947			1942; Type F (rep); delers parking
5	S32-05 (Bomb Shelter)	component	665				665			1942; Type F (rep); delers site access; parking
5	S32-06 (Bomb Shelter)	component	1,310				1,310			1942; Type F (rep); delers street network
5	S33-05 (Bomb Shelter)	component	1,960				1,960			1942; Type F (rep); delers site access; laydown area; parking
5	S33-06 (Bomb Shelter)	component	1,960				1,960			1942; Type F (rep); delers site access; laydown area; parking
5	S33-07 (Bomb Shelter)	component	1,635				1,635			1942; Type F (rep); delers site access; laydown area; parking
5	S34-02 (Bomb Shelter)	component	1,635				1,635			1942; Type F (rep); delers landmark reuse; parking
<b>AREA TOTAL</b>							<b>1,695,503</b>	<b>149,876</b>	<b>1,940,503</b>	

**Table E.1  
MASTER DEVELOPER  
PRELIMINARY DEVELOPMENT PLAN TABULATIONS**

Area	Building Number & Function	Historic Bldg. Classification	Existing (Sq Ft)	Reuse (Sq Ft)	New (Sq Ft)	New Sq Ft Subtotal	Demolition	Total	Land Use	Comments
<b>North Residential Village</b>										
6	433 (Radio Station)	notable	3,203	3,203					CIVIC/EDUCATIONAL	
6	733 (WAVES Officer's Quarters)	component	11,128	11,128					CIVIC/EDUCATIONAL	Lord's Fellowship
6	737 (WAVES Subsistence Bldg)	component	10,704	10,704					CIVIC/EDUCATIONAL	Lord's Fellowship
6	864 (Elementary School)	unclassified, non-contrib	0	0					CIVIC/EDUCATIONAL	Elementary school - Vallejo Unified School District
6	2000 (Elementary School)	unclassified, non-contrib	0	0					CIVIC/EDUCATIONAL	Elementary school - Vallejo Unified School District
6	2001 (Elementary School)	unclassified, non-contrib	0	0					CIVIC/EDUCATIONAL	Elementary school - Vallejo Unified School District
	<i>Subtotal</i>			25,035				25,035	CIVIC/EDUCATIONAL	
6	760 (Auxiliary Bldg?)	unclassified, non-contrib	3,180					3,180	COMMERCIAL	Retail
				3,180				3,180	COMMERCIAL	
6	6 (Quarters)	notable	1,583	du					RESIDENTIAL	Existing single family home
6	17 (Quarters)	landmark	1,268	du					RESIDENTIAL	Existing single family home
6	19 (Quarters)	landmark	1,400	du					RESIDENTIAL	Existing single family home, relocated to accommodate new street
6	21 (Quarters)	landmark	1,855	du					RESIDENTIAL	Existing single family home
6	28 (Quarters)	landmark	1,363	du					RESIDENTIAL	Existing single family home
6	133 (Civilian Quarters)	notable	2,253	du					RESIDENTIAL	Existing single family home
6	411 (Quarters)	notable	2,276	du					RESIDENTIAL	Existing single family home
6	420 (Quarters)	notable	1,918	du					RESIDENTIAL	Existing single family home
6	425 (Quarters)	notable	1,218	du					RESIDENTIAL	Existing single family home
6	F (Officer's Quarters)	notable	3,390	du					RESIDENTIAL	Existing single family home
6	I-T (Officer's Quarters)	notable	9,162	du					RESIDENTIAL	Existing single family home
6	M-7 (Quarters)	notable	1,662	du					RESIDENTIAL	Existing single family home
6	P (Boatswain's House)	notable	2,534	du					RESIDENTIAL	Existing single family home
6	O1/2 - O19/20 (Quarters/duplexes)	10 notables	39,300	du					RESIDENTIAL	Existing duplexes (10 duplexes with 20 units)
6	S (Officer's Quarters)	notable	2,861	du					RESIDENTIAL	Existing single family home
6	U (Officer's Quarters)	notable	4,140	du					RESIDENTIAL	Existing single family home
6	131 (Civilian Quarters)	notable	1,473				1,473			1899: Type A (non-rep); delers park space
6	231 (Train Maintenance Shed)	notable	11,085				11,085			1918: Type O (rep); delers street network, site access; housing
6	431 (Quarters)	notable	1,216				1,216			1921: Type A (non-rep); delers higher density housing type
6	637 (Transportation Repair Facility)	notable	61,229				61,229			1943: Type O (rep); delers street network, site access; housing
6	61 (Garage)	component	765				765			1915: Type B (rep); delers housing
6	6E (Garage)	component	70				70			1938: Type B (rep); delers housing
6	17B (Garage)	component	340				340			1935: Type B (rep); delers housing
6	17C (Garage)	component	340				340			1930: Type B (rep); delers housing
6	19A (Garage)	component	440				440			1930: Type B (rep); delers housing
6	29A (Garage)	component	288				288			1933: Type B (rep); delers housing
6	29G (Garage)	component	320				320			1932: Type B (rep); delers housing
6	131A (Garage)	component	280				280			1920: Type B (rep); delers park open space
6	133B (Garage)	component	600				600			1930: Type B (rep); delers street network
6	160 (Quarters)	component	1,675				1,675			1941: Type A (non-rep); delers street network
6	160A (Garage)	component	576				576			1941: Type B (rep); delers street network
6	376 (Dispensary/Radio Sta Barracks)	component	3,000				3,000			1920: Type D (non-rep); delers street network, housing
6	376A (Enlisted Quarters)	component	3,094				3,094			1941: Type C (non-rep); delers street network, housing
6	4259A (Garage)	component	488				488			1940: Type B (rep); delers housing

**Table E.1  
MASTER DEVELOPER  
PRELIMINARY DEVELOPMENT PLAN TABULATIONS**

Area	Building Number & Function	Historic Bldg. Classification	Existing (Sq Ft)	Reuse (Sq Ft)	New (Sq Ft)	New Sq Ft. Subtotal	Demolition	Total	Land Use	Comments
6	435 (Garage/Storage)	component	2,055				2,055			
6	475 (Concrete Mixing Plant)	component	2,287				2,287			1922, Type B (rep); delers street network
6	511 (Garage)	component	6,182				6,182			1934, Type O (rep); delers street network
6	529 (Motor Vehicle Storage)	component	14,400				14,400			1939, Type B (rep); delers housing
6	531 (Vehicle Repair)	component	15,400				15,400			1942, Type K (rep); delers housing
6	563 (Radio Sta. Support Quarters)	component	9,679				9,679			1942, Type O (rep); delers street network, housing
6	645 (Undergrd Fresh Water Tank)	component	NA				NA			1941, Type C (non-rep); delers street network
6	671 (Electrical Substation)	component	960				960			1943, Type H (non-rep); delers housing
6	761 (Transformer Station)	component	4,498				4,498			1942, Type E (rep); delers housing
6	803 (Storage)	component	1,840				1,840			1943, Type E (rep); delers street network
6	811 (Locomotive Maintenance)	component	1,050				1,050			1945, Type K (rep); delers housing
6	L-F (Garage)	component	420				420			1944, Type O (rep); delers street network
6	M-7A (Garage)	component	228				228			1920, Type B (rep); delers housing
6	M-D (Garage)	component	546				546			1915, Type B (rep); delers housing
6	N-H (Garage/Quarters)	component	1,092				1,092			1920, Type B (rep); delers housing
6	O-B (Servant's Quarters)	component	721				721			1920, Type D (non-rep); delers housing (incompatible type)
6	O-F (Garage)	component	286				286			1935, Type A (non-rep); delers housing (incompatible type)
6	P-D (Garage)	component	910				910			1900, Type B (rep); delers street network
6	QA 1/2 - QA 19/20 (Garage/diplex)	10 components	16,100				16,100			1944, Type B (rep); delers housing
										1942, Type C (rep); delers housing (incompatible type); 10 pairs (20 du)
6	R (Officer's Quarters)	inolate component	1,507				1,507			1888, Type A (non-rep); delers housing (incompatible type)
6	R-G (Garage)	component	940				940			1873, Type A (non-rep); delers housing (incompatible type)
6	S24-04 (Bomb Shelter)	component	432				432			1942, Type F (rep); delers park open space
6	S-B (Garage)	component	600				600			1935, Type B (rep); delers street network
6	T-A (Garage)	component	458				458			1934, Type B (rep); delers housing
6	U-B (Garage)	component	572				572			1924, Type B (rep); delers housing
6	U-D (Garage)	component	565				565			1920, Type B (rep); delers housing
	<b>AREA TOTAL</b>			<b>28,215</b>			<b>170,969</b>	<b>28,215</b>		

**Table E.1  
MASTER DEVELOPER  
PRELIMINARY DEVELOPMENT PLAN TABULATIONS**

Area	Building Number & Function	Historic Bldg. Classification	Existing (Sq Ft)	Reuse (Sq Ft)	New (Sq Ft)	New Sq Ft Subtotal	Demolition	Total	Land Use	Comments
South Residential Village										
8	NEW BLDG				20,000	20,000		20,000	OFFICE/R&D	
8	848/A (Prison/Warehouse)	2 notables	36,378	du					RESIDENTIAL	22 du in Brig
8	M-2 (Officer's Quarters)	landmark	5,238	du					RESIDENTIAL	Existing single family home, relocated
8	M-3/M-4 (Officer's Quarters, duplx)	2 landmarks	9,000	du					RESIDENTIAL	Existing single family home, relocated
8	M-5 (Officer's Quarters)	landmark	5,713	du					RESIDENTIAL	Existing single family home, relocated
8	M-37 (Barracks)	notable	75,000	du					RESIDENTIAL	30 du in Marine Barracks
8	103 (Post Office)	undassessed, non-contrib	2sf	du					RESIDENTIAL	Former Post Office, relocated to Cedar from Area 3B
8	H-4 (Med Officer's Quarters)	notable	1,750	du					RESIDENTIAL	Existing single family home
8	H-5 (Med Officer's Quarters)	notable	1,750	du					RESIDENTIAL	Existing single family home
8	H-64 (Garage)	notable	651	N/A					RESIDENTIAL GARAGE	
8	M-1 (Marine Officer's Quarters)	landmark	8,772	du					RESIDENTIAL	Existing single family home
8	M-1 (Landscape (Landscape))	notable	NA	NA					OPEN SPACE	
8	Palms along Cedar (Landscape)	notable	NA	NA					OPEN SPACE	
8	Parade Ground (Landscape)	notable	NA	NA					OPEN SPACE	
8	Clubhouse Drive Park (Landscape)	notable	NA	NA					OPEN SPACE	
8	764 (Dental Clinic)	component	10,792				10,792			1942, Type P (non-rep); delers street network
8	FA-3 (First Aid Station)	component	1,572				1,572			1942, Type F (rep); delers housing
8	M-1A (Servant's Quarters)	component	694				694			1938, Type A (non-rep); delers housing (incompatible type)
8	M-1C (Garage)	component	680				680			1938, Type B (rep); delers housing
8	858 (Electrical Distribution)	component	63				63			1938, Type E (rep); delers parking
8	M-31 (Bakery)	component	1,976				1,976			1941, Type P (non-rep); delers housing
8	M-60 (Bakery)	component	2,745				2,745			1941, Type B (rep); delers housing
8	M-63 (Garage)	component	7,701				7,701			1910, Type B (rep); delers housing
8	M-125 (Garage)	component	543				543			1942, Type B (rep); delers housing
8	M-126 (Garage)	component	543				543			1942, Type B (rep); delers housing
		subtotal					27,960			
<b>AREA TOTAL</b>									<b>20,000</b>	<b>20,000</b>

**Table E.1  
MASTER DEVELOPER  
PRELIMINARY DEVELOPMENT PLAN TABULATIONS**

Area	Building Number & Function University Area	Historic Bldg. Classification	Existing (Sq Ft)	Reuse Sq Ft Subtotal	New (Sq Ft)	New Sq Ft Subtotal	Demolition	Total	Land Use	Comments
9	944 (Office?)	unclassified, non-contrib.	13,128	13,128				13,128	OFFICE/R&D	
9	NEW BLDG. 9A				20,000	20,000		20,000	OFFICE/R&D	Conference Center
9	Touro University	includes as follows (landmark) (14 notables) (2 components)	542,890	542,890				542,890	CIVIC/EDUCATIONAL	4,800 students
9	US Forest Service	unclassified, non-contrib.	N/A	NA					OUTPARCEL	
9	US Army Reserve	unclassified, non-contrib.	N/A	NA					OUTPARCEL	
9	H-21 (Paint Locker)	component	575				575			1942, Type H (non-rep), delers parking, recreational open space
9	H-66 (Auxiliary Pump House)	component	624				624			1922, Type E (rep), delers parking, recreational open space
9	H-75 (Electrical Distribution)	component	121				121			1929, Type E (rep), delers parking, recreational open space
<b>AREA TOTAL</b>				<b>556,018</b>		<b>20,000</b>		<b>576,018</b>		

**Table E.1  
MASTER DEVELOPER  
PRELIMINARY DEVELOPMENT PLAN TABULATIONS**

Area	Building Number & Function	Historic Bldg. Classification	Existing (Sq Ft)	Reuse (Sq Ft)	New (Sq Ft)	New Sq Ft. Subtotal	Demolition	Total	Land Use	Comments
10A	782 (Electrical Distribution)	component	1,296	1,296					LIGHT INDUSTRIAL	
10A	A31 (Magazine)	notable	2,400	2,400					LIGHT INDUSTRIAL	
10A	A49 & A65 (Ordinance Warehouse)	notable (2)	13,650	13,650					LIGHT INDUSTRIAL	
10A	A54 (Ammunition Storage)	notable	5,304	5,304					LIGHT INDUSTRIAL	
10A	A69 (Warehouse)	notable	6,700	6,700					LIGHT INDUSTRIAL	
10A	A72 (Warehouse)	notable	7,350	7,350					LIGHT INDUSTRIAL	
10A	A75 (Ammunition Storage)	notable	31,683	31,683					LIGHT INDUSTRIAL	
10A	A76 (Ammunition Storage)	notable	15,686	15,686					LIGHT INDUSTRIAL	
10A	A80 (Ammunition Storage)	component	7,836	7,836					LIGHT INDUSTRIAL	
10A	A130 (Warehouse)	component	19,000	19,000					LIGHT INDUSTRIAL	
10A	A131 (Warehouse)	component	18,411	18,411					LIGHT INDUSTRIAL	
10A	A156 (Bag Change and Filling Hse)	component	9,876	9,876					LIGHT INDUSTRIAL	
10A	A219 (Projectile Processing Pl)	notable	22,500	22,500					LIGHT INDUSTRIAL	
10A	A220 (Ordinance Storage)	component	10,251	10,251					LIGHT INDUSTRIAL	
10A	A221 (Ordinance Storage)	component	10,251	10,251					LIGHT INDUSTRIAL	
10A	A222 (Ordinance Storage)	component	10,251	10,251					LIGHT INDUSTRIAL	
10A	A223 (Ordinance Storage)	component	10,251	10,251					LIGHT INDUSTRIAL	
10A	A224 (Ordinance Storage)	component	10,251	10,251					LIGHT INDUSTRIAL	
10A	A225 (Ordinance Storage)	component	10,251	10,251					LIGHT INDUSTRIAL	
10A	A249 (20 min Filling House)	notable	14,673	14,673					LIGHT INDUSTRIAL	
10A	A256 (Ordinance Storage)	notable	1,280	1,280					LIGHT INDUSTRIAL	
10A	A258 (Inert Material Storage)	notable	60,000	60,000					LIGHT INDUSTRIAL	
10A	A260 (Electrical Distribution Cent)	component	208	208					LIGHT INDUSTRIAL	
10A	A269 (Jomer & Machine Shop)	notable	71,515	71,515					LIGHT INDUSTRIAL	
10A	A271 (Vacuum System House)	notable	731	731					LIGHT INDUSTRIAL	
10A	2/6 (Fire Alarm Tower)	component	N/A	N/A					N/A	
10A	Finger Pias (Berth 24)	notable	N/A	N/A					N/A	
	Subtotal			370,309				370,309		
10A	900 (Warehouse?)	unclassified, non-confirb	18,270	18,270				18,270	HEAVY INDUSTRIAL	
10A	NEW BLDG 10A			55,000				55,000	HEAVY INDUSTRIAL	
10A	NEW BLDG 10B			55,000				55,000	HEAVY INDUSTRIAL	
	Subtotal			110,000				110,000		
10A	A192 (Electrical Distribution Bldg)	component	135				135			1940, Type E (rep); delers street network
	<b>AREA TOTAL</b>			<b>386,579</b>				<b>498,579</b>		

**Notes:**

Building areas of existing buildings are taken from Master Building Status report dated 01 July 1999 prepared by SSPORTS and not confirmed by developer  
 All buildings highlighted blue have been approved for relocation by the City of Vallejo  
 All buildings highlighted yellow have been approved for demolition by the City of Vallejo

### **Assumptions:**

The Navy could operate the Mare Island shipyard facilities in ways that are not possible for public sector use. Streets could be closed temporarily and used for operating heavy equipment or for unloading and storing materials. Navy personnel were specially trained to work safely under conditions that are not acceptable for a civilian workforce. For example, Navy personnel could be expected to navigate trucks between buildings where there was only a generally defined roadway. Rail lines were located within inches of building corners or facades. Buildings often were altered, moved or even demolished when they became obsolete or when critical new operations necessitated such changes.

Parking obviously was not the priority that it has become for civilian development. During the years when the shipyard employed tens of thousands of workers, ferries and busses provided the necessary transportation to the Island. People were expected to walk to their destinations after arriving from the mainland, often by boat, at central locations. Much of the shipyard industrial development relied on temporary and pragmatic solutions to the need for outdoor storage areas or turnaround space for heavy equipment.

Land area on an island obviously is limited and shared use becomes a recognized necessity of daily life. An important consideration for such development becomes what, for ease of reference, can be called “the island factor,” which simply means that certain standards for development and use must be different on an island than they are on the mainland.

### **Parking Design:**

In adapting certain portions of the Master Developer land use areas to private, civilian uses, one major consideration is that more on-island parking areas need to be created. In many cases, small, ancillary and often repetitive buildings such as latrines, storage sheds and bomb shelters must be removed to create surface parking facilities sufficient to support the reuse program that will allow the retention of a majority of the historic resources on Mare Island.

Creative, “on-island” solutions should be considered, as have been discussed in the Transportation Section (5.0) of the Specific Plan. Parking shortfalls at one location can be offset by adjacent or remote parking areas, or where there is a range of peak demand times, by shared use. Other progressive transportation management programs and projects also may be used to help reduce the number of on-site parking spaces required. Under the Specific Plan, parking demand can be met using a number of alternative solutions when site conditions impose trade-offs that could otherwise make reuse infeasible. The preliminary master development plan incorporates such concepts where feasible to reduce the impacts of surface parking lots.



### **Narrow Streets:**

Another “island factor” that is a legacy of the Navy’s long occupation is narrow streets. In order to preserve this very significant characteristic within the Historic District, the Transportation Section (5.0) of the Specific Plan provides policies for creating a grid of new connector streets that will more effectively distribute the increased traffic that is anticipated to result from civilian reuse. In a number of cases, these connector streets require demolition of existing buildings, some of which are Notable contributing resources. It should be understood that the street grid has been designed to impact the smallest number of these resources and that the grid pattern is essential to the preservation of the existing widths of streets such as Walnut Avenue, which is a significant feature of the historic setting in Reuse Areas 2A-5. The Preliminary Master Development Plan sites all new construction to be responsive to this grid pattern, as directed by the urban design policies of the Specific Plan, as well as the Design Guidelines for the Historic District (see 8.4.2).

### **Laydown Areas:**

A third ‘island factor’ is the typical ratio between the ‘footprint’ of an industrial use building and the adjacent outdoor area used for ‘laydown’ of materials, maneuvering heavy vehicles and cranes and other operations associated with industrial land uses. The ‘laydown’ space provided by the Navy for industrial shipyard activities was much lower than it would have been for a civilian shipyard, again because of the unique flexibility the Navy had in making adjacent areas temporarily available when necessary. Contemporary civilian industrial development typically requires a ratio of building footprint to laydown area of 1:4 or 25%. In more urbanized area, this percentage can be slightly higher, given the attraction of better access to other related businesses and higher land costs. It is assumed that the combined benefits of the direct to water and rail transportation, in addition to the cost benefits of the unique opportunity to reuse existing, very large industrial buildings, will mean that Mare Island can be marketable for industrial reuse with laydown ratios that are more in the range of 35%-40% without having to dedicate portions of the interior building space for laydown use. However, the less laydown area that is available for an industrial user, the higher the operation costs will be. Ratios higher than 40% for laydown areas may begin, even on Mare Island, to make industrial reuse infeasible for many operations.

### **Functional Obsolesce:**

After a careful inventory of existing buildings, it is clear that not all have sufficient reuse potential to allow a level of economic development that will provide the financing for the retention and reuse of the majority of buildings on the Island. Certain buildings, such as latrines or power sub-stations, were built for specific purposes that may not have a place in the reuse program, or they have large open spaces with balconies that cannot be adapted for new use, or they are located in places where the projected real estate values cannot justify their

retention, given the limitations of the building design. For all these and other comparable reasons, some buildings are considered to be completely or partially “obsolete” for reuse. In some cases, demolition of functionally obsolete buildings can optimize the reuse potential of a group of contributing resources, often Notable or Landmark buildings.

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**APPENDIX C: GENERAL PLAN AMENDMENT**

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# LENNAR MARE ISLAND GENERAL PLAN AMENDMENT

June 2005

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## **PURPOSE:**

To ensure consistency between the City of Vallejo General Plan and the proposed Mare Island Specific Plan, Amended and Restated, Lennar Mare Island, master developer of Mare Island, has proposed to amend the General Plan. Such amendment is subject to City of Vallejo approval.

## **PROPOSAL:**

The following provides the proposed amendment which lists the revisions by General Plan Element. Language in italics is meant as guide and generally notes locations in the General Plan requiring amendment or further consideration. Language in plain text is the original language as it appears in the General Plan. Underlined plain text is proposed language to be included in any revisions or amendments. Plain text language that has been stricken through is language to be deleted from the General Plan.

### **Part I - Scope of Plan**

*Page I-1, Scope and Use of the Plan; include information in 4th full paragraph explaining 1999 and 2005 amendments to the general plan.*

#### **I. Part II - Summary of Goals and Objectives**

*Page II-1, Urban Design Goal 1, Policy 1; delete unnecessarily restrictive language:*

Use specific plan ~~and area plans~~ as the development guide for the reuse of Mare Island.

*Page II-5, Waterfront Development Goal; add new Policy 5:*

5. Use the Mare Island Specific Plan to encourage flexible mixed-use waterfront development that provides public access, while utilizing standards appropriate to Mare Island's unique historic resources and land use patterns.

*Page II-6, Land Use Compatibility and Density Goals; add new Land Use Compatibility and Density Goal 3 and associated policies:*

Land Use Compatibility and Density Goal 3: To encourage mixed use commercial, industrial, and residential development on Mare Island in a manner that accounts for Mare Island's unique and complex land use patterns, historic resources, and environmental constraints.

#### Policies

1. Use the Mare Island Specific Plan as the primary development guide for Mare Island.

2. Encourage buffering requirements and other design standards that are appropriate to Mare Island's unique land use patterns.

*Page II-6, Commercial Development Goals; add new Commercial Development Goal 7 and associated policies:*

Commercial Development Goal 7: To promote the use of Mare Island as a commercial economic asset for the City of Vallejo.

#### Policies

1. Use the Mare Island Specific Plan to guide new commercial development on Mare Island in a manner which recognizes Mare Island's unique historic resources and land use patterns.

*Page II-8, Industrial Development Goal 3; add new Policy 3:*

3. Use the Mare Island Specific Plan to guide industrial development on Mare Island which recognizes and encourages flexible design and land use standards.

*Page II-14 through II-20, Housing (Goals and Policies); we are concerned that these goals and policies may need to be modified to ensure consistency with the new Housing Element.*

## **II. Part III - Land Use Element**

*Page III-2, A. Vallejo's Role In the Bay Area, 2. Historic Role, 4th full paragraph; edit as follows:*

The most profound change in Vallejo during this period of time was the decision made in 1993 to close Mare Island by 1996. ~~The closure would not only mean a loss of employment opportunities but a loss of residents as well.~~ In 2002, approximately 650 acres of Mare Island was transferred from the Department of the Navy to the State of California and the City of Vallejo. This transfer provides the City an opportunity to encourage economic development and residential housing on Mare Island in an effort to promote new employment and housing opportunities.

*Page III-2 through III-3, note: this section to be reviewed by Staff to ensure consistency with the new Housing Element.*

*Page III-4, first full paragraph; delete language as follows:*

Employment growth will continue in Vallejo, ~~despite the closure of Mare Island Naval Shipyard.~~

*Page III-5, Urban Design Goal 1, Policy 1; delete unnecessarily restrictive language:*

1. Use a specific plan ~~and area plans~~ as the development guide for the reuse of Mare Island.

*Page III-6, Urban Design Goal 3; add new Policy 7:*

7. The Mare Island Specific Plan should encourage commercial development designed in a manner appropriate to Mare Island's unique historic resources and existing land use patterns.

*Page III-11, Waterfront Development, Mare Island; add language as follows:*

Mare Island is characterized by its remarkable waterfront, its industrial, commercial, and historic areas, by its open space and recreation amenities, and by its natural resources. Consistent with the general principles and policies in the Reuse Plan, the Specific Plan should identify goals and policies to promote the comprehensive reuse of these resources and assets. The Mare Island Specific Plan should also encourage flexible waterfront development standards appropriate to Mare Island's unique resources and existing land use patterns.

*Page III-11, Waterfront Development, Policy 5 San Pablo Bay; alter language as follows:*

An additional 70 acres, known as the North Housing and Guadalcanal Village sites, are owned by the City. The North Housing will site will be transferred to the State, to be administered by the State Lands Commission. be part of the Mare Island Reuse and/or as a wetland mitigation site and Guadalcanal Village may be is being used as a wetland mitigation site for the improvement of State Route 37.

*Page III-12, Waterfront Development Goal; add Policy 5:*

5. Use the Mare Island Specific Plan to encourage flexible waterfront development standards appropriate to Mare Island's unique historic resources and land use patterns.

*Page III-14, Land Use Compatibility and Density Goal; add new Land Use Compatibility and Density Goal 3 and associated policies:*

Land Use and Density Goal 3: To encourage a variety of density standards and design requirements for commercial, industrial, and residential development on Mare Island in a manner that accounts for Mare Island's unique and complex land use patterns, historic resources, and environmental constraints.

#### Policies

1. Use the Mare Island Specific Plan to guide the implementation of Mare Island land use principles.

2. Encourage buffering requirements and other design standards that are appropriate to Mare Island's unique land use patterns and historic resources.

~~3. Encourage a variety of density standards and design requirements on Mare Island in order to effectively utilize Mare Island's unique opportunities for economic development.~~

*Page III-20, Commercial Development Goal; add new Commercial Development Goal 7 and associated policies:*

Commercial Development Goal 7: To promote the use of Mare Island as a commercial economic asset for the City of Vallejo.

#### Policies

1. Use the Mare Island Specific Plan to guide new commercial development on Mare Island.

2. Recognize the unique historic resources and land use patterns on Mare Island in evaluating new commercial development on Mare Island.

3. Encourage flexible design standards and land use patterns for commercial development on Mare Island.

*Pages III-20 through III-23, Industrial Development; add density standards for the various types of industrial uses existing and planned for non-Mare Island sites, as required by State Law.*

*Page III-21, Industrial Development; add sentence to end of 4th full paragraph:*

The Project's Work Group developed the Mare Island Final Reuse Plan outlining the reuse goals and standards for the island to insure its immediate, mid-term, and long-term viability as an economic asset to the community. The general principles of the Mare Island Final Reuse Plan should serve as the conceptual blueprint for the Mare Island Specific Plan industrial and mixed use development.

*Page III-23, Industrial Development Goal 3; add new Policy 3:*

3. Use the Mare Island Specific Plan in evaluating industrial development on Mare Island and to encourage flexible design and land use standards associated with Mare Island's future industrial uses.

*Page III-29: add Mare Island Land Use Designations and Standards:*

### **Mare Island Land Use Designations:**

The following *additional* land use designations apply to Mare Island:

### **III. Open Space - Regional Park**

This designation includes parks that promote contact with the natural environment and which have a unique character or function not found in community or neighborhood parks. The Regional Park designation is intended to allow for walking, cycling, and equestrian trails, habitat conservation, and other passive recreational uses consistent with the Mare Island Specific Plan.

### **IV. Mare Island Mixed Use**

The purpose of the Mare Island Mixed Use designation is to provide for the flexible integration of residential, commercial, industrial, recreational, educational, and civic uses on Mare Island in a manner that will facilitate the incorporation of smart growth design principles.

The Mare Island Mixed Use designation sets forth the proposed general distribution and intensity of uses of Mare Island. The Mare Island Specific Plan will more specifically describe the Mare Island Mixed Uses at a specific plan level of planning detail.

The Mare Island Specific Plan may provide for various ancillary uses within areas designated for mixed use, including, but not limited to, residential activities that involve reuse of existing buildings and live-work type uses.

The following land uses are compatible with the Mare Island Mixed Use designation:

*(Note to Reader: Proposed building intensity and population density have not been confirmed by City Staff.)*

### **A. Residential**

Maximum Building Intensity: 5 to 50 housing units per acre.

Maximum Population Density: 5 to 250 persons per net acre.

The Residential use classification accommodates single family detached housing units, multi-family duplexes, townhomes, apartments, condominiums, live-work units, work-live units, and other forms of multi-family housing and accessory uses necessary to accommodate the approximately 1,400 residential units (excluding Touro University dormitories) proposed for Mare Island.

### **B. Commercial**

Maximum Population Density: 1:100 square feet for most uses (excluding assembly, auditorium, theaters, etc.)

Maximum Building Intensity: 5 Floor Area Ratio (F.A.R.)

The Commercial use classification accommodates a broad range of commercial uses including, but not limited to, regional- and community-serving retail, service, and office uses. Uses anticipated in this classification include, but are not limited to, local, community, and regional serving retail uses; light industrial uses; employment centers; restaurants and bars; recreation-oriented commercial uses such as gyms, marinas, hotels, bed and breakfast inns; and, entertainment and cultural facilities.

### **C. Industrial**

Maximum Population Density: 1:500 square feet for most uses

Maximum Building Intensity: 2 F.A.R.

The Industrial use classification accommodates a broad range of industrial uses. Uses anticipated in this classification include, but are not limited to, heavy industry such a manufacturing or processing, recycling, warehouse, distribution, and light industrial uses. Construction and equipment services may also be permitted in the Industrial use classification.

### **D. Open Space**

Maximum Population Density: 250 people per acre

Maximum Building Intensity: N/A

The Open Space designation includes, but is not limited to, wildlife habitat, watershed areas, parks, conservation areas, and recreation areas of Mare Island. Permitted uses within Open Space areas will be determined according to the Mare Island Specific Plan but may include golf courses, camp grounds, ball fields, public and private parks, marinas, hiking trails, habitat



preservation, resource conservation areas, and other low-intensity uses consistent with the General Plan and Mare Island Specific Plan.

### **E. Educational / Civic**

Maximum Population Density: 1:100 square feet for office, 1:20 square feet for classroom and 1:7 square feet for auditorium

Maximum Building Intensity: 5 F.A.R.

This designation identifies areas where governmental, institutional, or civic type uses are anticipated on Mare Island. Such uses include public buildings such as schools, libraries, police and fire stations, public agency facilities, post offices, and utilities. Educational / Civic uses also include, but are not limited to, churches, medical facilities, and community centers.

### **F. Federal Transfer**

This classification encompasses property on Mare Island under the jurisdiction of the federal government. Land designated as Federal Transfer may be exempt from local land use authority and not subject to the provisions of the Mare Island Specific Plan.

## **III. Circulation and Transportation Element**

*Page IV-4, Arterial Streets; consider adding any Mare Island arterials to list in 4th full paragraph on page IV-4.*

*Page IV-4 through page IV-5, Arterial Streets; delete following language from the General Plan and refer to Appendix D1 of the Mare Island Specific Plan Amended and Restated, Transportation Section:*

~~Forced flow operations, with excessive delays and long queues, did occur at the Wilson Avenue/Tennessee Street intersections during peak periods when Mare Island Naval Shipyard was operating. It is anticipated that similar backups could occur with the reuse of the island unless the intersection is improved.~~

*Page IV-5, Collector Streets; consider adding any Mare Island collector streets to list in 3rd full paragraph on page IV-5.*

*Page IV-7, Compatibility with Adjoining Land Uses, Policies; add new Policy 6:*

6. The Mare Island Specific Plan shall guide the implementation of traffic and circulation compatibility standards on Mare Island.

*Page IV-9, Parking, Policies; add new Policy 6:*

6. The Mare Island Specific Plan shall guide the implementation of parking standards on Mare Island.

## **IV. Housing Element**

*A review of the updated Housing Element does not indicate a need for amendment.*

Educational Facilities Element.

*No amendment of this element is proposed.*

Public Facilities and Other Services Element

*Page VII-3, Parks and Open Space, Major Open Space and Park Complexes: update list, as required by state law, to include any Mare Island Open Space and Parks in the City's General Plan inventory.*

*Page VII-4, Parks and Open Space, Greater Vallejo Recreational District Facilities: update list to include and Mare Island Recreation District facilities in the City's General Plan inventory.*

*Page VII-5, Parks and Open Space, Parks and Open Space Goal, Policy 5; amend policy as follows:*

5. The open space and recreational areas identified in the Mare Island, Hiddenbrooke, and Northgate Specific Area Plans should be implemented as resources are available.

*Page VII-5, Parks and Open Space, Parks and Open Space Goal; add new policy 8 as follows:*

8. The City recognizes that many of the parks currently located on Mare Island are existing parks developed and maintained by the Navy when the Mare Island Naval Shipyard was operational. Accordingly, many of these existing parks may not meet the minimum standards required of city parks that are not located on Mare Island. The Mare Island Specific Plan should encourage a variety of flexible open space standards and park design requirements that account for Mare Island's unique and complex land use patterns, historic resources, and environmental constraints.

*Page VII-5, Other Services, Wastewater (Sanitary Sewer) System; consider deleting the following language from the second to last full paragraph on page VII-5 and replace with language that recognizes the creation of the Mare Island Utility District:*

~~The [Vallejo Sanitation and Flood Control District (VSFCD)] boundaries encompass all lands within the City, including Mare Island and Mare Island, and a portion of the developed unincorporated lands outside the city. The VSFCD currently provides wastewater treatment services to Mare Island through a contract with the Navy. Upon closure, the VSFCD may ultimately operate to maintain the system as disposal and reuse is implemented.~~

*Page VII-6, Other Services, Storm Water System; consider deleting the following language from the 1st full paragraph on page VII-6 and replace with language that recognizes the creation of the Mare Island Utility District:*

~~The Vallejo Sanitation and Flood Control District (VSFCD) is responsible for the operation and maintenance of the flood control system within the City of Vallejo boundaries including Mare Island. -with the exception of Mare Island. The VSFCD may ultimately operate and maintain the storm water system on Mare Island as disposal and reuse is implemented.~~

## **V. Safety Element**

*No amendment of this element is proposed.*

## **VI. Noise Element**

*No amendment of this element is proposed.*

## **VII. Air Quality Element**

*The General Plan discusses several TSM actions that are to be implemented to mitigate automobile air pollutants, including the promotion of transit ridership, traffic improvements, on-street parking restrictions, etc. Furthermore, the General Plan does expressly note Mare Island's industrial uses and, thus, may adequately account for some of Mare Island's contributions to air pollution. Nevertheless, this element should be updated to discuss the applicability of the existing TSM plan to Mare Island or to reflect Mare Island's unique circumstances and continuing review of Mare Island circulation and traffic issues.*

## **VIII. Natural Resources Element**

*Pages XI-1 through XI-3, Fish and Wildlife Resources; this section should be updated to discuss any special status animals and plants on Mare Island that are not already mentioned in the General Plan.*

## **IX. Action Program**

*Page XII-1, Action Program, B. Specific Area Plans and Special Studies; amend language as follows:*

Beside the five area plans completed in the late 1970's, specific plans have been prepared for Sky Valley, Northgate, and White Slough, and Mare Island. ~~A specific plan for Mare Island will be prepared for Mare Island.~~

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**APPENDIX D: TRANSPORTATION APPENDICES**

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**Table D-1: Signalized Intersection Level of Service Criteria**

<b>Level of Service</b>	<b>Description</b>	<b>Average Control Delay (Seconds)</b>
A	Free flow / non-congested operation. Turning movements are easily made and all queues clear in a single signal cycle.	≤ 10.0
B	Stable operation / minimal delays. An occasional approach phase is fully utilized. Drivers begin to feel somewhat restricted within platoons of vehicles.	> 10.0 to 20.0
C	Stable operation / acceptable delays. Major approach phases fully utilized. Backups may develop behind turning vehicles.	> 20.0 to 35.0
D	Approaching unstable operation / tolerable delays. Drivers may have to wait through more than one red signal indication. Queues may develop but dissipate rapidly, without excessive delays.	> 35.0 to 55.0
E	Unstable operation / significant delays. Volumes at or near capacity. Vehicles may wait through several signal cycles. Long queues form upstream of intersection.	> 55.0 to 80.0
F	Forced flow / excessive delays. Represents jammed conditions. Traffic demand exceeds the capacity. Queues may block upstream intersection.	> 80.0

*Source: Highway Capacity Manual, Transportation Research Board, 2000*

**Table D-2: Unsignalized Intersection Level of Service Criteria**

<b>Level of Service</b>	<b>Description</b>	<b>Average Control Delay (Seconds)</b>
A	Free flow / non-congested operation.	≤ 10.0
B	Stable operation / minimal delays.	> 10.0 to 15.0
C	Stable operation / acceptable delays.	> 15.0 to 25.0
D	Approaching unstable operation / tolerable delays.	> 25.0 to 35.0
E	Unstable operation / significant delays.	> 35.0 to 50.0
F	Forced flow / excessive delays.	> 50.0

*Source: Highway Capacity Manual, Transportation Research Board, 2000*

**Table D-3: Railroad Repairs Needed on Mare Island**

<b>Item No.</b>	<b>Description &amp; Location</b>	<b>Repair Needed</b>
1-3	Yellow warning signs on Causeway.	Relocate on power pole further to right.
4.	Warning light on Causeway.	Signal needs to be moved to right as far as it can go.
5.	Causeway bridge handrail.	Too close, need variance.
6.	Sidewalk on Causeway span.	Too close, need variance.
9.	Island curbs at California Avenue crossing.	Curbs too close.
10.	E and RR Streets.	Install crossbuck.
11.	North end of RR crossing.	Install rock on ends of rubber pads for transition.
13.	Turn back track along RR Ave., 500 ft. of curb.	Paint bright color; need variance.
14.	Turn back track on RR Ave., fire hydrant west side of track too close.	Need variance.
15.	Turnback track - pedestrian sign on west side.	Remove sign or move to right side to provide adequate clearance.
17.	Turnback track - short switch rod	6-ft. switch rod needed.
18.	Main track next to RR Ave., before C St. (behind B459).	Remove landscaping and wood boards.
23.	At C St. crossing around curve near scaleyard.	Trim tree branches sticking out through fence.
24.	Main track in advance of Walnut Ave. crossing. Painted yellow - repairs still needed.	Remove asphalt; steel fence too close.
26.	Main track - A Street Yard rail barricade along A Street.	Remove barricade.
29.	A Street yard where east leg of wye crosses A St.	Install warning device.
30.	Mare Island Yard, east leg of wye along fence by Duracrete.	Remove bushes growing in walkway.
32.	Mare Island Yard, north wye switch along Azuar (Cedar).	Replace short switch rod.
34.	Mare Island Yard, west leg of wye crosses A St.	Install warning device.
35.	Mare Island Yard, west wye switch to A St.	Replace short switch rod.
36.	Mare Island Yard - crossover switches to scale track.	Replace short switch rods.
40.	Mare Island Yard, crossing of Azuar (Cedar).	Walkway transition slopes and trainman's walkway surface.
41.	Mare Island Yard, Walnut and A. St. crossing.	Walkway transition slopes.
45.	Mare Island Yard, crossing A St. east end to Railroad Ave.	Need crossbucks going north and south on RR at A St.
46.	Railroad Ave. crossing at A. St.	500 ft. of curb along west side of track. Remove or paint distinctive color.
47.	Railroad and 2 <sup>nd</sup> Street.	Need crossbuck on 3 <sup>rd</sup> Street at Calif (B77); move crossbuck at Aurora up to stop sign.
48.	Railroad Ave. lead, B599 Switch.	Replace short switch rod.
49.	Railroad Ave. lead, between 599 and A St.	300 ft. of curb along track - tripping hazard.

*(cont'd.)*

**Table D-3 (continued)**

<b>Item No.</b>	<b>Description &amp; Location</b>	<b>Repair Needed</b>
50.	Railroad Ave. lead, between C and A St.	Wood post west side of track too close.
51.	Railroad Ave. lead, between C and A St.	White PVC pipe.
52.	Railroad Ave. lead, between C and A St.	2 separate sections of curb too close.
53.	Railroad Ave. lead, between C and A St.	Sidewalk west side of track too close.
54.	Railroad Ave. lead, south leg of east yard crossover.	25 MPH sign too close.
55.	Railroad Ave. lead, south leg of east yard crossover.	Replace short switch rod.
56.	Railroad Ave. lead, adjacent to Bldg. 100.	Water valve on west side of track too close.
57.	Railroad Ave. - near Bldg. 100.	Replace short switch rod.
58.	Railroad Ave. - near Bldg. 100B.	Replace short switch rod.
60.	Railroad Ave. at 3 <sup>rd</sup> Street.	Need crossbuck where crosses Railroad.
61.	Railroad - Engine House lead at 3 <sup>rd</sup> .	Need crossing warning; not used.
62.	Railroad - Engine House lead at Walnut.	Need crossing protection; not used.
63.	Railroad at VA Medical Building.	Private crossing signs needed.
64.	Railroad adjacent to Bldg. 417.	200 ft. of curb too close.
65.	Railroad at Bldg. 229 and 417.	Private crossing signs needed.
68.	Railroad and 10 <sup>th</sup> .	Private crossing needed when leased.
69.	Railroad and 12 <sup>th</sup> adjacent to Bldg 750.	Rails protecting fire hydrant; need crossbuck west side of 12 <sup>th</sup> .
70.	Railroad and 14 <sup>th</sup> .	Light pole (paint bottom yellow).
71.	Azuar (Cedar) at C Street.	Short switch rod; not used.
72.	Azuar (Cedar) at Destination Siding.	Short switch rod; not used.
74.	Azuar (Cedar) and I Street crossing.	Need private crossing sign.
75.	Azuar (Cedar) and I St. crossing.	Need transition slope connecting crossing surface with walkway.
76.	Azuar (Cedar) at north end of Destination Siding.	Concrete location marker in walkway.
77.	Azuar (Cedar) at north end of Destination Siding.	Replace short switch rod.
78.	Azuar (Cedar) at J Street.	Need private crossing sign.
79.	Azuar (Cedar) at L Street.	Need private crossing sign.
80.	Azuar (Cedar) between L and M.	Curb along west side.
81. & 82.	Azuar (Cedar) at B627.	Replace short switch rods.
83.	Azuar (Cedar) in front of B629A.	Hub of a cut-off switch stand protrudes up into walkway.

*Note:* Numbers not listed are for deficiencies that have been repaired or removed.

*Source:* California Public Utilities Commission Survey, conducted March 18, 1997; Industrial Railways Companies, list of items repaired, July 6, 2005.



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**APPENDIX E: WATER SUPPLY ASSESSMENT**

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**WATER SUPPLY ASSESSMENT FOR  
THE CITY OF VALLEJO**

**FINAL**

**Mare Island  
Redevelopment Project**

June 24, 2005

Provided by



2701 Prospect Park Drive  
Rancho Cordova, California 95670



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## SECTION 1

### INTRODUCTION

This section discusses the purpose and scope of the water supply assessment for the Mare Island Redevelopment Project (Project) and provides a description of both the proposed redevelopment and the existing City of Vallejo (City or Vallejo) Water Systems.

#### 1.1 Purpose and Scope of Water Supply Assessment

Senate Bill 610, now codified as Water Code sections 10910 and 10911, requires land use planning entities when evaluating certain large development and redevelopment projects to request an assessment of the availability of water supplies from the water supply entity that will provide water to the project. Such a water supply assessment (WSA) is performed in conjunction with the land-use approval process associated with the project and must include an evaluation of the sufficiency of the water supplies available to the water supplier to meet existing and anticipated future demands, including the demand associated with the project over a twenty-year horizon for normal, single-dry, and multiple-dry years.

The WSA must identify any existing water supply entitlements, water rights, or water service contracts held by the water supplier or relevant to the identified water supply for the proposed project, and include a description of the quantities of water received in prior years by the public water system.

#### 1.2 Description of Proposed Redevelopment

The main vision of the Project is to restore Mare Island to the vitality that it brought to Vallejo through its 91 years of recognized significance. This vision includes a vital new place where people live and work within the context of a well-established, highly distinctive and historically significant fabric of buildings and landscape that balances economic development with preservation. The goals set forth for the Project as stated in the 1999 Specific Plan are as follows: 1). Create jobs and other economic development opportunities to sustain and improve the economic conditions in the surrounding areas. 2). Preserve and enhance the history of Mare Island. 3). Create a self-sustaining and multi community. 4). Ensure that the human services needed are easily accessible and available. The proposed Mare Island project consists of commercial, residential, and open space development as well as public improvements related to transportation and access to the island. Neighborhoods will provide a full range of land uses for Mare Island including employment, residential, commercial, recreation, and open space. The new development will preserve and expand the existing open space areas and will provide access to a regional and local populace. Access to Mare Island will be achieved through a balance between automobile, transit, bicycle, and pedestrian modes. Overall, the project will add up to 1,400 residential units and up to 9,047,000 gross square feet of space for commercial, office, education, recreation, and industrial use. Approximately 1,333,938 square feet of vacant storage, garages, bomb shelters, and miscellaneous navy base structures would be removed to



make way for the new Mare Island Redevelopment project. Figure 1-1 shows a map of the regional location of Mare Island and Figure 1-2 shows the general plan for the redevelopment project.

### **1.3 Description of Existing City of Vallejo Water Systems and Water Supply Facilities**

There are currently two separate water systems: the City of Vallejo water system and Vallejo Lakes water system, collectively called the City of Vallejo Water Systems. The City of Vallejo is a public water supplier that purchases, treats, distributes and sells water in the City of Vallejo and unincorporated areas of Solano County. The City also provides potable water to the Vallejo Lakes water system, to the former Mare Island Naval Shipyard, and to Travis Air Force Base. The City of Vallejo distribution system currently serves the area encompassing the proposed Project area.

The City of Vallejo water system serves approximately 36,500 connections in the City of Vallejo and the adjacent western parts of Solano County, as of FY 2002/2003. The terrain in the service area is moderately varied with residential developments in canyon areas.

The Vallejo Water Systems utilize two water treatment plants--the Fleming Hill WTP and the Green Valley WTP. The Fleming Hill WTP will serve the proposed Project area.

The Fleming Hill WTP treats water that is supplied from the Sacramento River Delta and upstream catchment and delivered through the North Bay Aqueduct (NBA), Lake Berryessa (Solano Project), and Lake Curry (under anticipated conditions). The Fleming Hill WTP is the main water treatment facility for the City. The WTP uses preozonation, coagulation, flocculation, sedimentation, intermediate ozonation, filtration, and disinfection. A recent expansion program increased the design flow rate from 27 to 42 million gallons per day (mgd). The Fleming Hill WTP is the only plant which can supply water to customers within the City limits and included unincorporated areas within the City boundaries.

The Green Valley WTP was completed in 1998 with a capacity of 1.0-mgd and serves the Vallejo Lakes System. The Gordon Valley WTP is out of service and not currently operated. The area it once served was temporarily connected to the City of Fairfield's system, but is now served from the new Green Valley WTP. The Green Valley WTP can not be used to serve City of Vallejo residents or the Mare Island Development. It has a separate raw water lake supply and distribution system.

### **1.4 Description of Location and Climatology**

Vallejo is located in the northern part of the San Francisco Bay area. Vallejo's climate is characterized by cool, rainy winters and warm, dry summers. Like the rest of the San Francisco Bay Area, the Vallejo region is classified as a Marine West Coast Climate type with Mediterranean characteristics. Summer maximum temperatures average in the low 80's, with summer minimums in the low 50's. Winter maximums are in the mid-50's, with minimums in the mid-30's (City of Vallejo, 1999). Sunshine is plentiful, and the annual precipitation averages 20 inches, with most of it falling

between November and May (Rains, Melton, and Carella, Inc., July 2001). The moderately hot and dry weather during the summer months results in moderately high water demand.

[Please see Figure 1-1 on the following page, 1-4.]



## SECTION 2

### WATER SUPPLIES

The City of Vallejo Water Systems currently uses surface water as their sole source of supply. The City of Vallejo water systems do not use any groundwater sources. The City brings surface water from four different sources into two treatment plants in order to serve customers in two different counties and on an active and former military base. This chapter describes the surface water supplies, as well as the historical, present and projected water supplies.

#### 2.1 Surface Water Supplies

The City has five sources of surface water: Solano Project Water, State Water Project, Vallejo Permit Water, Lakes Frey and Madigan, and Lake Curry. This section describes these sources. Table 2-1 summarizes these surface water supplies including water entitlements of each surface water source in units of acre-feet per year.

**Table 2-1. Surface Water Sources**

Source	Water Entitlements (ac-ft/yr)	Remarks
State Water Project	5,600	SCWA <sup>c</sup>
Vallejo Permit Water <sup>a</sup>	17,200 (until 2005); 22,800 (2010 and beyond)	Water rights and conveyance control with SCWA
Solano Project Water	14,600	Entitlement from U.S. Bureau of Reclamation through SCWA
Lakes Frey and Madigan	400	City water rights
Lake Curry <sup>b</sup>	3,750 (2010 and beyond)	City water rights
Total	37,800 (until 2005); 47,150 (2010 and beyond)	

<sup>a</sup> Supply should increase from 17,200 ac-ft/yr in 2005 to 22,800 ac-ft/yr in 2010 and beyond, when agreements required to allow Vallejo's full conveyance of the 22,800 ac-ft/yr through the NBA should be in place.

<sup>b</sup> The City currently has a fully entitled water right to 3,750 ac-ft/yr of Lake Curry supplies. Such supplies are anticipated to be available to the City by 2009, when necessary conveyance facilities are intended to be constructed.

<sup>c</sup> SCWA = Solano County Water Agency.

State Water Project (SWP). State Water Project water is delivered from Lake Oroville through the Sacramento River to the North Bay Aqueduct (NBA) pumping facility at Barker Slough where it is pumped to the California Department of Water Resources (DWR) Forebay at Cordelia. SWP water may be diverted to supply Travis Air Force Base before reaching the DWR Forebay. From the DWR Forebay at Cordelia it is pumped by City facilities to the Fleming Hill Water Treatment Plant (WTP).

Vallejo Permit Water. Vallejo Permit Water is delivered from the NBA pumping facility at Barker Slough to the DWR Forebay at Cordelia. Vallejo Permit Water may be diverted to supply Travis Air Force Base before reaching the DWR Forebay. From the DWR Forebay at Cordelia it is pumped by City facilities to the Fleming Hill WTP. The 5,600 acre foot increase shown for 2010 reflects the entitlement of water purchased by City of Vallejo when the state water project was created. The City purchased an additional 17.10 cubic foot per second (cfs) capacity which translates to 22,800 acre feet per year. Although the relevant contract correctly indicated that the City purchased 17.10 cfs additional capacity, a clerical contract error resulted in an incorrect annual delivery calculation of 17,200 ac-ft/yr, rather than 22,800 ac-ft/yr. This clerical error is recognized by the parties to the contract, who are actively working on a corrective contract amendment expected to be completed within three years.

Solano Project Water (SPW). Solano Project Water is delivered from Lake Berryessa via the Putah South Canal to the U. S. Bureau of Reclamation Terminal Reservoir in Cordelia. From Cordelia it can be pumped to the Fleming Hill WTP or via Solano Irrigation District's distribution facilities to the Green Valley WTP.

Lakes Frey and Madigan Lakes Frey and Madigan are located in northern Solano County. The City owns both lakes and the surrounding land. Water flows from Lake Madigan into Lake Frey and then into the diversion dam, from which the water continues to flow under gravity through a pipe into the Green Valley WTP located at the end of Green Valley Road. The water from these lakes is solely used by the Green Valley Plant, and the water rights are equal to the maximum plant capacity.

Lake Curry. Lake Curry is a future source for the City located in Napa County. The City owns the water rights but currently lacks a method of conveyance to immediately use the raw water impounded behind the dam. The City is actively investigating the most efficient use and in the process of EIR preparation to determine the preferred method of transportation of the water to a point usable by City of Vallejo customers. It is anticipated that this process may take up to five years to be finalized and the City water customers to regain beneficial usage of this water right.

Table 2-2 summarizes the projected annual water supply for normal climate years. The City, in conjunction with the Vallejo Sanitation and Flood Control District, has considered reclaimed water. While reclaimed, secondary-treated water is available, studies have repeatedly shown that its distribution would be cost prohibitive. In addition, no water supply loss due to water quality is anticipated and assumed for water planning purposes. Furthermore, no groundwater sources are or will be available.

**Table 2-2. Projected Normal Water Year Water supplies, ac-ft/yr**

Water supply	2005	2010	2015	2020	2025
Surface water	37,800	47,150	47,150	47,150	47,150
Groundwater	0	0	0	0	0
Recycled water	0	0	0	0	0
Water supply loss due to water quality	0	0	0	0	0
<b>Total</b>	<b>37,800</b>	<b>47,150</b>	<b>47,150</b>	<b>47,150</b>	<b>47,150</b>

## 2.2 Transfers and Exchanges

Table 2-3 provides a breakdown of the water transfers that have occurred in prior dry years per existing service agreements that the City maintains with American Canyon, Benicia, and Fairfield. Note that historically, these transfers have only been from the City to other wholesale agencies. Copies of these water transfer agreements will be provided upon request by the City. This section provides a discussion of these agreements.

**Table 2-3. Water Transfers**

From whom	To whom	1989 (ac-ft)	1991 (ac-ft)	1996 (ac-ft)	2001 (ac-ft)
City of Vallejo	American Canyon	0	0	0	500
City of Vallejo	Benicia	0	5,572	0	3,807
City of Vallejo	Fairfield	0	1,716	0	1,333
<b>TOTAL</b>	--	<b>0</b>	<b>7,288</b>	<b>0</b>	<b>5,640</b>

City of American Canyon. A water service agreement exists between the City of Vallejo and the City of American Canyon, dated May 1, 1996. The agreement gives American Canyon the right to purchase up to 1.0 mgd of potable water from Vallejo with possible additional capacity purchases. If available, American Canyon will supply its excess raw water entitlement to Vallejo at \$75/acre-foot, which Vallejo shall treat and transmit to American Canyon. Existing Vallejo transmission facilities in American Canyon's water service area are available to wheel American Canyon raw water with reimbursement of costs.

Per Addendum No. 1 to the Water Service Agreement between the City of Vallejo and the City of American Canyon, dated July 18, 1996, American Canyon wants an alternative source of raw water to supply water for agricultural, golf course, and landscaping purposes. Vallejo agrees to sell raw water to American Canyon during emergencies, if available, such as a reduction in NBA entitlement, in quantities up to 500 acre-feet per year at a cost of 90 percent of what American Canyon charges their customers outside the city limit.

Per Addendum No. 2 to the Water Service Agreement between the City of Vallejo and the City of American Canyon, dated June 4, 1998, Vallejo agrees to sell and transfer 500 acre-feet of water entitlement to American Canyon from Vallejo's permit water for domestic use at a cost of \$1,000 per acre-foot. American Canyon will transfer to the City of Calistoga 500 acre-feet of American Canyon's NBA entitlement. American Canyon will reimburse Vallejo for previously incurred capacity investments, and other costs associated with conveyance of the permit water. Restrictions on Vallejo's permit water will be passed along to American Canyon proportionally.

Per Addendum No. 3 to the Water Service Agreement between the City of Vallejo and the City of American Canyon, dated May 4, 2000, Vallejo agreed to provide and American Canyon purchased fire supply storage and fire supply flow to the Montevino Subdivision.

Per Addendum No. 4 to the Water Service Agreement between the City of Vallejo and the City of American Canyon, dated December 7, 2000, Vallejo will sell up to 250 acre-feet of Vallejo Permit water to American Canyon thereby allowing American Canyon to sell an equivalent amount of their water to Yountville. There are a number of agreements which must be reached before the sale can take place. The addendum can be voided if all conditions are not fulfilled by December 31, 2005.

City of Benicia. An agreement exists between the City of Vallejo and the City of Benicia relating to the limited term (18-year) purchase of water, dated March 5, 1992. Vallejo will make available to Benicia, before any other agency, up to 4,400 acre-feet on an annual basis at a cost of \$220,000 firm and \$75 (initially) per acre-foot usage. Notification to Vallejo is required by February 1 or Vallejo is free to sell or use the water as it chooses. This agreement was terminated by Benicia Council action in February 2004, thereby reverting the 4,400 ac-ft/yr entitlement to Vallejo control.

Per Amendment No. 2 to the 1962 Vallejo / Benicia Water Agreement, dated April 28, 1989, Vallejo is to deliver 1,100 acre feet per year. A service charge applies for usage exceeding 50 days per year. Treated water is sold to Benicia at Vallejo's outside-the-City-limit rate. Raw water from the Terminal Reservoir sells at a calculated charge of \$37.53/ac-ft.

City of Fairfield. An agreement exists for temporary potable water service between the City of Fairfield and the City of Vallejo, dated March 20, 1992. Fairfield is to serve potable water to Vallejo's Lake System. Vallejo provides the raw water supply and pays for the cost of service (lease payment and user charge). Demand is not to exceed 1,120 acre-feet in 12 months.

Per an agreement for mutual water exchange or sale and temporary standby water service between the City of Fairfield and the City of Vallejo, dated May 4, 1993, Vallejo will provide surplus permit water to Fairfield at either an exchange rate of 2:1 for Solano Project water or at a price of \$50/ac-ft

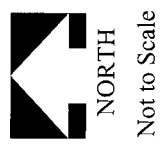
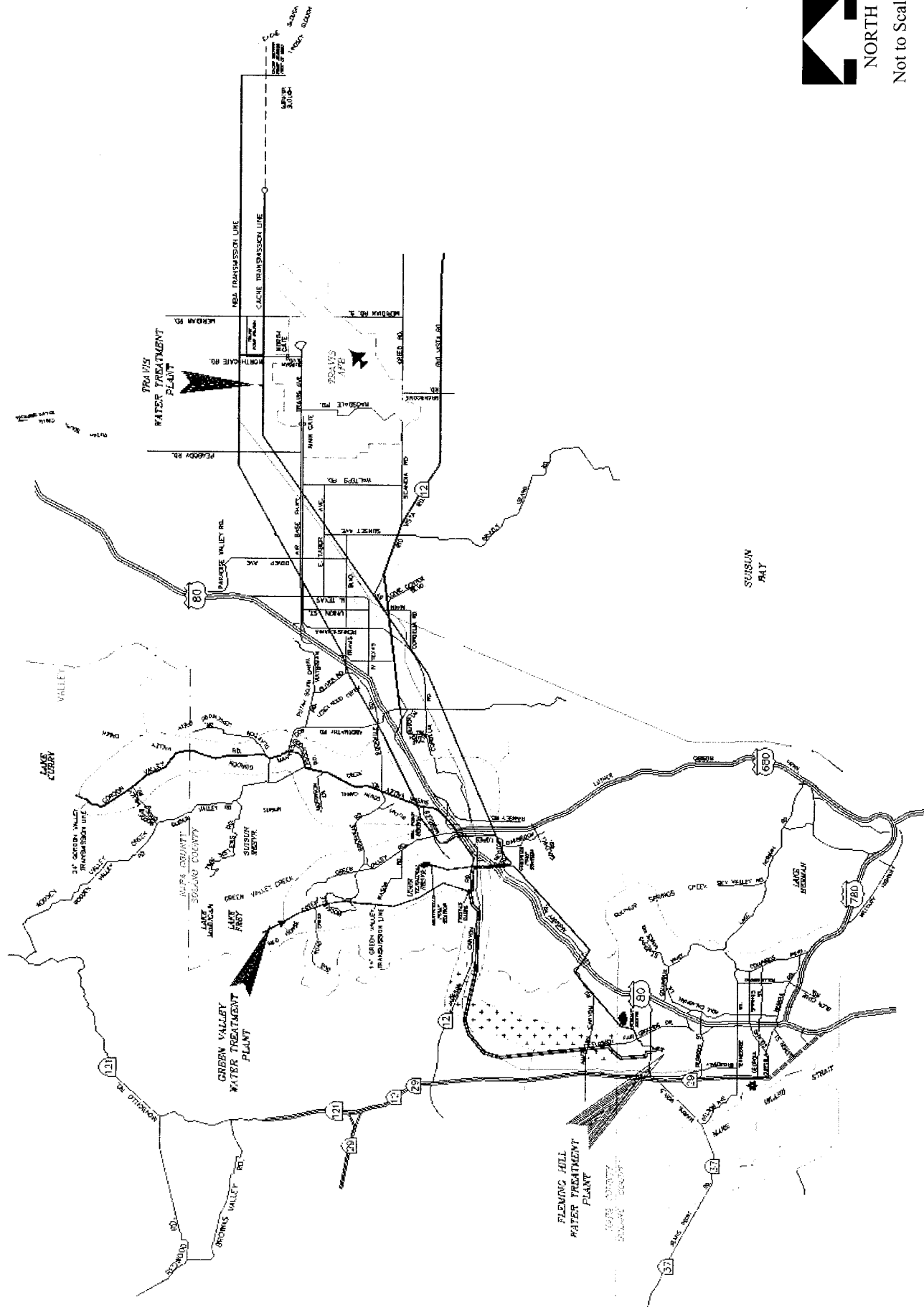
(initially). Fairfield will serve potable water into the Vallejo system. Raw water used will be added to Vallejo's Solano Project use. Vallejo will be charged for water service at Fairfield's in-city general service rate.

Per Amendment No. 1 to provide for mutual water exchange or sale and temporary standby water service between the City of Fairfield and the City of Vallejo, dated August 4, 1993, a second connection will be added through which Fairfield will serve potable water into the Vallejo system. Vallejo pays Fairfield a user charge if the connections are activated.

Figure 2-1 presents a map depicting the areas served by the water systems.

[Please see Figure 2-1 on the following page, 2-6]





<b>B R O W N   A N D C A L D W E L L</b>	DATE	7-18-03	SITE	Water Supply Assessment, City of Vallejo, California		<b>Figure 2-1</b>
	PROJECT	24580-001	TITLE	Water System Map		

## SECTION 3

### EXISTING AND PROJECTED WATER DEMANDS

This section describes the existing and projected housing and employment figures as well as historical and projected water demand.

#### 3.1 Existing and Projected Demographics

This section describes the existing and projected housing and employment for the existing City of Vallejo Systems. These figures are based on information from the draft Environmental Impact Report (EIP Associates, 2004), the Vallejo Water Utility Financing Plan and Rate Study, and the City of Vallejo Buildout Estimates (Miering Contracting and Consulting, 2003). In addition, this section describes the projected housing and employment for the proposed Project.

##### 3.1.1 City of Vallejo System Demographics

Housing and employment data were obtained from the City of Vallejo Buildout Estimates, which is presented by traffic zone. Figures 3-1 and 3-2 show the traffic zones that cover the City of Vallejo water system service area. Historical and projected housing and employment data are presented in Table 3-1.

**Table 3-1. Housing and Employment Projections, Vallejo Water Systems**

Customer category	2000	2005	2010	2015	2020 (buildout)	2025 (buildout)
<i>City of Vallejo Water System<sup>d</sup></i>						
Single Family Residential, units	30,445 <sup>H</sup>	31,540 <sup>EE</sup>	32,634 <sup>EE</sup>	33,729 <sup>EE</sup>	34,823 <sup>BE</sup>	34,823 <sup>BE</sup>
Multi-Family Residential, units	12,629 <sup>H</sup>	13,770 <sup>EE</sup>	14,911 <sup>EE</sup>	16,053 <sup>EE</sup>	17,194 <sup>BE</sup>	17,194 <sup>BE</sup>
Residential, Total, units	43,074 <sup>H</sup>	45,310 <sup>EE</sup>	47,545 <sup>EE</sup>	49,782 <sup>EE</sup>	52,017 <sup>BE</sup>	52,017 <sup>BE</sup>
CIILGR, employees	35,550 <sup>IE</sup>	41,357 <sup>EE</sup>	47,164 <sup>EE</sup>	52,972 <sup>EE</sup>	58,779 <sup>BE</sup>	58,779 <sup>BE</sup>
<i>Vallejo Lakes System</i>						
Single Family Residential, units <sup>c</sup>	778	803	828	853	878	900

<sup>a</sup> Miering Contracting and Consulting, 2003. Figures based on historical data, and the City of Vallejo Buildout Estimates for base year (1999) and 2020 (buildout); intermediate figures were linearly extrapolated. Figures for 2025 are assumed to be the same as for 2020 due to anticipated buildout by 2020. H = historical; IE = initial City of Vallejo Buildout Estimates; EE = extrapolated City of Vallejo Buildout Estimates; BE = buildout City of Vallejo Buildout Estimates.

<sup>b</sup> CIILGR = Commercial, industrial, institutional, landscaping, governmental, and recreational.

<sup>c</sup> Housing projections for the Vallejo Lakes service area is calculated based on 778 residential connections, at a growth rate of 5 connections/year up to a capacity of 900 connections, per the City of Vallejo Water Utility Financing Plan and Rate Study, Table 2.11, and the City of Vallejo, Utilities Division, Water Department.

### 3.1.2 Proposed Project Demographics

Housing and land use data developed in the Mare Island Specific Plan were used to develop estimates for this study of the future Project water use. The build out demographics for the redevelopment are shown in Table 3-2.

**Table 3-2. Proposed Mare Island Redevelopment**

	Single family units	Multi-family units	Office/R&D (kgsf)	Light Industrial (kgsf)	Retail (kgsf)	Ware-house (kgsf)	Heavy Industrial (kgsf)	Educational/Civic (kgsf)
<b>Buildout</b>	870	530	1,618	2,225	508	1,400	2,050	1,226
<b>Demolition</b>	0	0	0	0	0	0	0	0
<b>Net</b>	870	530	1,618	2,225	508	1,400	2,050	1,226

**Source:** Tables 3-2 and 5-1, Mare Island Specific Plan, Administrative Draft, May 2004.  
kgsf = thousand gross square feet.

### 3.2 Historical Water Use and Demands

Records of historical annual water production were obtained from the City. Water production is the volume of water measured at the source, which includes all water delivered to residential, commercial, and public authority connections, as well as unaccounted-for water. For the purposes of this Plan, four categories of water users have been identified: (1) single family residential; (2) multi-family residential; (3) commercial, industrial, institutional, landscaping, governmental, and recreational (CIILGR); and (4) other. Note that the City supports minimal agricultural or manufacturing uses. This section discusses how the unit water use factor method was used to estimate demand for the CIILGR category. In addition, this section will also explain why the City believes that the use of previously-established, more conservative unit water use factors, in lieu of using gross average historical unit water use factors, is appropriate for single family and multi-family units in determining the residential demand projections. This section will also elaborate on the definition of “other users,” which consists of unbilled metered use and unaccounted-for water use, and miscellaneous water use.

#### 3.2.1 Annual Water Production

Table 3-4 presents historical annual and maximum day water use from 1985 to 2004 for the Fleming Hill (e.g., City of Vallejo) water system. Historical annual and maximum-day water use records for the remainder of the City of Vallejo water systems were not available. Due to known inaccuracies of State Water Project meters and billings, the City does not have an accurate method of determining the amount of water actually received from its water supplies. However, such information can be determined by reference to the annual water production at the City’s Fleming Hill WTP, which is accurately recorded. These annual production figures are particularly representative of the amount of water received by the City from its wholesale water suppliers because of the lack of significant

raw water users of City's untreated supplies. Furthermore, the City is reluctant to rely on the incomplete water records of its wholesale water suppliers because such reliance may under-represent actual historical water usage.

**Table 3-3. Historical Water Production  
Fleming Hill Water System**

Year <sup>a</sup>	Annual average		Maximum day	
	ac-ft/yr	mgd	mgd	Peaking factor <sup>b</sup>
1985	19,291	17.23	29.2	1.69
1986	20,467	18.28	29.1	1.59
1987	21,127	18.87	30.9	1.64
1988	22,146	19.78	29.3	1.48
1989	22,617	20.20	33.4	1.65
1990	21,732	19.41	27.9	1.44
1991	21,990	19.64	28.4	1.45
1992	21,183	18.92	29.5	1.56
1993	19,851	17.73	29.6	1.67
1994	17,981	16.06	24.8	1.54
1995	19,437	17.36	28.0	1.61
1996	18,709	16.71	26.0	1.56
1997	20,254	18.09	28.0	1.55
1998	19,090	17.05	29.0	1.70
1999	20,433	18.25	31.0	1.70
2000	20,814	18.59	28.0	1.51
2001	20,377	18.20	28.0	1.54
2002	20,736	18.52	29.4	1.59
2003	20,242	18.51	30.1	1.63
2004	20,545	18.10	28.8	1.59
	(est.)	(est.)		

<sup>a</sup> Water Year March through February

<sup>b</sup> Maximum day peaking factor = maximum-day demand/annual average day demand.

### 3.2.2 Unit Water Use

Current water demand, housing and employment data are used by this assessment to derive the unit water use factors for the following types of water use categories: (1) single-family residential; (2) multi-family residential; and (3) CIILGR. Future single-family and multi-family residential water needs have been determined using the projections for single-family or multi-family residential dwelling units, as appropriate, within the City's service area, coupled with a unit water use factor per single-family or multi-family dwelling unit, respectively. Since the City does not have specific geographical data and building size records to correlate with gross calculated historical per unit usage rates, a conservative factor of safety of 33 percent has been added to historical averages to adequately account for the future water needs of SFR and MFR units (although this factor of safety likely over-estimates actual future demand). CIILGR future water needs have been determined using projections for employees within the City area, coupled with a unit water use factor per

employee. Studies show that a good correlation exists between the projected number of employees and the CIILGR water demand (California Urban Water Agencies, 1992). In the Solano Transportation Authority Travel Model, a conversion factor from non-residential floor space to employee counts is provided for each CIILGR category (see Appendix C). Note that, due to the lack of production data for the entire Vallejo Water Systems, this assessment relies on the production data for the City of Vallejo system (i.e. Fleming Hill water system alone) as a surrogate for calculating estimated unit water use factors. By eliminating the Lakes System, which is geographically isolated and primarily serves only residential uses, a more accurate data set was developed for use in this assessment.

The historical billing data for FY 2000-2001 are used by this assessment to derive estimates for unit water use factors for the CIILGR category. Per unit multi-family residential MFR water use is projected to be 89 percent of the calculated gross historical single family residential SFR water use average. This differential is consistent with that calculated within the most recent Water Master Plan hydraulic design calculations. A summary of the unit water use factors used are presented in Table 3-4. Detailed calculations may be found in the Draft 2005 UWMP (Brown and Caldwell, 2005).

### **3.2.3 Non-billed Metered Water Use**

In addition to usage recorded in the billings data, there exists some non-billed metered water use at select City locations which are not recorded in the usage database. Non-billed metered use has been determined to comprise of approximately 12 percent of the total water are not in 2000 (or 2.2 mgd). Ongoing conversion of non-billed accounts to metered, billed accounts will create incentives for best management water use practices to be implemented. These changes are expected to reduce non-billed, non-collected metered usage figures to about 7 percent of total metered usage, or 1.7 mgd, by 2025.

### **3.2.4 Unaccounted-for Water**

Unaccounted-for water use is unmetered water use such as from fire protection and training, system and hydrant flushing, sewer cleaning, construction, system leaks and breaks, and unauthorized connections. Unaccounted-for water can also result from meter inaccuracies. As estimated by the City Utilities Department, Water Division, approximately 10 percent of total water use consists of unaccounted-for water. However, enhanced metering programs at City connections and water auditing programs are underway, in addition to a large meter replacement project to assure greater accuracy for major users. By 2025, it is anticipated that unaccounted-for water will gradually drop to about 6 percent of total metered use, or 1.4 mgd.

### **3.2.5 Miscellaneous Water Use**

Miscellaneous water use consists of raw water use at golf courses. Historically, the Hiddenbrooke Golf Course and the Blue Rock Springs East and West Golf Course use 270 million gallons (826 ac-ft) per year. It is anticipated that this demand for raw will remain constant through 2025.

### 3.2.6 Proposed Project Unit Water Use

The unit water use factors and conversion factors used to estimate project demands are presented in Table 3-4. The residential unit water use factors (single-family and multi-family dwelling unit) are obtained from historical billing data for FY 2000-2001 from the Vallejo Water Utility Financing Plan and Rate Study (Rate Study) using the methodology outlined in Section 3.2.2. Employee unit water use factors were calculated based on actual non-residential usage per the Rate Study and employee counts per the City of Vallejo Buildout Estimates. The Solano Transportation Authority Travel Model also provided conversion factors to convert square footage by land use category to employee counts.

**Table 3-4. Conversion<sup>a</sup> and Unit Water Use Factors for the City of Vallejo Water Systems and Proposed Project<sup>b</sup>**

Classification	Conversion or unit water use factor <sup>c</sup>
Single-Family Dwelling Unit <sup>d</sup>	387 gpd/unit
Multi-family Dwelling Unit <sup>e</sup>	345 gpd/unit
Employees	102 gpd/employee
Office/R&D	3.32 employees/kgsf
Light Industrial	2.31 employees/kgsf
Retail	2.85 employees/kgsf
Warehouse	1.28 employees/kgsf
Heavy Industrial	2.31 employees/kgsf
Educational/Civic	3.32 employees/kgsf

- a Conversion factors to employee counts were obtained from the Solano Transportation Authority Travel Model.  
 b Unit water use factors were obtained from the Water Master Plan (Kennedy Jenks, 1985), and developed in the Draft 2000 Urban Water Management Plan (Brown and Caldwell, February 2005).  
 c gpd = gallons per day; kgsf = thousand gross square feet  
 d Single-Family unit water use factor derived as follows: Safety factor of 1.33 x [2000-2001 single-family usage of 4,188,303 ccf x (2.05 gpd/ccf)] / 29,486 single-family connections = 387 gpd/unit.  
 e Multi-Family unit water use factor derived as follows: 89% x [Single-Family unit water use factor] = 345 gpd/unit. The 89% differential between multi-family and single-family unit water use factors is consistent with that calculated within the most recent Water Master Plan design usage calculations.

### 3.3 Projected Water Demands

This section describes the projected water demands for the Vallejo Systems. In addition, this section describes the projected water demands for the proposed redevelopment.

### 3.3.1 City of Vallejo Water Systems Projected Water Demands

Water demands through the year 2025 were estimated based on the unit water use factors presented in Table 3-4, the housing and employment projections presented in Table 3-2, a sliding percentage of total metered usage as unaccounted-for water, and a decreasing percentage of total metered usage as non-billed metered water use. Detailed calculations for the derivation of these demand figures are presented in Appendix B. These demand projections are shown in Table 3-5 and Table 3-6. For the purposes of this WSA, it is assumed that these demand projections include the demands due to the proposed project.

**Table 3-5. City of Vallejo Water Systems Projected Annual Water Demands, mgd<sup>a</sup>**

	2000	2005	2010	2015	2020	2025
Fleming Hill system	19.38	20.45	21.65	21.60	24.37	24.37
Vallejo Lakes system	0.28	0.29	0.30	0.31	0.32	0.33
Total	19.65	20.74	21.96	21.91	24.69	24.70

<sup>a</sup> These figures include “unaccounted-for” water as described in Section 3.2.3.

<sup>b</sup> The Vallejo Lakes system uses the full 400 ac-ft/yr of the supply from Lakes Madigan and Curry with no surplus.

**Table 3-6. City of Vallejo Systems Total Projected Water Demands**

Year	Annual average		Maximum day <sup>a</sup>
	ac-ft/yr	mgd	mgd
2000	22,240	19.65	31.45
2005	23,470	20.74	33.18
2010	24,840	21.96	35.13
2015	24,790	21.91	35.06
2020	27,930	24.69	39.50
2025	27,940	24.70	39.51

<sup>a</sup> Assuming Peaking Factor = 1.6

### 3.3.2 Proposed Projected Water Demands for the Project

Water demands through the year 2025 were estimated based on the unit water use factors (see Table 3-5) and the demographic estimates for the redevelopment (see Table 3-3). For a detailed analysis of the conversion from land use (in terms of gross square feet) by land use category to

employee counts, upon which the CIILGR unit water use factor is based, refer to Appendix C. These projections are shown in Table 3-8 and Table 3-9. The projected annual water demands are based on the assumption that the redevelopment will be completed by 2005. The actual completion date is planned for mid 2005 (Lennar Mare Island Website). The assumption of a slightly premature build out date ensures a conservative (high) annual water demand estimate in each year prior to the actual build-out date.

**Table 3-7. Proposed Mare Island Redevelopment Projected Annual Water Demands by User Type, mgd<sup>a</sup>**

Category	2005 <sup>c</sup>	2010	2015	2020	2025
Single Family Dwelling Unit	$387 \text{ gpd/unit} \times 870 \text{ units} \times 1 \text{ million}/10^6 = 0.34$				
Multi-family Dwelling Unit	$345 \text{ gpd/unit} \times 530 \text{ units} \times 1 \text{ million}/10^6 = 0.18$				
CIILGR <sup>b</sup>	$102 \text{ gpd/employee} \times 22,557 \text{ employees} \times 1 \text{ million}/10^6 = 2.30$				
Total	$0.34 + 0.18 + 2.30 = 2.82$				

<sup>a</sup> For the sake of simplifying this calculation, a premature build-out date of 2005 is assumed to ensure a conservative (high) estimate of the water demand estimate in each year prior to the actual build-out date.

<sup>b</sup> CIILGR = Commercial, industrial, institutional, landscaping, governmental, and recreational. See Appendix C for a full derivation of this figure.

**Table 3-8. Proposed Mare Island Redevelopment Total Projected Water Demands**

Year	Annual average		Maximum day <sup>a</sup>
	ac-ft/yr	mgd	mgd
2005	3190	2.82	4.51
2010	3190	2.82	4.51
2015	3190	2.82	4.51
2020	3190	2.82	4.51
2025	3190	2.82	4.51

<sup>a</sup> Assuming Peaking Factor = 1.6

### 3.3.3 Proposed Projected Water Demands for Projects to Date

The projected demands of all redevelopment projects to date, including this Project and the Vallejo Station and Downtown Redevelopment Project, are shown in Table 3-9. The combination of

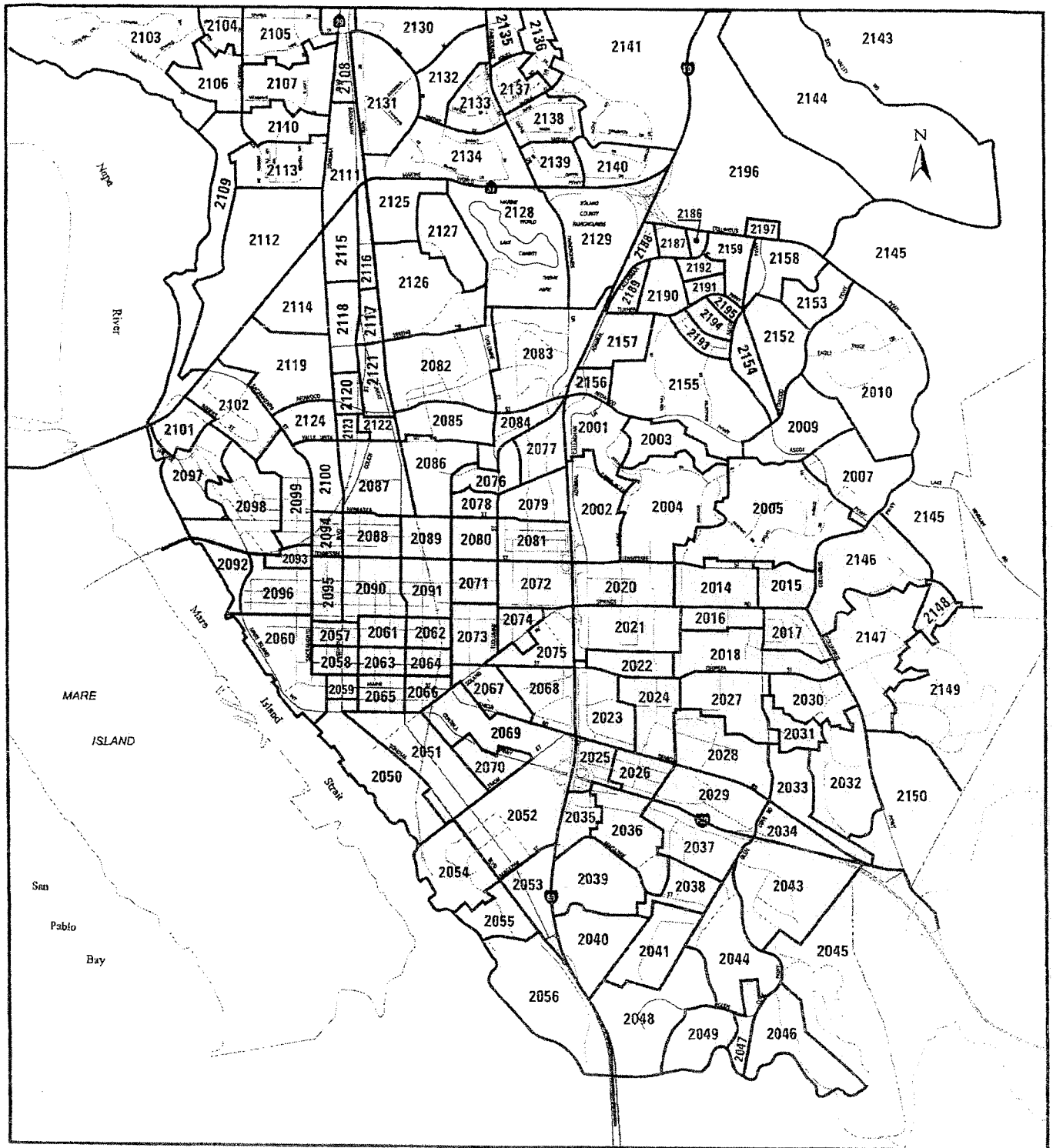


pending redevelopment demands and existing base year 2000 demands exceeds that shown in Table 3-6 until 2015 due to variable nature of development timing. Table 3-6 is calculated as a linear extrapolation of total possible build out 2020 development (Meiring Contracting and Consulting) which appears to underestimate the speed at which pending development is anticipated. Given the uncertain nature of development timing, the intermediate 5-year demands are estimates only with the total City-wide demand due to full build out at 2020 being the restricting factor to new development.

**Table 3-9. Total Projected Water Demands  
Attributable to Redevelopment Projects To Date**

Year	Annual average		Maximum day <sup>a</sup>
	ac-ft/yr	mgd	mgd
2005	3,730	3.30	5.28
2010	3,930	3.48	5.56
2015	4,870	4.31	6.89
2020	4,870	4.31	6.89
2025	4,870	4.31	6.89

Source: Table 3-8 (above), Table 3-8, Vallejo Station and Waterfront Water Supply Assessment, and Table 3-8, Downtown Water Supply Assessment, Brown and Caldwell, 2005.



## VALLEJO TRAFFIC ZONES

Figure 3-1. Vallejo Traffic Zones

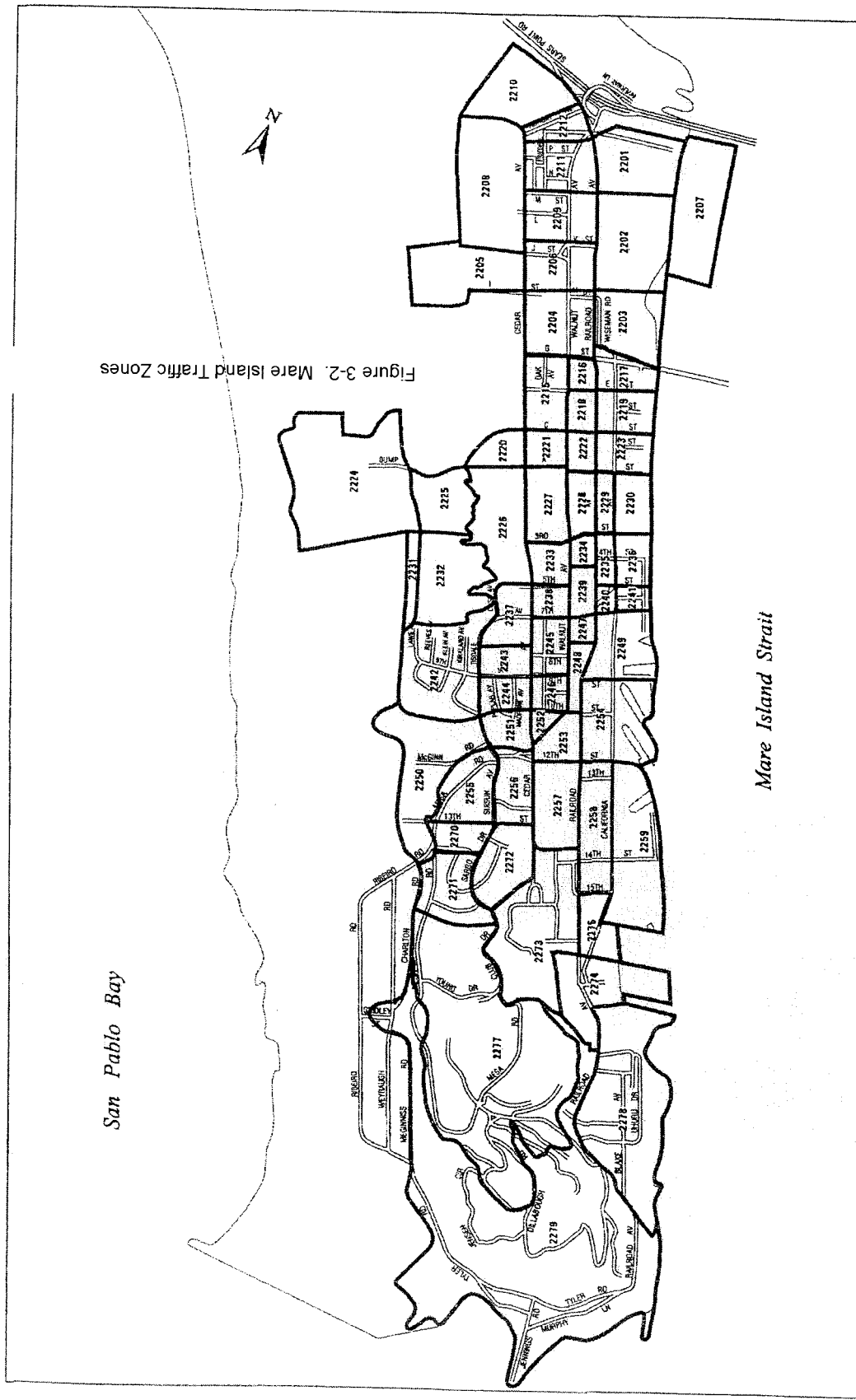


Figure 3-2. Mare Island Traffic Zones

# MARE ISLAND TRAFFIC ZONES

Figure 3-2. Mare Island Traffic Zones

## SECTION 4

### SUPPLY/DEMAND COMPARISON, SHORTAGE, AND SUPPLY PROJECTS

This chapter provides a comparison of projected water supplies and demand and water shortage expectations.

#### 4.1 Water Supplies and Demand Comparison

The projected annual existing available water supply and demand from existing, approved, and pending projects for the City of Vallejo water systems is compared and summarized in Table 4-1. Recycled water supply is not currently available, and is assumed to not become available in the future. Groundwater is also not available. The estimated demands also include the demands for the adjacent cities that are supplied water by Vallejo. Although the 400 acre-feet/year entitlement to Lakes Frey and Madigan supplies is included in this document's total estimated supplies, the annual demand for this water, which is equal to 400 acre-feet/year, is also included in this document's total estimated demands. Accordingly, the Lakes Frey and Madigan supply is not relied on by this document as being available to the project or other users within the City of Vallejo. The existing available water supply does not include the planned availability of Lake Curry. This assumption about water supply serves to examine conservatively the City's ability to sustain all known water use accounted for to date. As shown in Table 4-1, the surface water supplies are sufficient to serve existing, approved, and pending development.

[Please see Table 4-1 on the following page, 4-2.]

*SUPPLY/DEMAND COMPARISON, SHORTAGE, AND SUPPLY PROJECTS*

**Table 4-1. Comparison of Existing Supply and Demand from Existing, Approved, and Pending Projects, ac-ft/yr**

	2005	2010	2015	2020	2025
Water supply					
Surface water	37,800	43,400	43,400	43,400	43,400
Groundwater	0	0	0	0	0
Recycled water	0	0	0	0	0
Water loss due to water quality	0	0	0	0	0
<b>Total Supply</b>	<b>37,800</b>	<b>43,400</b>	<b>43,400</b>	<b>43,400</b>	<b>43,400</b>
Estimated demand					
Vallejo Water Systems <sup>a</sup>	25,970	26,170	27,110	27,110	27,110
Travis AFB deliveries <sup>b</sup>	3,400	3,860	4,330	4,790	5,250
City of Benicia	1,100	1,100	1,100	1,100	1,100
City of American Canyon	750	750	750	750	750
Other	0	0	0	0	0
<b>Total Demand</b>	<b>31,220</b>	<b>31,880</b>	<b>33,290</b>	<b>33,750</b>	<b>34,210</b>
<b>Surplus or (Deficit)</b>	<b>6,580</b>	<b>11,520</b>	<b>10,110</b>	<b>9,650</b>	<b>9,190</b>

Units of measure: ac-ft/yr

<sup>a</sup> Vallejo Water Systems demand estimates include those from all existing, approved, and pending development (i.e. this Project, the Mare Island Redevelopment Project, and the Vallejo Downtown Redevelopment Project). The estimated demand does not include General Plan buildout over and above demand associated with existing, approved and pending development.

<sup>b</sup> Travis AFB demand in 2005 of 3,400 ac-ft/yr is based on the maximum demand out of three recent years of historical water production data. Demands in subsequent years are assumed to increase in equal steps to the maximum potential demand of 5,250 ac-ft/yr by 2025.

Water supply and demand reliability comparisons are provided in Tables 4-2 through 4-5 for the year 2025, assuming various conditions regarding the future availability of Lake Curry and the adoption of water demand management measures. All tables consider three water supply scenarios: average/normal water year; single dry-water year; and multiple dry-water years. The possible future reduction in water supply to the City of Vallejo water systems due to drought conditions cannot be precisely predicted. However, estimates are made for this WSA. It is assumed that a single dry-water year would result in a reduction in normal year supply. The surface water supplies to the City of Vallejo water systems could be further reduced during a multiple-dry-year scenario. For the third year of the multiple-dry-year scenarios, it is assumed that an overall reduction to 74 percent of normal year supply would occur. The footnotes in each of Tables 4-2 through 4-5 describe the supply reduction assumptions for each water supply source. The SCWA Agreement requires specific drought measures by all Participating Agencies (including the City of Vallejo) when the water level in Lake Berryessa drops below half full. A copy of the agreement will be made available upon request to the City of Vallejo.

*SUPPLY/DEMAND COMPARISON, SHORTAGE, AND SUPPLY PROJECTS*

Table 4-2 gives the water supply reliability for the year 2025, assuming existing supply and existing, approved, and pending development (i.e. this Project, the Mare Island Project, and the Vallejo Downtown Project). This scenario does not consider that portion of the demand from City-wide buildout (as estimated by the City of Vallejo Buildout Estimates) over and above the demand associated with existing, approved and pending development. There are insufficient water supplies to serve the demand analyzed in this table in the third of consecutive dry years.

**Table 4-2. Water Supply Reliability, 2025, ac-ft/yr, Assuming Existing, Plus Approved, Plus Pending Development**

	Average/normal water year	Single dry water year <sup>a</sup>	Multiple dry water years		
			Year 1 <sup>a</sup>	Year 2 <sup>b</sup>	Year 3 <sup>c</sup>
Water supply					
Surface water	43,400	37,720	37,720	35,250	32,050
Groundwater	0	0	0	0	0
Recycled water	0	0	0	0	0
<b>Total Supply</b>	43,400	37,720	37,720	35,250	32,050
<b>Total Demand</b>	34,210	34,210	34,210	34,210	34,210
<b>Surplus or (Deficit)</b>	9,190	3,510	3,510	1,040	(2,160)

Units of measure : ac-ft/yr

<sup>a</sup> Assumes 3,400 AF State Water Project Water from DWR, (40 percent cutback on 5,600 AF entitlement), 19,400 AF Permit Water ( 15 percent cutback on 22,800 AF entitlement), 320 AF for Lake System Suppliers (20 percent reduction of 400 AF) and 14,600 AF Solano County Water Agency Agreement (0 percent cutback on Lake Berryessa supplies).

<sup>b</sup> Assumes 2,800 AF State Water Project Water from DWR, (50 percent cutback on 5,600 AF entitlement), 18,250 AF Permit Water (20 percent cutback on 22,800 AF entitlement), 300 AF for Lake System Suppliers (25 percent reduction of 400 AF) and 13,900 AF Solano County Water Agency Agreement (5 percent cutback on Lake Berryessa supplies).

<sup>c</sup> Assumes 2,250 AF State Water Project Water from DWR, (60 percent cutback on 5,600 AF entitlement), 17,100 AF Permit Water ( 25 percent cutback on 22,800 AF entitlement), 300 AF for Lake System Suppliers (25 percent reduction of 400 AF) and 12,400 AF Solano County Water Agency Agreement (15 percent cutback on Lake Berryessa supplies).

Table 4-3 gives the water supply reliability for the year 2025, assuming existing supply and existing, approved, pending, and planned development. That is, this scenario assumes full City-wide buildout as estimated by the City of Vallejo Buildout Estimates. There are insufficient water supplies to serve the demand analyzed in this table in the third of consecutive dry years.

*SUPPLY/DEMAND COMPARISON, SHORTAGE, AND SUPPLY PROJECTS*

**Table 4-3. Water Supply Reliability, 2025, ac-ft/yr, Assuming Existing, Plus Approved, Plus Pending, Plus Planned Development**

	Average/normal water year	Single dry water year <sup>a</sup>	Multiple dry water years		
			Year 1 <sup>a</sup>	Year 2 <sup>b</sup>	Year 3 <sup>c</sup>
Water supply					
Surface water	43,400	37,720	37,720	35,250	32,050
Groundwater	0	0	0	0	0
Recycled water	0	0	0	0	0
Total Supply	43,400	37,720	37,720	35,250	32,050
2025 Demand	34,610	34,610	34,610	34,610	34,610
Surplus or (Deficit)	8,790	3,110	3,110	640	(2,560)

Units of measure : ac-ft/yr

<sup>a</sup> Assumes 3,400 AF State Water Project Water from DWR, (40 percent cutback on 5,600 AF entitlement), 19,400 AF Permit Water ( 15 percent cutback on 22,800 AF entitlement), 320 AF for Lake System Suppliers (20 percent reduction of 400 AF) and 14,600 AF Solano County Water Agency Agreement (0 percent cutback on Lake Berryessa supplies).

<sup>b</sup> Assumes 2,800 AF State Water Project Water from DWR, (50 percent cutback on 5,600 AF entitlement), 18,250 AF Permit Water (20 percent cutback on 22,800 AF entitlement), 300 AF for Lake System Suppliers (25 percent reduction of 400 AF) and 13,900 AF Solano County Water Agency Agreement (5 percent cutback on Lake Berryessa supplies).

<sup>c</sup> Assumes 2,250 AF State Water Project Water from DWR, (60 percent cutback on 5,600 AF entitlement), 17,100 AF Permit Water ( 25 percent cutback on 22,800 AF entitlement), 300 AF for Lake System Suppliers (25 percent reduction of 400 AF) and 12,400 AF Solano County Water Agency Agreement (15 percent cutback on Lake Berryessa supplies).

Table 4-4 gives the water supply reliability for the year 2025, assuming existing supply and existing, approved, pending, and planned development, and assuming the implementation of water demand management measures. That is, this scenario assumes full City-wide buildout as estimated by the City of Vallejo Buildout Estimates. This scenario also factors in water savings achieved through the implementation of certain anticipated water demand management measures during drought years. A draft Water Shortage Contingency Plan (WSCP) is currently in place. The City intends to adopt this WSCP and implement Stage 1 demand management measures during drought years. Implementation of such measures is expected to offset the 8 percent in water deficit in the third of consecutive dry years.

*SUPPLY/DEMAND COMPARISON, SHORTAGE, AND SUPPLY PROJECTS*

**Table 4-4. Water Supply Reliability, 2025, ac-ft/yr, Assuming Existing, Plus Approved, Plus Pending, Plus Planned Development, and Assuming the Implementation of Water Demand Management Measures**

	Average/normal water year	Single dry water year <sup>a</sup>	Multiple dry water years		
			Year 1 <sup>a</sup>	Year 2 <sup>b</sup>	Year 3 <sup>c</sup>
Water supply					
Surface water	43,400	37,720	37,720	35,250	32,050
Groundwater	0	0	0	0	0
Recycled water	0	0	0	0	0
Total Supply	43,400	37,720	37,720	35,250	32,050
2025 Demand	34,610	34,610	34,610	34,610	34,610
Implementation of Demand Management Measures					2,560
Surplus or (Deficit)	8,790	3,110	3,110	640	0

Units of measure : ac-ft/yr

<sup>a</sup> Assumes 3,400 AF State Water Project Water from DWR, (40 percent cutback on 5,600 AF entitlement), 19,400 AF Permit Water ( 15 percent cutback on 22,800 AF entitlement), 320 AF for Lake System Suppliers (20 percent reduction of 400 AF) and 14,600 AF Solano County Water Agency Agreement (0 percent cutback on Lake Berryessa supplies).

<sup>b</sup> Assumes 2,800 AF State Water Project Water from DWR, (50 percent cutback on 5,600 AF entitlement), 18,250 AF Permit Water (20 percent cutback on 22,800 AF entitlement), 300 AF for Lake System Suppliers (25 percent reduction of 400 AF) and 13,900 AF Solano County Water Agency Agreement (5 percent cutback on Lake Berryessa supplies).

<sup>c</sup> Assumes 2,250 AF State Water Project Water from DWR, (60 percent cutback on 5,600 AF entitlement), 17,100 AF Permit Water (25 percent cutback on 22,800 AF entitlement), 300 AF for Lake System Suppliers (25 percent reduction of 400 AF) and 12,400 AF Solano County Water Agency Agreement (15 percent cutback on Lake Berryessa supplies).

<sup>d</sup> Assumes that Water Shortage Contingency Plan Stage 1 measures will be implemented to achieve an 8 percent reduction in demand during Year 3 of consecutive dry water years to offset deficit. Measures within Stage 1 implementation include prohibitions to street washing for other than public health goals and uncontrolled water usage such as car washing with a constantly running hose.

Table 4-5 gives the water supply reliability for the year 2025, assuming the following: (1) existing supply and existing, approved, pending, and planned development, and (2) the availability of future water supplies. As was noted previously in Section 2, the City owns water rights to Lake Curry but presently lacks the physical means to convey that water for use. A description of the two alternatives proposed to bring Lake Curry online by 2009 is located in Section 4.3. In the scenario analyzed in this table, a slight surplus is observed in the third of consecutive dry years. Thus, in this case, the City is expected to have adequate supply to meet City-wide buildout demands.



**Table 4-5. Water Supply Reliability, 2025, ac-ft/yr, Assuming Existing, Plus Approved, Plus Pending, Plus Planned Development, and Assuming the Availability of Future Water Supplies**

	Average/normal water year	Single dry water year <sup>a</sup>	Multiple dry water years		
			Year 1 <sup>a</sup>	Year 2 <sup>b</sup>	Year 3 <sup>c</sup>
Water supply					
Surface water	47,150	40,700	40,700	38,050	34,850
Groundwater	0	0	0	0	0
Recycled water	0	0	0	0	0
Total Supply	47,150	40,700	40,700	38,050	34,850
2025 Demand	34,610	34,610	34,610	34,610	34,610
Surplus or (Deficit)	12,540	6,090	6,090	3,440	240

Units of measure : ac-ft/yr

<sup>a</sup> Assumes 3,400 AF State Water Project Water from DWR, (40 percent cutback on 5,600 AF entitlement), 19,400 AF Permit Water ( 15 percent cutback on 22,800 AF entitlement), 3,300 AF for Lake System Suppliers (20 percent reduction of 4,150 AF) and 14,600 AF Solano County Water Agency Agreement (0 percent cutback on Lake Berryessa supplies).

<sup>b</sup> Assumes 2,800 AF State Water Project Water from DWR, (50 percent cutback on 5,600 AF entitlement), 18,250 AF Permit Water (20 percent cutback on 22,800 AF entitlement), 3,100 AF for Lake System Suppliers (25 percent reduction of 4,150 AF) and 13,900 AF Solano County Water Agency Agreement (5 percent cutback on Lake Berryessa supplies).

<sup>c</sup> Assumes 2,250 AF State Water Project Water from DWR, (60 percent cutback on 5,600 AF entitlement), 17,100 AF Permit Water ( 25 percent cutback on 22,800 AF entitlement), 3,100 AF for Lake System Suppliers (25 percent reduction of 4,150 AF) and 12,400 AF Solano County Water Agency Agreement (15 percent cutback on Lake Berryessa supplies).

#### 4.2 Water Shortage Expectations

No unusual short-term water shortages are anticipated. Short-term surface water supply shortages lasting from several hours to several days are accounted for in supply planning. At key locations, the City's pumps are fitted with emergency diesel-powered generators for use during power outages, which increases the reliability of supply. The City's Draft Water Shortage Contingency Plan is included in the Draft 2000 Vallejo Urban Water Management Plan (Brown and Caldwell, 2005).

#### 4.3 Water Supply Projects

The City owns water rights to Lake Curry but presently lacks the physical means to convey the 3750 Ac-Ft of yearly safe yield water for use. One conveyance option contemplates the release of water from Lake Curry dam to flow into Suisun Creek. This would require the construction of a diversion structure and pumping station approximately 5 miles downstream, where Suisun Creek crosses the Putah South Canal. This water would then be usable by the City at the terminal reservoir in the identical manner in which Lake Berryessa is currently used. A second conveyance option requires

*SUPPLY/DEMAND COMPARISON, SHORTAGE, AND SUPPLY PROJECTS*

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the construction of a 5-mile-long raw water pipe along the existing Gordon Valley Road from the Lake Curry dam outlet to the point of intersection of Gordon Valley Road and the Putah South Canal. The water would then be directed into the Putah South Canal and would be usable by the City in the same manner as is currently employed for Solano Project, Lake Berryessa water. The capital outlay program for financing this conveyance project has not been drafted as the options vary greatly in cost, with estimates ranging from 0.5 to 5 million dollars, depending on which alternative is implemented. Regardless of which option is ultimately implemented, the City has informed the State Water Resources Control Board that the conveyance structures are intended to be completed by approximately 2010.



## SECTION 5

### CONCLUSIONS

This Water Supply Assessment has been prepared in accordance with the requirements of Senate Bill 610, now Water Code Sections 10910 and 10911. The total available supplies for the Vallejo Water Systems in 2025 in a normal climate year is 43,400 acre-feet per year (ac-ft/yr), excluding Lake Curry supplies, or 47,150 ac-ft/yr if Lake Curry supplies (to which the City owns the water rights but has no conveyance facilities in place at present) are included. The total projected demand from existing, approved, and pending development (including this proposed Project, as well as the Mare Island and Vallejo Downtown Projects) is 34,210 ac-ft/yr. The total demand from existing, approved, pending, plus planned development (i.e., the projected City of Vallejo 2025 Buildout Estimates) is 34,610 ac-ft/yr. Thus, it has been determined that, during normal climate years, adequate water supplies are available, during a 20-year projection, to serve the projected demand of the proposed Project, in addition to existing and planned future uses.

This WSA has also examined the reliability of the City's water supply assuming various below-average precipitation scenarios, the future availability of Lake Curry, and the potential implementation of water shortage response measures. This WSA demonstrated that the City has insufficient available supplies to serve existing, approved, pending, and buildout development in the event of a three-year drought without the re-introduction of Lake Curry supplies if per dwelling unit demands are not reduced. The renewed use of Lake Curry would remove this deficit and result in a slight surplus even after the third year of below average rainfall. If Lake Curry supplies are unavailable in the future, the projected maximum deficit in the third dry year is less than 9 percent. It should be noted that the probability of attaining this marginal deficit is remote when considering the enhanced conservation efforts being imposed by the State and the use of residential water usage unit demand figures which incorporate a 33 percent factor of safety above gross historical average use. Nevertheless, if in the event of a multi-year drought, the City implements water shortage response measures substantially similar to those in the attached draft Water Shortage Contingency Plan, then projected water supplies are sufficient to serve the projected demand of the Project, in addition to existing and planned future uses (as such future uses are projected by the City of Vallejo Buildout Estimates) even if Lake Curry supplies are not ultimately brought on-line.





## APPENDIX A

### REFERENCES

- Brown and Caldwell. *Draft City of Vallejo Water Shortage Contingency Plan*. Rancho Cordova, California. January 2003.
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## **APPENDIX B**

**Detailed Calculations for Vallejo Water Systems Housing and Employment Projections;  
Total Water Demand Projections By Customer Category; and Demand vs. Supply  
Comparisons**





City of Vallejo Urban Water Management Plan – Calculations for Demand Projections within Vallejo Water Systems  
 By Lisa Maddaus and Wynn Yin, Brown and Caldwell  
 Last Modified: June 10, 2005

**Unit Water Use Factors**  
 Single Family (gpd/unit) 387  
 Multi-family (gpd/unit) 345  
 Employees (gpd/employee) 102

**TYPE OF UNITS AND BUILDING PROJECTION**

	2000	2005	2010	2015	2020	2025
<b>City of Vallejo Water System</b>						
<i>Single Family, units</i>						
City of Vallejo Buildout Estimates <sup>a</sup>	30445H	31,540EE	32,634EE	33,729EE	34823BE	34823BE
ABAG						
EIR						
<i>Multi-family, units</i>						
City of Vallejo Buildout Estimates <sup>a</sup>	12629H	13,770EE	14,911EE	16,053EE	17194BE	17194BE
ABAG						
EIR						
<i>Total Residential, units</i>						
City of Vallejo Buildout Estimates <sup>a</sup>	43074H	45,310EE	47,545EE	49,781EE	52017BE	52017BE
ABAG <sup>b</sup>	35,844	40,784	42,588	44,614	46,511	48,100
EIR <sup>c</sup>	40,608	42,814	45,020	47,045	49,070	49,070+
<i>CILGR<sup>d</sup>, employees</i>						
City of Vallejo Buildout Estimates <sup>a</sup>	35,550IE	41,357EE	47,164EE	52,972EE	58779BE	58779BE
ABAG <sup>b</sup>	25,113	28,660	31,685	34,391	37,203	39,849
EIR <sup>c</sup>	32,210	35,695	39,180	42,370	45,560	45,560+
<b>Vallejo Lakes System</b>						
<i>Single Family, units</i>						
Vallejo Utilities Division, Water Dept. <sup>e</sup>	778	803	828	853	878	900

**Notes:**

- <sup>a</sup>Miering Contracting and Consulting, 2003. Figures based on historical data, and the City of Vallejo Buildout Estimates for base year (1999) and 2020 (buildout); intermediate figures were linearly extrapolated. Figures for 2025 are assumed to be the same as for 2020. H = historical; IE = initial City of Vallejo Buildout Estimates; EE = extrapolated City of Vallejo Buildout Estimates; BE = buildout City of Vallejo Buildout Estimates.
- <sup>b</sup>ABAG data by census tract, sent to Brown and Caldwell on 9/17/02. City of Vallejo service area only.
- <sup>c</sup>EIP Associates, Vallejo Waterfront/Downtown Project, Draft EIR, 12/02. Only figures for even years listed were available; other figures were linearly extrapolated when necessary.
- <sup>d</sup>CILGR = Commercial, industrial, institutional, landscaping, governmental, and recreational use.
- <sup>e</sup>Vallejo Lakes System service area assumes 778 residential connections per Vallejo Water Utility Financing Plan and Rate Study, at a growth rate of 5 connections/year up to a capacity of 900 connections, per the City of Vallejo, Utilities Division, Water Department. All residential units are conservatively assumed to be single-family.

**DEMAND ESTIMATES**

	2000	2005	2010	2015	2020	2025
<b>City of Vallejo Water System</b>						
<b>Single Family Units, mgd</b>						
City of Vallejo Buildout Estimates	8.6	9.0	9.4	9.9	10.3	10.3
ABAG						
EIR						
<b>Multi-Family Units, mgd</b>						
City of Vallejo Buildout Estimates	2.3	2.7	3.1	3.5	3.9	3.9
ABAG						
EIR						
<b>Total Residential, mgd</b>						
City of Vallejo Buildout Estimates	10.9	11.7	12.5	13.3	14.1	14.1
ABAG						
EIR						
<b>Total Commercial, mgd</b>						
City of Vallejo Buildout Estimates	3.6	4.2	4.8	5.4	6.0	6.0
ABAG	2.6	2.9	3.2	3.5	3.8	4.1
EIR	3.3	3.7	4.0	4.3	4.7	4.7+
<b>Total Other Demand, mgd (water losses, etc.)</b>						
Non-billed metered use <sup>1</sup>	2.2	2.0	1.8	1.7	1.7	1.7
Unaccounted for water <sup>2</sup>	1.9	1.7	1.6	0.1	1.4	1.4
Golf course irrigation	0.7	0.7	0.7	0.7	0.7	0.7
<b>Vallejo Lakes System</b>						
<b>Single Family Units, mgd</b>						
Vallejo Utilities Division, Water Dept.	0.3	0.3	0.3	0.3	0.3	0.3

**Notes:**

<sup>1</sup>E-mail from E. Nutgeren, City of Vallejo, received 1/3/05. Non-billed metered use, which accounts for approx. 13% of total metered use in the base year (2000), is expected to decrease linearly due to changes in non-billing practices which will create incentive for best management water use practices.

<sup>2</sup>E-mail from E. Nutgeren, City of Vallejo, received 1/3/05. Unaccounted-for water, which includes meter losses and inaccuracies, pipeline leaks, etc., is assumed to be 11% of total metered use for calibration purposes for the base year. This value is expected to drop due to enforcement of illegal connection removal, enhanced flushing and maintenance practices, and greater meter accuracy due to large meter replacement projects which will accurately gauge true cost of service and create incentives for best management practices and reductions in use.

<sup>3</sup>E-mail from E. Nutgeren, City of Vallejo, received 4/14/05. Irrigation of Hiddenbrooke Golf Course and Blue Rock Springs East and West Golf Courses comprise of 270 million gallons per year, or 0.7 mgd.

**Total Demand Projection for Vallejo Water System (based on City of Vallejo Buildout Estimates sent 12/20/04), mgd, unless otherwise specified**

	2000	2005	2010	2015	2020	2025
Single Family	8.6	9.0	9.4	9.9	10.3	10.3
Multi-family	2.3	2.7	3.1	3.5	3.9	3.9
Commercial	3.6	4.2	4.8	5.4	6.0	6.0
Other	4.9	4.4	4.1	2.6	3.8	3.8
<b>Total, mgd</b>	<b>19.4</b>	<b>20.4</b>	<b>21.5</b>	<b>21.3</b>	<b>24.0</b>	<b>24.0</b>
<b>Total, AF/yr</b>	<b>21,920</b>	<b>23,030</b>	<b>24,290</b>	<b>24,120</b>	<b>27,140</b>	<b>27,140</b>

**Total Demand Projection for Vallejo Lakes System**

	2000	2005	2010	2015	2020	2025
Single Family, mgd	0.3	0.3	0.3	0.3	0.3	0.3
Single Family, AF/yr	320	330	340	350	360	370

**Demand Projections for Other Wholesale Customers, ac-ft/yr, unless otherwise specified**

	2000	2005	2010	2015	2020	2025
Travis AFB deliveries <sup>1</sup>	3,200	3,400	3,860	4,330	4,790	5,250
City of Benecia	1,100	1,100	1,100	1,100	1,100	1,100
City of American Canyon	750	750	750	750	750	750
<b>Total, AF/yr</b>	<b>5,050</b>	<b>5,250</b>	<b>5,710</b>	<b>6,180</b>	<b>6,640</b>	<b>7,100</b>

**Notes:**

<sup>1</sup>Travis AFB demand in 2005 of 3,400 ac-ft/yr is based on the maximum demand out of three recent years of historical water production data. Demands in subsequent years are assumed to increase in equal steps to the maximum potential demand of 5,250 ac-ft/yr by 2025.

**Total Supply**

	2000	2005	2010	2015	2020	2025
State Water Project	5,600	5,600	5,600	5,600	5,600	5,600
Vallejo Permit Water	17,200	17,200	22,800	22,800	22,800	22,800
Solano Project Water	14,600	14,600	14,600	14,600	14,600	14,600
Lakes Frey, Madigan	400	400	400	400	400	400
Lake Curry	-	-	3,750	3,750	3,750	3,750
<b>Total Supply Excluding Lake Curry, AF/yr</b>	<b>37,800</b>	<b>37,800</b>	<b>43,400</b>	<b>43,400</b>	<b>43,400</b>	<b>43,400</b>
<b>Total Supply Including Lake Curry, AF/yr</b>	<b>37,800</b>	<b>37,800</b>	<b>47,150</b>	<b>47,150</b>	<b>47,150</b>	<b>47,150</b>

**Total Demand**

	2000	2005	2010	2015	2020	2025
<b>Total Demand, All Sources</b>	<b>27,290</b>	<b>28,610</b>	<b>30,340</b>	<b>30,650</b>	<b>34,140</b>	<b>34,610</b>
<b>Supply vs. Demand Comparison</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>
<b>Surplus, AF/yr</b>	<b>10,510</b>	<b>9,190</b>	<b>16,810</b>	<b>16,500</b>	<b>13,010</b>	<b>12,540</b>





## APPENDIX C

Detailed Calculations for the Conversion of Land Use by Category to Employment Projections, Mare Island Project



Mare Island Water Supply Assessment -- Conversion of Land Use by Category to Employment Projections  
 By: Wynn Yin, Brown and Caldwell  
 Last Modified: June 22, 2005

Vallejo Land Use	Build		Conversion		Units
	Units	Out	Factor	Units	
Office/R&D	KSF	1,618	3,320	Emp/KSF	5,372
Light Industrial	KSF	2,225	2,310	Emp/KSF	5,140
Retail	KSF	508	2,850	Emp/KSF	1,448
Warehouse	KSF	1,400	1,280	Emp/KSF	1,792
Heavy Industrial	KSF	2,050	2,310	Emp/KSF	4,736
Educational/Civic	KSF	1,226	3,320	Emp/KSF	4,070
TOTAL:					22,557
					Emp

Source: Tables 3-2 and 5-1, Mare Island Specific Plan, Administrative Draft, May 2004.

\*Conversion factor obtained from the Solano Transportation Authority Travel Model.



