4.0 Environmental Analysis

The following sections analyze the potential environmental impacts that may occur as a result of project implementation. The environmental issues subject to detailed analysis in the following sections include those that were identified by the City of San Diego through preliminary project review and in response to the NOP as potentially significant.

Sixteen environmental issues are addressed in the following sections, and in accordance with the City's December 2005 EIR Guidelines.

Each issue analysis section is formatted to include a summary of existing conditions, including the regulatory context, the criteria for the determination of impact significance, evaluation of potential project impacts, a list of required mitigation measures, and conclusion of significance after mitigation for impacts identified as requiring mitigation. Although the project description has six components, for ease of analysis, especially in regard to project alternatives, four groupings of project elements have been identified. Under each issue, the impact analysis may be separated for each of the four major project components (Figure 4.0-1), as follows:

1) **Centennial Bridge:** construction of the Centennial Bridge from the Cabrillo Bridge to the Alcazar parking lot.

2) **Alcazar Parking Lot and Centennial Road:** regrading and reconfiguration of the parking lot and construction of the Centennial Road, to where it passes beneath the Pan American Promenade, along with the Palm Canyon walkway.

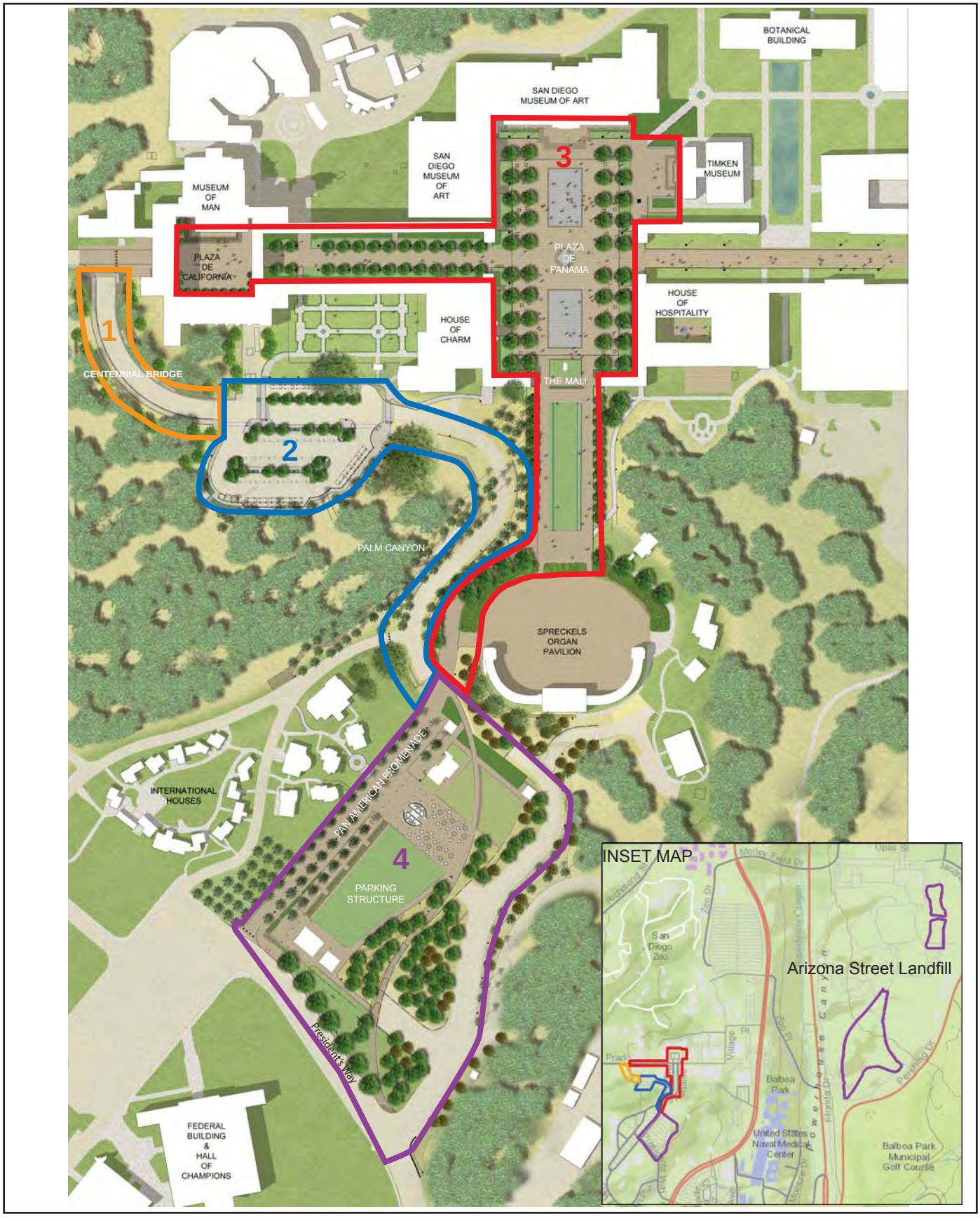
3) **Plaza de California, El Prado, Plaza de Panama, and The Mall**: the pedestrianization (removal of parking, resurfacing of these spaces, and the addition of landscaping and other site amenities) of Plaza de California, El Prado, the Plaza de Panama, the Mall, and Pan American Road (from the Mall to where it becomes the Pan American Promenade above Centennial Road).

4) **Parking Structure, Rooftop Park, and Arizona Street Landfill**: the excavation for, and construction of, the subterranean parking structure within the existing Organ Pavilion parking lot; development of the rooftop park with amenities and landscaping and the Pan American Promenade; and construction of the Centennial Road segment from the Pan American Promenade to Presidents Way This component also includes hauling of the excess fill material, generated during construction of the parking structure, to the off-site Arizona Street Landfill, and the associated landform alteration of the existing landfill site.

Where impacts are applicable to more than one of the project components, then the analyses may be grouped together.

All potential direct and indirect impacts in Section 4.0 are evaluated in relation to applicable City, state, and federal standards, as reflected in the City's 2011 Significance Determination Thresholds.

Map Source: Rick Engineering



1 Centennial Bridge

2 Alcazar Parking Lot & Centennial Rd.

3 Plaza de California, El Prado, Plaza de Panama, & The Mall

4 Parking Structure, Rooftop Park and Arizona Street Landfill

No Scale

FIGURE 4.0-1

Four Components for Analysis

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4.1 Land Use

This section addresses the consistency of the project with the City of San Diego General Plan, the BPMP and CMPP, City of San Diego LDC, the MSCP Subarea Plan, and the San Diego International Airport ALUCP.

4.1.1 Existing Conditions

4.1.1.1 Existing Land Use Plans and Development Regulations

The Planning Context of the Environmental Setting, Section 2.4 of this EIR, provides an overview of the land use plans and development regulations that apply to development of the project. The following provides an expansion of the planning context's discussion of relevant plans and development regulations.

a. City of San Diego General Plan

The City of San Diego's General Plan sets forth a comprehensive, long-term plan for development within the City of San Diego. A comprehensive update of the City's General Plan was adopted March 10, 2008, and was based on a new planning strategy for the City developed in the 2002 Strategic Framework Element. Known as the City of Villages strategy, the General Plan aims to focus growth into mixed-use activity centers that are pedestrian friendly centers of the community that provide housing, goods and services, employment, and civic uses that are linked to the regional transit system.. This development strategy mirrors regional planning and smart growth principles intended to preserve remaining open space and natural habitat and focus development within areas with available public infrastructure.

The Strategic Framework comprises the introductory chapter of the new General Plan, followed by 10 elements (a description of each element is provided in the following paragraphs):

- Land Use and Community Planning
- Mobility
- Urban Design
- Economic Prosperity
- Public Facilities, Services, and Safety
- Historic Preservation
- Recreation
- Conservation
- Noise
- Housing

The ***Land Use and Community Planning Element (Land Use Element)*** provides policies to implement the City of Villages strategy within the context of San Diego's community planning program. The element addresses land use issues that apply to the

City as a whole and identifies the community planning program as the mechanism to designate land uses, identify site-specific recommendations, and refine citywide policies as needed. The Land Use Element establishes a structure for the diversity of each community and includes policy direction to govern the preparation of community plans. The element addresses zoning and policy consistency, the plan amendment process, airport-land use planning, balanced communities, equitable development, and environmental justice.

The project site is identified in the General Plan's Land Use and Street System Map (contained in the Land Use and Community Planning Element) as "Park, Open Space and Recreation." The Balboa Park Master Plan and Central Mesa Precise Plan set forth more specific land uses, along with goals and policies pertaining to the project site.

The ***Mobility Element*** contains policies that promote a balanced, multi-modal transportation network while minimizing environmental and neighborhood impacts. In addition to addressing walking, streets, and transit, the element also includes policies related to regional collaboration, bicycling, parking, the movement of goods, and other components of the transportation system.

Urban Design Element policies call for development that respects the City's natural setting; enhances the distinctiveness of neighborhoods; strengthens the natural and built linkages; and creates mixed-use, walkable villages throughout the City. The Urban Design Element addresses urban form and design through policies relative to San Diego's natural environment that work to preserve open space systems and target new growth into compact villages.

The intent of the ***Economic Prosperity Element*** is to create an environment that fosters creativity and allows San Diego to better compete in the regional, national, and global economic setting. This element links economic prosperity goals with land use distribution and employment land use policies. The element also expands the traditional focus of a general plan to include economic development policies that have a less direct effect on land use. These include policies aimed at supporting existing and new businesses that reflect the changing nature of the industry, creating the types of jobs most beneficial to the local economy, and preparing the City's workforce to compete for these jobs in the global marketplace.

The ***Public Facilities, Services, and Safety Element*** is directed at providing adequate public facilities through policies that address public financing strategies, public and developer financing responsibilities, prioritization, and the provision of specific facilities and services that must accompany growth. The policies within the Public Facilities Element also apply to transportation and park and recreation facilities and services.

The goals and policies of the ***Recreation Element*** have been developed to take advantage of the City's natural environment and resources, to build upon existing

recreation facilities and services, to help achieve an equitable balance of recreational resources, and to adapt to future recreation needs. The Recreation Element contains policies to address the challenge of meeting the public's park and recreational needs; the inequitable distribution of parks citywide, especially acute in the older, urbanized communities; and to work toward achieving a sustainable, accessible, and diverse park and recreation system. The Recreation Element also addresses alternative methods, or "equivalencies," to achieve citywide equity where constraints may make meeting City guidelines for public parks infeasible, or to satisfy community-specific needs and demands.

The ***Conservation Element*** contains policies to guide the conservation of resources that are fundamental components of San Diego's environment, that help define the City's identity, and that are relied upon for continued economic prosperity. San Diego's resources include, but are not limited to water, land, air, biodiversity, minerals, natural materials, recyclables, topography, viewsheds, and energy.

The ***Historic Preservation Element*** guides the preservation, protection, restoration, and rehabilitation of historical and cultural resources.

The ***Noise Element*** provides goals and policies to guide compatible land uses and the incorporation of noise attenuation measures for new uses to protect people living and working in the City from an excessive noise environment.

The separately adopted 2005–2010 ***Housing Element*** is intended to assist with the provision of adequate housing to serve San Diegans of every economic level and demographic group.

b. Balboa Park Master Plan

The major policies and objectives related directly to future development of Balboa Park are outlined in the City's BPMP (1989, as amended), which functions as the Community Plan for the Park. The BPMP implements the City's General Plan with the following underlying vision: " to nurture and enhance the cultural, recreational and passive resources of the park to meet the needs of the region and surrounding community, while respecting its physical, cultural and historical environment."

The BPMP sets forth general goals, polices, and design principals, many aimed toward the improvement of pedestrian and vehicular traffic and access to the Park and preserving and enhancing open space and existing Park uses.

The BPMP also divides the Park into the following nine Subareas:

- A - Prado West
- B - Prado East and Spanish Village

- C – Palisades
- D - Inspiration Point North
- E - Inspiration Point South
- F - Central Operations Station
- G - Zoo Parking Lot and Florida Canyon
- H – Morley Field and Arizona Street Landfill
- I – Golden Hill.

The subareas are illustrated on Figure 4.1-1.

A master plan, along with a summary of development objectives, is established for each subarea. Five subareas are relevant to the project. The project site lies within Subarea A, Prado West and Subarea C, Palisades, and is adjacent to Subarea B, Prado East and Spanish Village and Subarea D, Inspiration Point North. Additionally, the export soil from the excavation of the parking structure would be disposed of at the Arizona Street Landfill, located in Subarea H, Morley Field and Arizona Street Landfill.

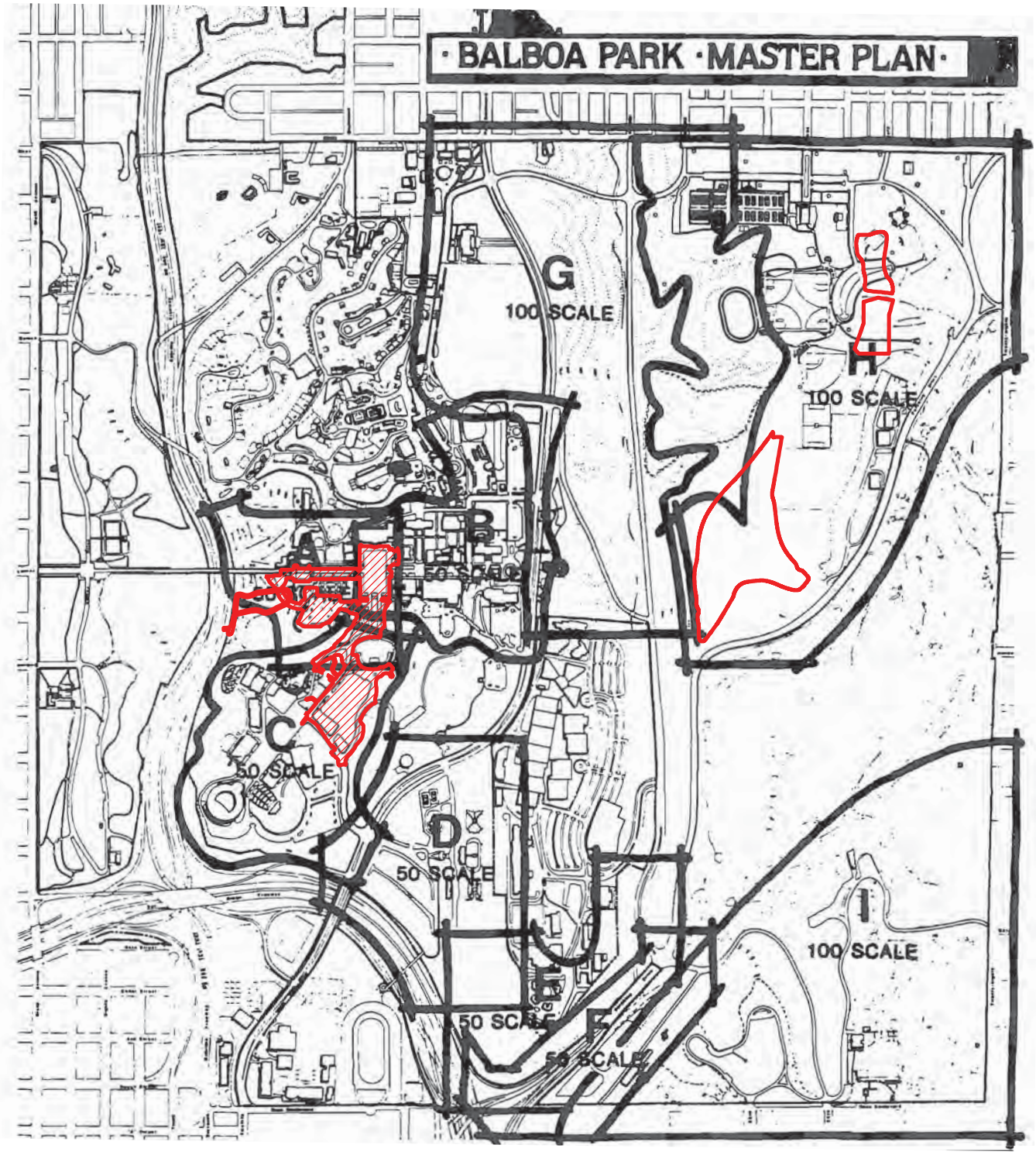
Finally, the BPMP provides a more in-depth analysis of opportunities and constraints relative to the improvement of the Park within the context of seven Elements—Land Use Architecture and Site Design; Access, Circulation and Parking; Historic Preservation; Safety and Security; Horticulture; Lighting and Signage.

c. Central Mesa Precise Plan

The CMPP, adopted in 1992 (and subsequently amended), was developed to further refine the goals and objectives of the BPMP. The CMPP provides specific guidelines for park policy development, park administrative development, and physical development within Park. The CMPP study area encompasses approximately 193 acres near the center of the Park including the Prado, the Palisades, the Spanish Village, Zoo parking lot, Pepper Grove, and the War Memorial areas (Figure 4.1-2).

Major goals of the CMPP include preserving cultural uses and an open, public park environment; creating a pedestrian-oriented park with convenient accessibility; preserving historical significance, while meeting functional needs; and establishing administrative excellence to achieve design success. The policy component of the CMPP includes a statement of the goals for each major component (or element) of the plan: Land Use, Circulation, Architecture, Landscape, Specific Recommendations, Security, Management, Maintenance, and Implementation. Recommendations and guidelines in relation to the project are discussed in detail below in Section 4.1.3, Issue 2, *Plan Consistency*.

Map Source: Balboa Park Master Plan, 1989



A PRADO WEST
B PRADO EAST & SPANISH VILLAGE
C PALISADES
D INSPIRATION POINT NORTH
E INSPIRATION POINT SOUTH
F CENTRAL OPERATIONS STATION
G ZOO PARKING LOT & FLORIDA CANYON
H MORLEY FIELD & ARIZONA LANDFILL
I GOLDEN HILL

Project Area

Off-site Project Components

No Scale

FIGURE 4.1-1

Balboa Park Master Plan Subareas

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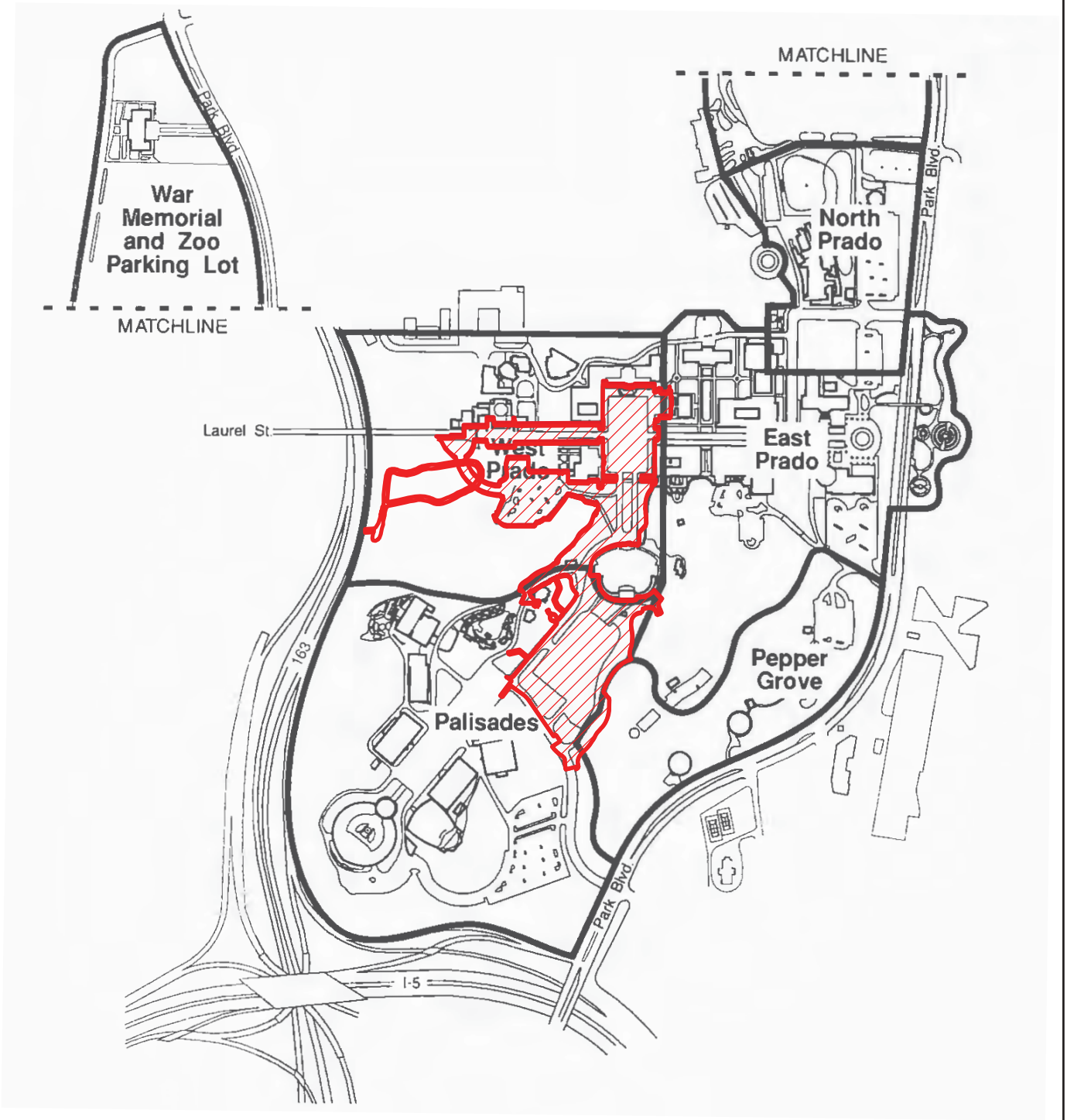
Map Source: Central Mesa Precise Plan, 1992



Project Area

Off-site Project Components

No Scale

FIGURE 4.1-2

Central Mesa Precise Plan

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d. East Mesa Precise Plan

The EMPP, adopted in 1993, is consistent with the overall goals of the BPMP. The EMPP provides detailed design and program recommendations for the physical development and improvements for the East Mesa, including specific criteria for design character and intent, administrative actions, and implementation of policies and improvements.

The EMPP is applicable to the Arizona Street Landfill, which would serve as the disposal site for the excess material generated through implementation of the project (Figure 4.1-3). Pursuant to the EMPP, the Arizona Street Landfill is intended ultimately to be "reclaimed" as passive use parkland. The EMPP establishes a "two-stage recovery plan" that includes the necessary geotechnical and engineering improvements required to reclaim the site for recreational purposes. (These improvements were previously completed). Recommendations and guidelines in relation to the project are discussed in detail below in Section 4.1.3, Issue 2, *Plan Consistency*.

e. Land Development Code Regulations

Chapters 11 through 15 of the City's Municipal Code are defined as the LDC and contain the City's planning, zoning, subdivision, use, and building regulations that dictate how land is to be developed and used within the City. The LDC contains citywide base zones that specify permitted land use; development standards, such as density, floor-area ratio, and other requirements for given zoning classifications; overlay zones, and other supplemental regulations that provide additional development requirements.

Base Zone

The project site is unzoned and therefore, is not subject to any particular base zone use regulations or development standards. The project site is, however, subject to several overlay zones, the Environmentally Sensitive Lands Regulations, and many general development regulations pertaining to landscaping, lighting, grading, parking, signage, etc.

Overlay Zones

Chapter 13 of the LDC sets forth development standards for a number of overlay zones. The purpose of overlay zones is to provide supplemental regulations that have been tailored to specific geographic areas of the City. The project is subject to the AEOZ and the TAOZ.

The purpose of the AEOZ is to provide supplemental regulations for property surrounding the San Diego International Airport (SDIA), and other specified airports within the City. The intent of these regulations is to ensure that land uses are compatible with the operation of airports by implementing the Airport Land Use Plans

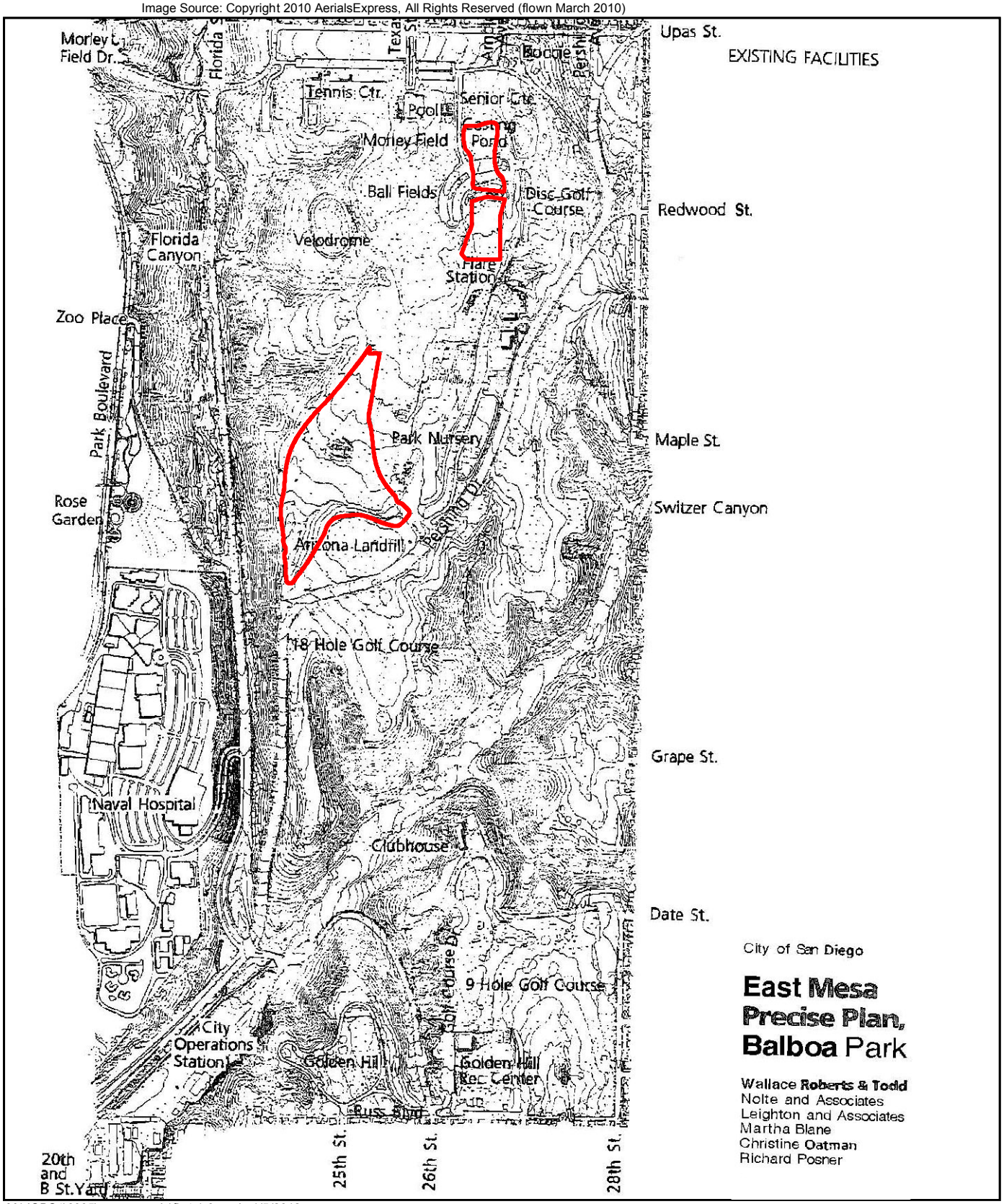

FIGURE 4.1-3

East Mesa Precise Plan

prepared by the ALUC for the San Diego region, to provide a mechanism for notifying property owners of noise and safety impacts associated with airport operations, and to ensure that the provisions of California Administrative Code (Title 21) pertaining to incompatible land uses are satisfied.

The TAOZ is intended to provide supplemental parking regulations for areas receiving a high level of transit service with the intent of reducing parking demand and lowering off-street parking requirements. The TAOZ applies to land adjacent to both 6th Avenue and Park Boulevard, and therefore, encompasses a portion of the project site. (The boundaries of the TAOZ are illustrated on Map No. C-921, filed in the office of the City Clerk as Document No. OO-19287-2.) Nonresidential development located within this overlay zone is subject to the parking regulations found in Land Development Code Section 142.0530.

General Development Regulations

Chapter 14 of the LDC includes the general development regulations, supplemental development regulations, building regulations, and electrical/plumbing/mechanical regulations that govern all aspects of project development. The grading, landscaping, parking, signage, fencing, and storage requirements are all contained within the Chapter 14, General Regulations. Also included within the general regulations of Chapter 14 are the ESL Regulations, discussed below. All other applicable land development regulations are discussed throughout this EIR, particularly in Sections 3.0 (Project Description) and 4.0 (Environmental Analysis).

Environmentally Sensitive Lands Regulations

On December 9, 1997, the ESL Regulations were adopted by ordinance as a part of the LDC. The purpose of the ESL Regulations is to protect and preserve environmentally sensitive lands (e.g., sensitive biological resources, steep hillsides, coastal beaches, sensitive coastal bluffs, and special flood hazard areas), along with the viability of the species supported by those lands. The regulations are intended to assure that development occurs in a manner that protects the overall quality of the resources and the natural and topographic character of the area. (Municipal Code, Chapter 14, Article 3: Supplemental Regulations, Division 1: ESL Regulations, Section 143.0101 et seq.). If proposed development does not comply with all applicable development regulations of the ESL, a deviation may be requested with the approval of a SDP in accordance with Process Four.

Historical Resources Regulations

The project site is located within the National Historic Landmark District (NHLD) and National Register-designated Balboa Park Historic District. A portion of the project site is also located within San Diego Landmark No. 1 – Balboa Park. As described further in

Section 4.2 of this EIR, there is no definitive list of contributors and non-contributors for all of the nominations described above and in many cases the boundary descriptions do not match the maps that accompany the nominations. However, based on the periods of significance listed in the various nominations, it is apparent that all buildings, structures, landscapes, and objects constructed for the 1915 Panama-California Exposition and the 1935 California Pacific International Exposition that retain integrity should be considered contributors to the Balboa Park NHLD.

A portion of SR-163, located within Balboa Park, was designated as a California State Scenic Highway in 1992. In addition to the Scenic Highway designation, SR-163 has been designated as a California Historic District (1996), which encompasses most of the 1947 Cabrillo Freeway project limits. In September 2000, the City of San Diego listed the Cabrillo Freeway as a City of San Diego Historic Landmark (Listing No. 4441). In August of 2002, the roadway beginning from A Street to the Sixth Avenue on-ramp was designated an official Historic Parkway by the California State Legislature (AB 3025).

The purpose of the City's Historical Resources Regulations found in Section §143.0251 of the LDC is to protect, preserve and, where damaged, restore the historical resources of San Diego, which include historical buildings, historical structures or historical objects, important archaeological sites, historical districts, historical landscapes, and traditional cultural properties. These regulations are intended to assure that development occurs in a manner that protects the overall quality of historical resources. The Historic Resources Regulations require that development affecting designated historical resources or historical districts shall provide full mitigation for the impact to the resource, in accordance with the Historical Resources Guidelines of the Land Development Code, as a condition of approval. If development cannot to the maximum extent feasible comply with the development regulations for historical resources, then an SDP in accordance with Process Four is required.

A more detailed description of the regulatory setting related to historical resources is provided in Section 4.2, Historical Resources.

f. Street Design Manual

The City of San Diego's Street Design Manual, adopted in 2002, is intended to provide information and guidance for the design of the public right-of-way that recognizes the many and varied purposes that streets serve. The Street Design Manual is intended to assist in the implementation of the General Plan, the Transit-Oriented Development Design Guidelines, and the Land Development Code. In addition, it is intended to assist in the implementation of special requirements established through community plans, specific plans, precise plans, or other City Council adopted policy and/or regulatory documents.

g. Multiple Species Conservation Program Subarea Plan

The MSCP is a comprehensive program to preserve a network of habitat and open space in the region. Large blocks of native habitat having the ability to support a diversity of plant and animal life are designated as MHPA. MHPA lands are those that have been included within the City's MSCP Subarea Plan for habitat conservation. These lands have been determined to provide the necessary habitat quality, quantity, and connectivity to sustain the unique biodiversity of the San Diego region. MHPA lands are considered by the City of San Diego to be a sensitive biological resource.

"MSCP Covered" refers to species covered by the City's Federal Incidental Take Permit (ITP) issued pursuant to Section 10(a) of the Federal Endangered Species Act (FESA) (16 United States Code [USC] § 1539(a)(2)(A)). Under the FESA, an incidental take permit is required when non-federal activities would result in "take" of a threatened or endangered species. A Habitat Conservation Plan (HCP) must accompany an application for a Federal ITP. Take authorization for federally listed wildlife species covered in the HCP shall be effective upon approval of the HCP.

As of April 20, 2010, the City of San Diego may no longer rely on its Federal ITP for authorization for incidental take of the two vernal pool animal species and five plant species (the seven vernal pool species). Development involving the take of the seven vernal pool species requires authorization from the U.S. Fish and Wildlife Service (USFWS) through the federal process until the City of San Diego completes a new vernal pool HCP and enters into another Implementing Agreement for a new Federal ITP for those species.

Conserved vegetation communities, including Diegan coastal sage scrub, grasslands, and chaparral, are found within Balboa Park and are included as part of the MHPA (Figure 4.1-4). Two areas identified as MHPA land are located within the Park. One is Florida Canyon, which includes the portion of the canyon between Park Boulevard and Morley Field, as well as a narrow, southerly part of the canyon. The other is the Marston Hills Natural Area, located at the northwestern Park boundary, near the scout camps and SR-163. The project site does not contain vernal pools or MHPA lands, nor is located adjacent to, MPHA lands. However, the Arizona Street Landfill, where the excavated soil would be exported is bordered on three sides by MHPA. MHPA adjacency issues are discussed below in Section 4.1.4.1.

h. SDIA - Airport Land Use Compatibility Plan

ALUCPs are tools for use by the San Diego County Regional ALUC in conducting reviews of proposed land uses in areas surrounding airports. The purpose of an ALUCP is to provide for the orderly growth of airports and the areas surrounding the airports, and to safeguard the general welfare of inhabitants within an airport's vicinity. An ALUCP addresses compatibility between airport operations and future land uses that

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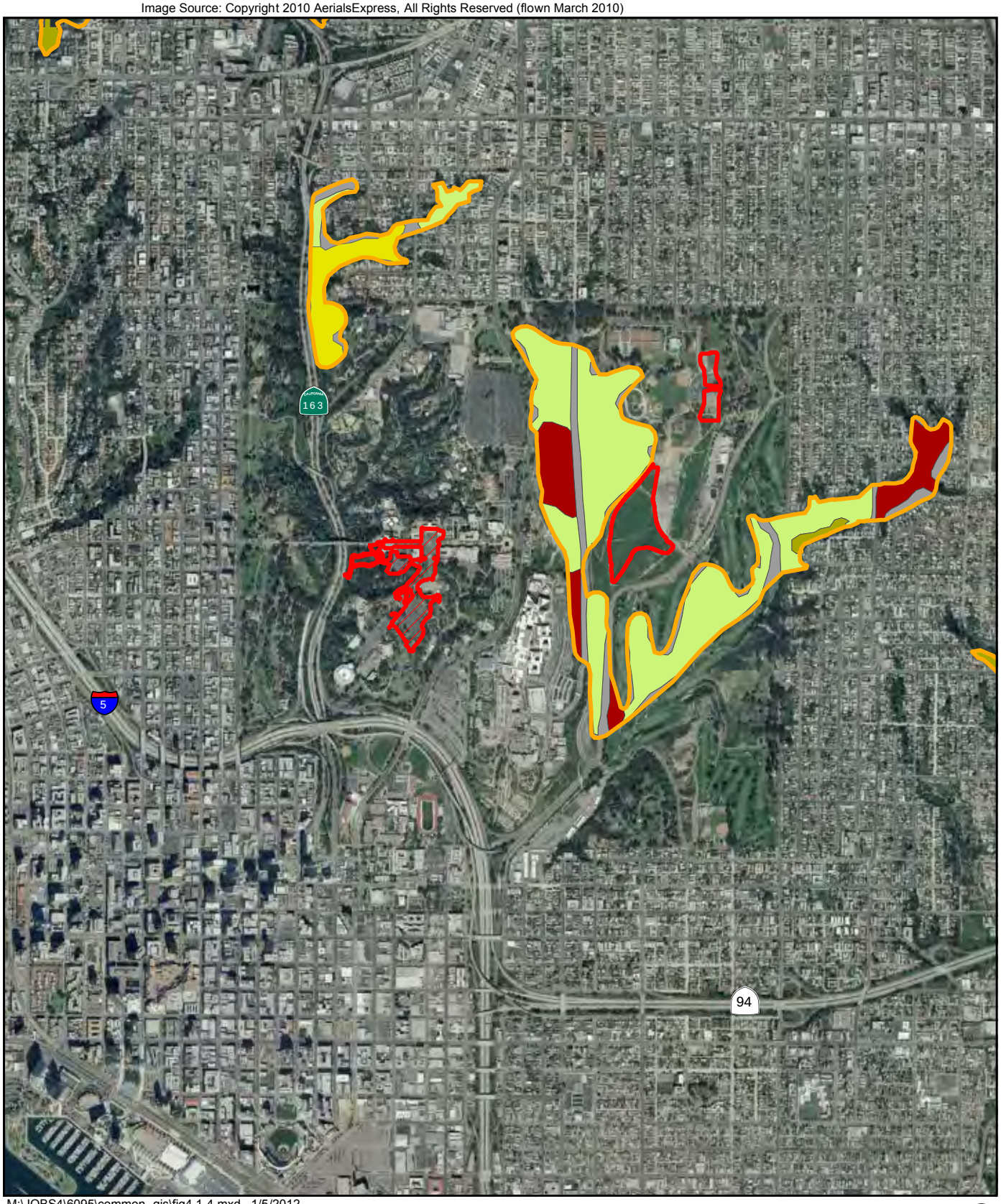

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Project Area
Off-site Project Components
City of San Diego MHPA

MHPA Vegetation
Chaparral
Diegan Coastal Sage Scrub
Disturbed Habitat
Southern Riparian Scrub
Urban/Developed
Grassland

FIGURE 4.1-4
MHPA Areas

surround them by providing policies and criteria for aircraft overflight, safety, and airspace protection, to both minimize the public's exposure to excessive noise and safety hazards within an AIA and to preserve the viability of airport operations.

The project site lies within the AIA of the SDIA. The SDIA's AIA was delineated by using the projected 60 decibel (dB) CNEL contour (Figure 4.1-5). A portion of the project site is located within the 60-65 dB CNEL contour of the SDIA.

4.1.1.2 On-site and Surrounding Land Use

The City's General Plan designates Balboa Park as a "resource-based" park, which is defined as a site of "distinctive scenic, natural or cultural features designed for city-wide use." The Park contains a wide variety of attractions and amenities, including museums, horticulture, theaters, cultural organizations, and recreational facilities. This section summarizes land uses within and surrounding the project site. Figure 4.1-6 illustrates the general areas found within Balboa Park and some of the major existing uses.

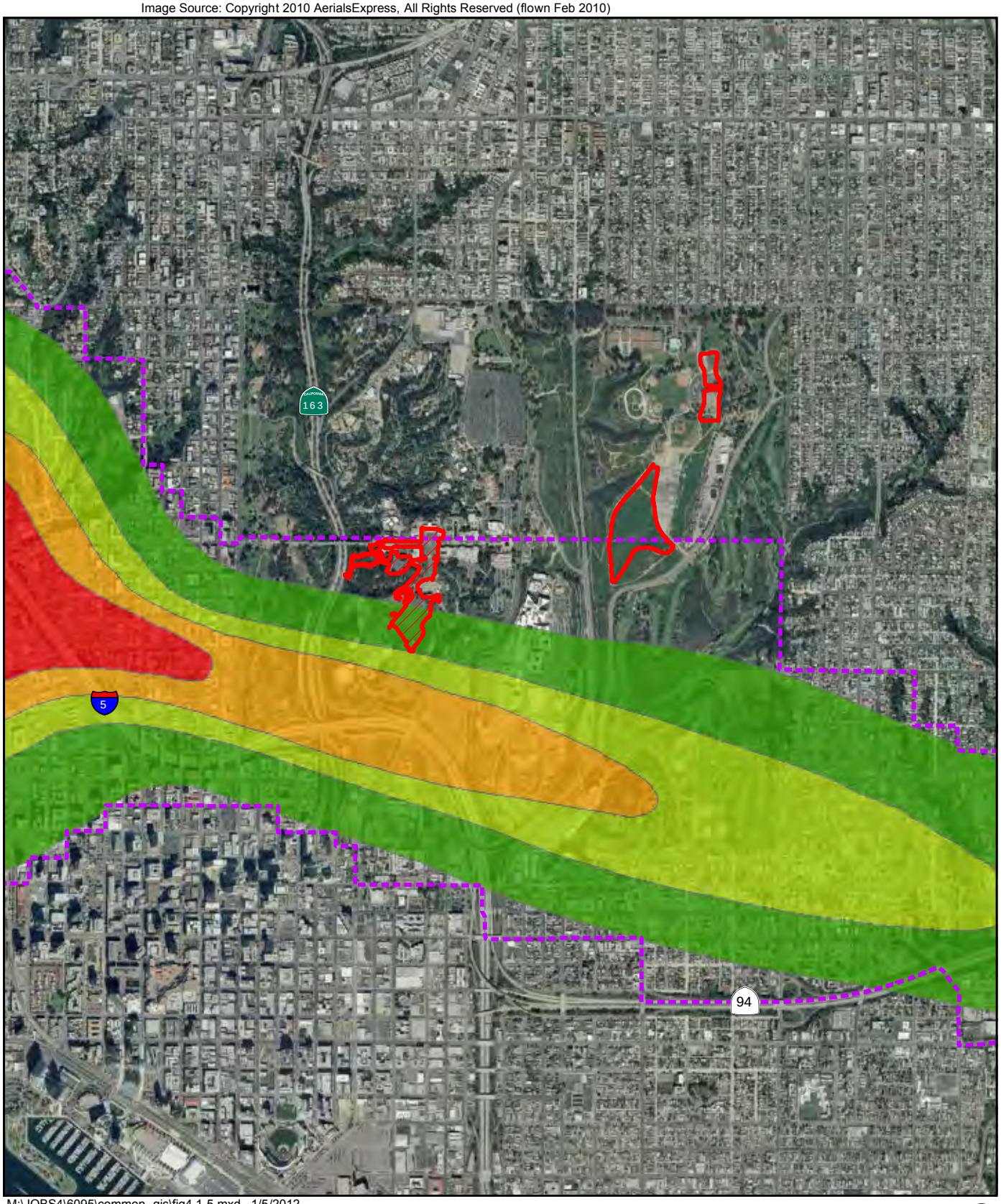
As described above, the project site is located within the Central Mesa area of the Park and was the site of the 1915 and 1935 Expositions. The Central Mesa is a part of the NHLD and National Register-designated Balboa Park Historic District and is home to a large number of the cultural amenities and attractions found within the Park (Figure 4.1-7).

The project site is composed of: El Prado from the Cabrillo Bridge through Plaza de California into Plaza de Panama; the existing Alcazar parking lot, located south of the Alcazar Garden; Pan American Road East; the Mall from Plaza de Panama south to the Organ Pavilion, and the existing Organ Pavilion parking lot. The Arizona Street Landfill disposal site is located outside of the project area, on the East Mesa, as illustrated on Figure 4.1-3. Figure 4.1-8 provides a more detailed depiction of existing land uses within the project site and immediate surroundings. On-site land uses consist primarily of roadways and surface parking lots that serve the amenities located within the Prado and Palisades subareas of the Park. Three parking areas are located within the project site: the Alcazar parking lot (136 total spaces - both standard and ADA), the Plaza de Panama (54 total spaces – both standard and ADA), and the Organ Pavilion lot (367 total spaces – both standard and ADA). Roadways within the project area include El Prado, which runs east and west from the Cabrillo Bridge through the Plaza de Panama, and the Mall/Pan American Road East, which runs north to south from Plaza de Panama to the Organ Pavilion.

a. El Prado and Plaza de California

El Prado through the archway in the Plaza de California serves as a primary entrance into the Central Mesa. The Plaza de California is the small plaza encircled by the California Building, which was one of the few permanent 1915 buildings, and it now

Image Source: Copyright 2010 AerialsExpress, All Rights Reserved (flown Feb 2010)



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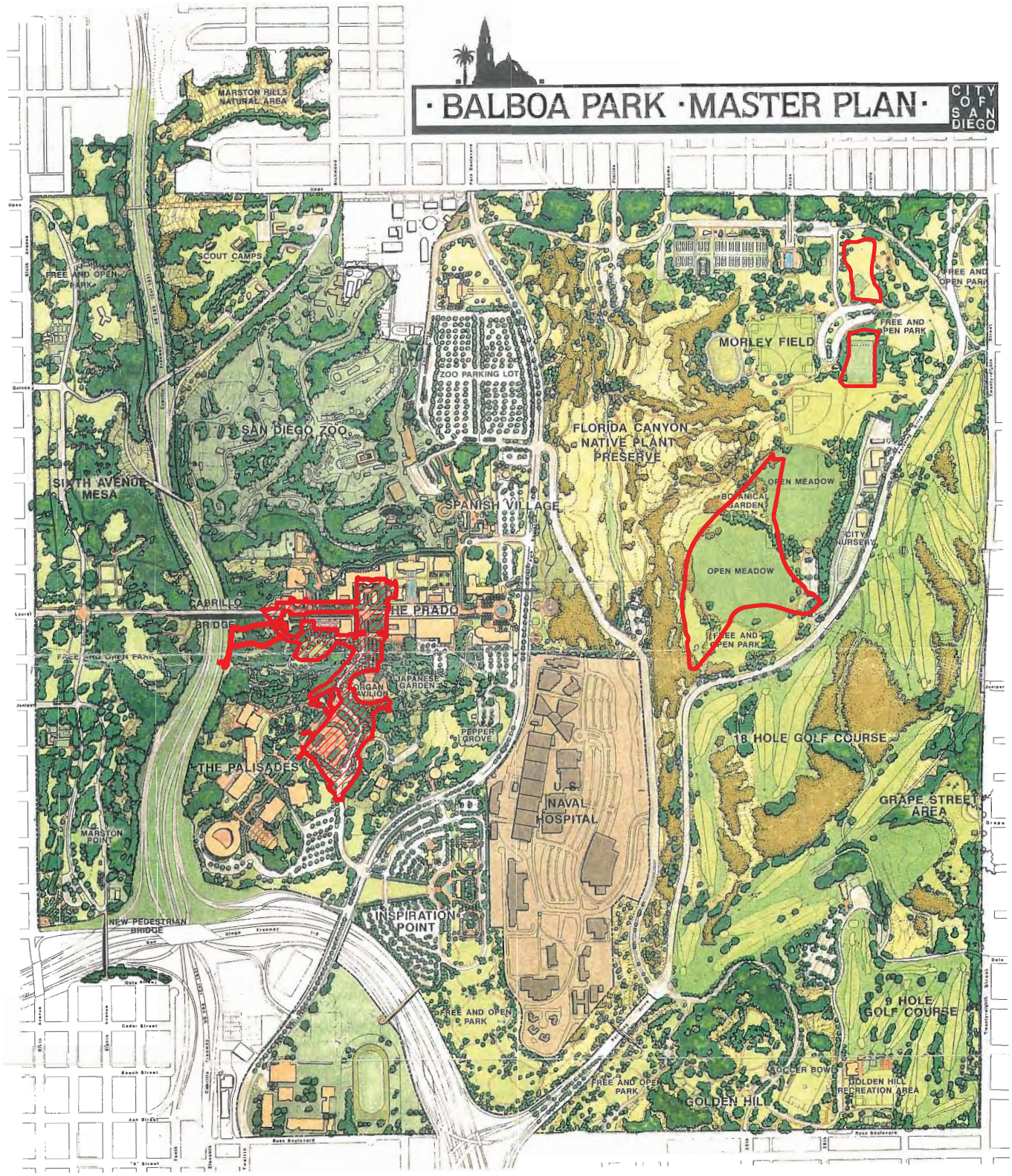
Project Area
Off-site Project Components
Airport Influence Area

1990 Annual Airport Noise Contours

60 CNEL
65 CNEL
70 CNEL
75 CNEL

FIGURE 4.1-5
San Diego International Airport - Airport Influence Area

Map Source: Balboa Park Master Plan



Project Area

Off-site Project Components

No Scale

FIGURE 4.1-6

Park Land Uses

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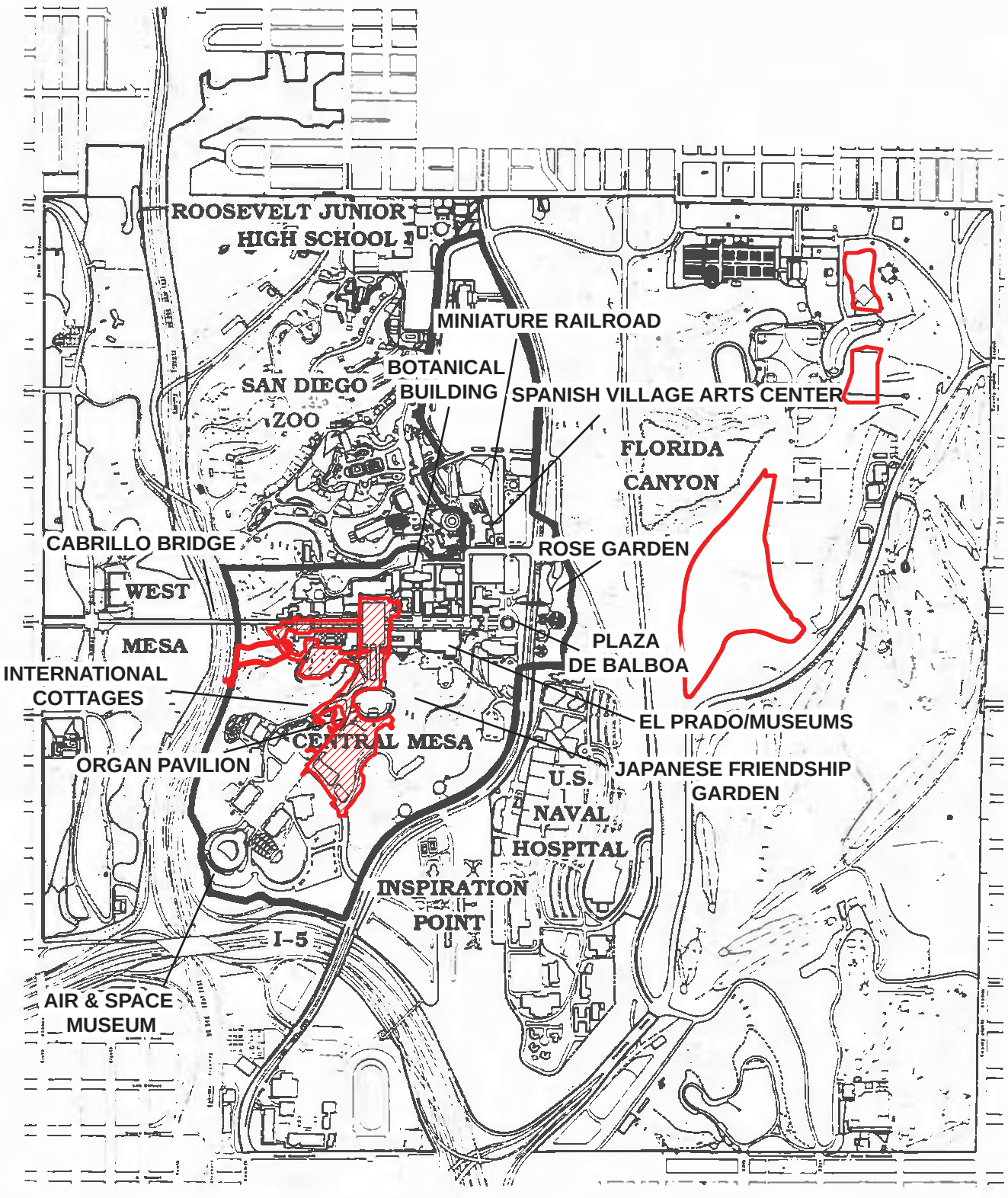
Map Source: Balboa Park Central Mesa Precise Plan



Project Area

Off-site Project Components

No Scale

FIGURE 4.1-7

Central Mesa Location and Amenities

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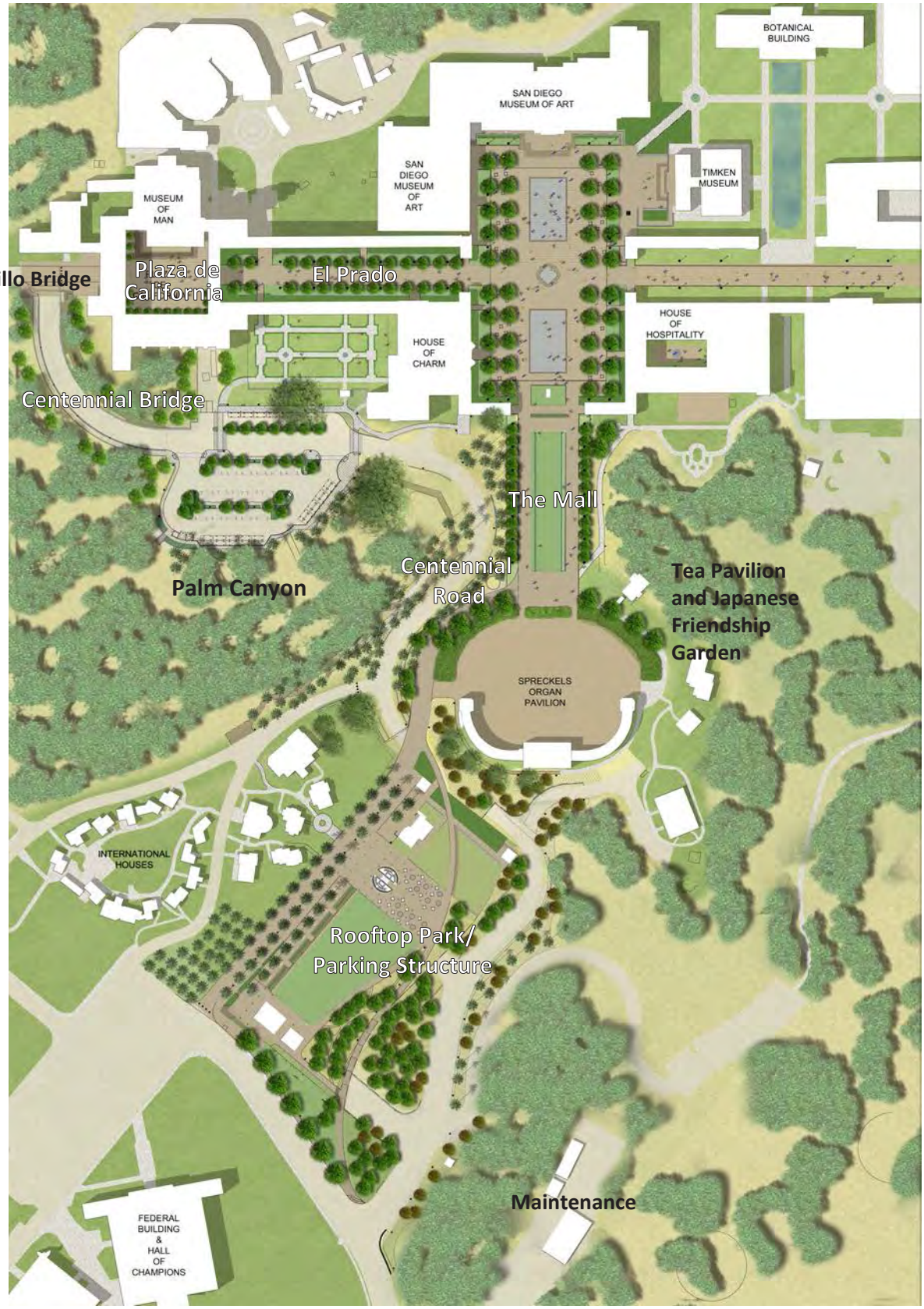
Map Source: Rick Engineering



White Text - **Project**

Black Text - Surrounding Land Uses

No Scale

FIGURE 4.1-8

Surrounding Land Uses

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houses the Museum of Man. After the 1915–16 Exposition, vehicular traffic was introduced to El Prado. Only during the 1935 Exposition was El Prado closed to vehicular traffic. The east El Prado was returned to pedestrian-only use in the 1970s, but the Plaza de California and west El Prado remain as vehicular routes, with pedestrian access via the arcades on each side of the Prado (Heritage 2011).

b. Plaza de Panama

Landscaping in the Plaza presently consists of lawn panels, foundation plantings, and small trees lining the perimeter of the Plaza, with large concrete planters set throughout the remainder of the Plaza to define vehicle circulation and provide protection for pedestrians. The Plaza pavement is asphalt, with concrete walks connecting the arcades to the central plaza. Most of the existing landscape is non-historic with the exception of a few Bougainvillea adjacent to the House of Hospitality. Today, the majority of the Plaza is used for parking with vehicle through traffic at the southwest corner (Heritage 2011).

c. Alcazar Parking Lot

Alcazar parking lot is located immediately south of Alcazar Garden. The paved surface lot holds 136 automobiles; it is only accessible from the east via a drive connecting it to the Mall. Alcazar parking lot is landscaped with perimeter plantings that merge with Palm Canyon to the south and east and the Archery Range to the west. The parking lot has two large fig trees near its northeast corner, a footpath that wraps around its southern side, and a restroom structure on the west side.

d. The Mall and Pan American Promenade

Pan American Road East is the segment of road that connects the Plaza de Panama to Presidents Way. The Mall is the portion of Pan American Road East consisting of a roadway and landscaped median between the Plaza de Panama and the Organ Pavilion. The Mall and Pan American Road East are currently used for vehicular circulation. Pedestrian access is limited to sidewalks on both sides of the road.

e. Organ Pavilion Parking Lot

Immediately to the south of the Spreckels Organ Pavilion is a large surface parking lot commonly known as the Organ Pavilion parking lot. Containing approximately 367 total spaces (357 standard, 10 ADA), the parking lot is irregularly shaped, conforming to its canyon-side location. The area is bounded by the Spreckels Organ Pavilion to the north, Spanish Canyon to the east, Presidents Way to the south, and Pan American Road East to the west.

f. Arizona Street Landfill

The 70-acre Arizona Street Landfill is centrally located within the East Mesa. It is mostly undeveloped and the large, vegetated areas atop are used for passive recreational activities. A City maintenance yard, associated parking lot, and archery range also are located within the Arizona Street Landfill site. Former casting ponds are located in the barren area north of the archery range. The site supports a methane gas collection system, due to previous methane gas issues that resulted in the 1987 explosion.

g. Surrounding Land Use

Project Site

Land uses immediately surrounding the project site generally consist of other park amenities and open space. Located to the north of the project site, along El Prado are the Alcazar Garden, the Old Globe Theatre, and the Museum of Art. El Prado continues east past the project site towards Plaza de Balboa, along which several other museums are located. Southeast of the project site, next to the Mall and Organ Pavilion, are located the Tea Pavilion, Japanese Friendship Garden, and Gold Gulch Canyon. Palisades Plaza is located to the south of the project site. To the southwest of the project area, near the proposed parking structure, are the Pan American Plaza and the International Cottages. The area to the west of the project site is mostly undeveloped, including Palm Canyon. The Archery Range is located in Cabrillo Canyon, the canyon bounded to the north by Cabrillo Bridge and the California Quadrangle, the former Fine Arts Museum and Alcazar parking lot to the east, and SR-163 to the west.

Arizona Street Landfill

The area surrounding the Arizona Street Landfill, the disposal site located on the East Mesa, is developed with various existing land uses. To the north of the landfill are the Morley Field sports complex and the Mesa Rim, which includes numerous recreational facilities such as ball fields, tennis courts, a recreation center, pool, the San Diego velodrome, and a disc golf course. To the east and south is the Park nursery and across Pershing Drive, the Balboa Park municipal golf course. West of the landfill is Florida Canyon, which contains native habitat and is part of the City of San Diego MHPA.

4.1.2 Issue 1: LDC Development Regulations

Would the proposal require a deviation or variance, and the deviation or variance would in turn result in a physical impact on the environment?

Pursuant to the City's Significance Determination Thresholds (Guidelines) Initial Study Checklist questions, land use compatibility impacts may be considered significant should the following result:

- The project requires a deviation or variance, and the deviation or variance would in turn result in a physical impact on the environment.

4.1.2.1 Impacts

a. Base Zones

All Project Components

Consistent with the entirety of the Park, the project site is unzoned; therefore, there are no base zone use regulations or base zone development standards that apply to the project area. As such, no deviations or variances to Chapter 13 of the LDC would be required, and no secondary impacts would occur.

b. Overlay Zones

All Project Components

The project as it relates to the City's AEOZ and the TAOZ is described below.

The AEOZ supplemental regulations are applicable to the project, because it is located within the AIA for SDIA. Applicable supplemental regulations of AEOZ include:

1. Development proposals shall comply with the airport noise/land use compatibility matrix or table of the applicable ALUCP.

2. Development proposals shall comply with the accident potential zone/land use compatibility matrix, and the text regarding land use compatibility in the flight activity zones, of the applicable ALUCP.

3. Uses identified in the land use compatibility matrices as being conditionally compatible are permitted only if the noise is attenuated and the density is restricted as indicated in the matrices.

4. Development proposals shall comply with the standards of the Runway Protection Zones (RPZ) and AAOZ as described by the ALUCP.

   Additionally, all development proposals shall be reviewed by the City Manager for conformance with the following site planning standards:

   a) Structures shall be located as far away from the noise source or accident potential/flight activity zone as possible, taking maximum advantage of the topography and other site design features to minimize noise impacts and safety hazards; and

b) The amount of outdoor recreational space or other activity area where individuals would be subject to high levels of noise shall be minimized.

Because the project proposes to amend a land use plan (i.e., the BPMP) and is located within an AIA, the project was submitted to the ALUC for a consistency determination. The ALUC for San Diego County, the San Diego County Regional Airport Authority, determined that the project is consistent with the SDIA ALUCP, based on the following findings:

1. The project is located within the 60–65 CNEL noise contours and is deemed a compatible use by the ALUCP.

2. The project is not located within the City of San Diego Airport AOZ. Additionally, a determination of "no hazards" to air navigation has been issued by the Federal Aviation Administration (FAA).

3. The project is not located within the RPZ.

4. The project is consistent with the adopted SDIA ALUCP.

The project also conforms with the site planning standards set forth in the AEOZ, because (1) no new habitable structures are proposed, and a "no hazard" determination was made by the FAA; and (2) the proposed rooftop park is located within the 60-65 CNEL contour of the SDIA, which according to the ALUCP's Airport Noise/Land Use Compatibility Matrix, is deemed a compatible use. Therefore, the project is consistent with the AEOZ, and no secondary impacts would occur.

Portions of the project site are located within the TAOZ, pursuant to Map No. C-921, filed in the office of the City Clerk as Document No. OO-9287-2. However, because the site is unzoned, parking regulations (pertaining to non-residential uses) within the Transit Area Overlay are not applicable to the project.

c. ESL Regulations

All Project Components

The project is subject to the ESL Regulations of the San Diego LDC because the project site includes naturally steep hillsides. (Other sensitive resources covered under ESL, including sensitive biological resources, coastal beaches, sensitive coastal bluffs, and special flood hazard areas do not apply within the project site.) The project would deviate from the ESL development regulations for naturally steep hillsides. Since the project is outside of the Coastal Overlay Zone, deviations to the steep hillside regulations can be considered, subject to the findings criteria outlined in the Steep Hillsides Guidelines of the LDC.

According to the ESL Regulations, for areas outside of the MHPA, the allowable development area includes all portions of the premises without slopes greater than 25 percent (steep hillsides). All slopes shall be revegetated in accordance with ESL Regulations. Steep hillsides shall be preserved in their natural state, except where development is permitted in steep hillsides if necessary to achieve a maximum development area of 25 percent of the premises.

Approximately 8.8 percent of the 15.4-acre project site (1.35 acres) contains steep hillsides, as defined by the ESL Regulations. No steep hillsides subject to ESL regulations are located within the Arizona Street Landfill disposal site. Most steep slopes within the project area are not natural, but are instead the result of previous manmade disturbances that have occurred during the 50-plus-year occupation of the Central Mesa.

Project grading would encroach into 0.121 acre of ESL steep slopes (0.79 percent of the total project area), as illustrated on Figure 4.1-9. As shown in Table 4.1-1, below, the proposed project would exceed the permitted encroachment allowance.

TABLE 4.1-1
SENSITIVE SLOPE ANALYSIS

Gross Acreage	Areas Containing Slopes Greater Than 25%	Maximum Encroachment Allowance	Proposed Disturbance to Hillside Slopes	Meets Encroachment Allowance?
15.4	1.35 acres/8.8%	0 acre/0% 0.121	acre/0.79%	No

The encroachment into the steep slopes would require a deviation from Municipal Code, Section §143.0101 et seq. The Code allows that if a proposed development does not comply with all applicable development regulations of the ESL, a deviation may be requested with the approval of a SDP, in accordance with Process Four.

Centennial Bridge

The Centennial Bridge component of the project would encroach into a total of 0.11 acre of ESL steep slopes located near the connection to the Cabrillo Bridge (0.04 acre) and near the connection to the Alcazar parking lot (0.07 acre). This project component, would therefore, require a deviation from the City's ESL regulations, which would result in potential secondary land use impacts to steep slopes and natural landforms, as discussed in Visual Effects Section 4.3 of this EIR.

Alcazar Parking Lot and Centennial Road

The Centennial Road would encroach into 0.01 acre of ESL steep slopes located near the rim of Palm Canyon. Additionally, grading of the Alcazar parking lot would result in impacts to 0.001 acres of ESL steep slopes located along the western edge of the lot.

Image Source: Rick Engineering, September 2011

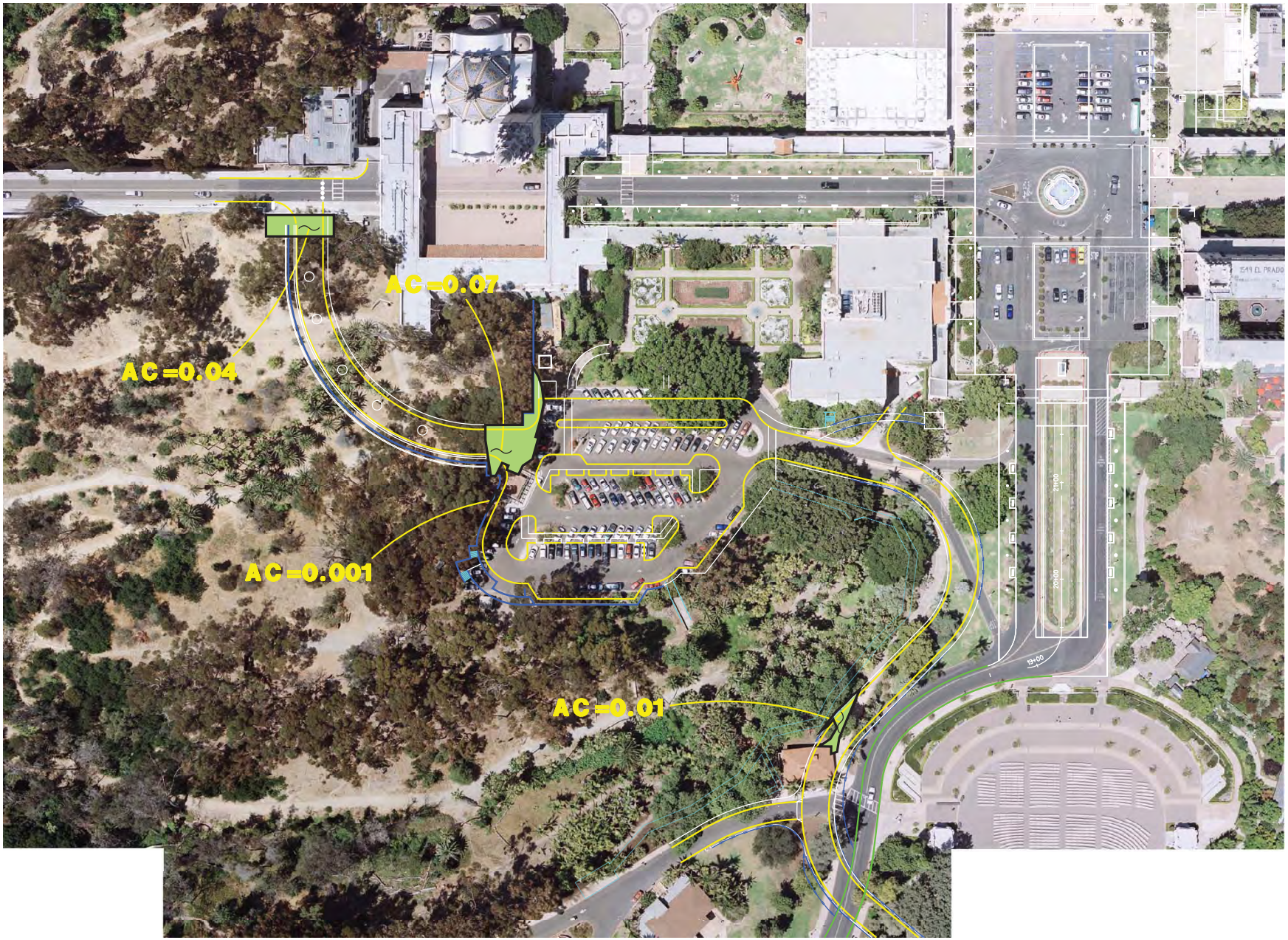

FIGURE 4.1-9

ESL Slope Impact Exhibit

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This project component, would therefore, require a deviation from the City's ESL regulations. As analyzed in Section 4.3.4, potential secondary land use impacts to steep slopes and natural landforms would be less than significant.

Plaza de California, El Prado, Plaza de Panama, and the Mall

The improvements associated with these project components would not encroach into ESL steep slopes; therefore, no deviation is required and no impacts would result.

Parking Structure/Rooftop Park/Arizona Street Landfill

The improvements associated with these project components would not encroach into ESL steep slopes; therefore, no deviation is required and no impacts would result.

d. Historical Resources Regulations

A complete evaluation of the project's effects on the NHLD is provided in Section 4.2, Historical Resources. The discussion below is based on conclusions in Section 4.2, but focuses on the relationship of the project to the land use threshold concerning deviations that result in secondary impacts.

Centennial Bridge

As described in Section 4.2, the Centennial Bridge component of the project would have a limited physical impact on Cabrillo Bridge, resulting from the removal of a small portion of the balustrade (about 2 percent). In addition, as described in Sections 4.2 and 4.3 and illustrated in Appendix C, Centennial Bridge would be visible from the most easterly span of Cabrillo Bridge and the west side of Cabrillo Canyon, including Nate's Point Dog Park and other areas of the West Mesa In these areas the Centennial Bridge would be clearly or partly visible. The bridge would also be visible from some parts on the east side of Cabrillo Canyon south of Cabrillo Bridge, including from within the Archery Range and the southern edge of the Alcazar parking lot. The bridge would be slightly visible from the northwestern corner of the Palisades area, in particular the Old Cactus Garden. Although it has partially been obscured by the eucalyptus forest, the relationship of Cabrillo Bridge to the California Quadrangle complex is one of the most important designed relationships in the NHLD.

For these reasons, the Centennial Bridge would not comply with the SOI Rehabilitation Standards 2 and 9 and would in turn, require a deviation from the following provision of the Historical Resources Regulations of the City's LDC (Section §143.0251(b)):

> . . . any new construction within a historical district may be permitted if the minor alteration or new construction would not adversely affect the special character or special historical, architectural, archaeological, or

> cultural value of the resource consistent with the [SOI's] Standards and Guidelines.

As a result of this secondary historic impact, land use impacts associated with the Centennial Bridge would be significant.

Alcazar Parking Lot and Centennial Road

Centennial Road, through grading and landform alteration, construction of retaining walls a maximum of 24 feet in height and change in the pedestrian circulation between the Palisades area and the Promenade, would alter the historic character and spatial relationships of the NHLD. Therefore, this project component would not be consistent with SOI Rehabilitation Standards 2 and 9, and would require a deviation from the City's Historical Resources Regulations (HRR). As described in detail in Section 4.2, this deviation would not, however, result in a significant impact to an historical resource, because it would not impact any contributing features of the NHLD, and it would not demolish, destroy, relocate, or alter the NHLD such that it would be materially impaired. Therefore, secondary land use impacts associated with LDC nonconformance would be less than significant.

Plaza de California, El Prado, Plaza de Panama, and the Mall

All proposed improvements would be consistent with the historic use of the Central Mesa and any applicable Historic Resources regulations, including the SOI Rehabilitation Standards, along with the Balboa Park Master Plan and Central Mesa Precise Plan. Also, the rehabilitation design of the Plaza de Panama, El Prado, Plaza de California, and the Mall would recall the 1915–16 appearance, with the exception of the two reflecting pools which were constructed in the Plaza de Panama circa 1935 for the second Exposition. No secondary land use impacts would occur; therefore, impacts would be less than significant.

Parking Structure/Rooftop Park/Arizona Landfill

These aspects of the project would comply with the SOI Rehabilitation Standards. The Organ Pavilion parking lot is not a historic feature of Balboa Park and it is not a contributor to the NHLD. The California Garden, proposed within the rooftop park would comply with the SOI Rehabilitation Standards, as there was a garden built in this area for the 1935 California Pacific International Exposition. The Arizona Street Landfill is located outside the NHLD, and is not an historic resource (see Appendix B-2). No secondary land use impacts would occur; therefore, impacts would be less than significant.

e. Street Design Manual

Centennial Bridge

The Centennial Bridge component would require a deviation from the City's Street Design Manual with respect to the commercial local street section, which per the City's Street Design Manual, should include a parkway width of 20 feet, with 8 per cent maximum grade and a minimum centerline radius of 290 feet. The Centennial Bridge would have 14-foot travel lanes, but would include an 8-foot pedestrian walkway along the outer radius of the bridge separated from vehicular traffic by a low crash rated barrier. The requested deviation would not result in any secondary impacts with respect to traffic hazards.

Alcazar Parking Lot and Centennial Road

The Centennial Road component would require a deviation from the City's Street Design Manual with respect to the standard commercial local street section, which per the City's Street Design Manual, should include a parkway width of 20 feet, with 8 per cent maximum grade and a minimum centerline radius of 290 feet. The proposed Centennial Road would have 14-foot lanes (no pedestrian walkways) with a 28-foot curb-to-curb width and a minimum centerline radius of 83 feet. Grades would comply with standards. The requested deviation would not result in any secondary impacts with respect to traffic hazards.

Plaza de California, El Prado, Plaza de Panama, and the Mall

No deviations would be required in conjunction with these project components.

Parking Structure/Rooftop Park/Arizona Street Landfill

As described above, Centennial Road would require deviations from the City's Street Design Manual. The requested deviation would not result in any secondary impacts with respect to traffic hazards.

4.1.2.2 Significance of Impacts

a. Centennial Bridge

While the project requires a deviation from ESL Regulations found within the City's LDC, secondary impacts to steep slopes and natural land forms would be less than significant, as discussed in Section 4.3.4 of this EIR.

The required deviation from the Historic Resources Regulations would result in direct impacts related to the historic spatial characteristics and views, and therefore, would be significant.

The Centennial Bridge component requires a deviation from the City's Street Design Manual with respect to the commercial local street section. Secondary impacts associated with traffic hazards would be less than significant.

b. Alcazar Parking Lot and Centennial Road

The project requires a deviation from the City's ESL Regulations; however, secondary impacts to steep slopes and natural land forms would be less than significant.

Construction of the Centennial Road would require a deviation from the City's HRR; however, as described above under 4.1.2.1, secondary impacts would be less than significant.

The Centennial Road component requires a deviation from the City's Street Design Manual with respect to the commercial local street section. Secondary impacts associated with traffic hazards would be less than significant.

c. Plaza de California, El Prado, Plaza de Panama, and the Mall

No deviations or variances are required; no impacts would occur.

d. Parking Structure/Rooftop Park/Arizona Street Landfill

The Centennial Road component requires a deviation from the City's Street Design Manual with respect to the commercial local street section. Secondary impacts associated with traffic hazards would be less than significant.

4.1.2.3 Mitigation, Monitoring, and Reporting

Centennial Bridge

No feasible mitigation is available for historic impacts associated with the Centennial Bridge.

4.1.2.3 Significance of Impacts After Mitigation

Centennial Bridge

As there is no feasible mitigation, impacts would remain significant and unmitigable.

4.1.3 Issue 2: Plan Consistency

Would the proposal result in a conflict with the environmental goals, objectives, or recommendations of a General and/or Community Plan in which it is located?

Pursuant to the City's Significance Determination Thresholds, land use compatibility impacts may be considered significant should the following result:

- Inconsistency/conflict with the environmental goals, objectives, or guidelines of a community or general plan.
- Substantial incompatibility with an adopted plan.
- Conflict with the provisions of the City's Multiple Species Conservation Program Subarea Plan or other approved local, regional or state habitat conservation plan.

As stated in the City's Thresholds, a project's inconsistency or conflict with a plan does not in and of itself constitute a significant environmental impact. The plan or policy inconsistency would have to result in a secondary physical effect on the environment to be considered significant pursuant to the City's guidelines and CEQA.

4.1.3.1 Impacts

a. Consistency with the San Diego General Plan

Land Use Designation - All Project Components

The project site is designated as "Park, Open Space and Recreation" in the General Plan Land Use Element. Additionally, the Recreation Element of the General Plan classifies Balboa Park (and the project site) as a "Resource Based Park." The project includes elements that are supportive of the Park uses and are therefore consistent with the General Plan designation.

Goals and Policies

The General Plan provides goals and policies that guide the development of Community Plans, as well as growth and development citywide. Most of the General Plan's goals are implemented through policy established in the BPMP; however, there are also some General Plan policies that relate directly to the project. General Plan Elements and issues that relate specifically to the project include Land Use (Airport Land Use Compatibility), Mobility, Conservation, Recreation, Urban Design, and Historic Preservation. The following section identifies relevant goals and policies of those General Plan Elements and provides an analysis of the project's consistency. Additional detail is provided in Section 3, Project Description, and under relevant issue areas in Section 4.0 of the EIR.

Land Use Goals

- Protection of the health, safety, and welfare of persons within an airport influence area by minimizing the public's exposure to high levels of noise and risk of aircraft accidents.

- Protection of public use airports and military air installations from the encroachment of incompatible land uses within an airport influence area that could unduly constrain airport operations.

All Project Components

The project does not include any change in land use or the construction of structures in violation of FAA provisions that would result in the exposure of people to excessive noise or risk associated with airport operations. Also, the project would not include the development of incompatible land uses that would unduly constrain airport operations. The project has been reviewed by the FAA and issued a determination of "no hazard," and also deemed compatible with the ALUCP for SDIA by the Airport Authority. The project is, therefore, consistent with these land use goals of the General Plan.

Mobility Goals

- A safe and comfortable pedestrian environment.

- A complete, functional, and interconnected pedestrian network, that is accessible to pedestrians of all abilities.

All Project Components

The project proposes to reconfigure circulation within portions of the Central Mesa. Centennial Bridge would be constructed from the Cabrillo Bridge, thereby eliminating traffic from El Prado. The project also would remove cars from the Plaza de Panama, Plaza de California, the Mall, and Pan American Road. This would reduce pedestrian/vehicular conflicts and improve safety for pedestrians. A grade-separated pedestrian crossing would be installed at the intersection of the Centennial Road and the Pedestrian/Tram Promenade (Pan American Road East). The project is, therefore, consistent with these mobility goals of the General Plan.

Conservation Goals

- Protection and expansion of a sustainable urban forest.

All Project Components

The project would permanently remove approximately 165 trees. Other trees, potentially impacted by construction, would be transplanted (when feasible) or replaced, so as to preserve the urban forest within the Park. Additionally, a total of 405 new trees, of which 129 are palms, 222 deciduous and 54 evergreens would be added to the project site. The project is, therefore, consistent with these conservation goals of the General Plan.

Conservation Policies

CE-A.11. Implement sustainable landscape design and maintenance.

CE-A.11.d. Strategically plant deciduous shade trees, evergreen trees, and drought tolerant native vegetation, as appropriate, to contribute to sustainable development goals.

All Project Components

The project's landscaping would include plant species that reflect the long-established themes of the Central Mesa and Balboa Park. Wherever improvements are proposed, plant species have been selected to be consistent with the palettes and themes of the adjacent landscapes. The proposed plant palette includes a large variety of native, non-native and drought tolerant plant species. The landscape improvements would adhere to all standards of the City's Landscape Ordinance. All irrigation systems would be consistent with the irrigation system used for the rest of the park. The project, therefore, would be consistent with this conservation policy of the General Plan.

CE-B.4. Limit and control runoff, sedimentation, and erosion both during and after construction activity.

All Project Components

Erosion control and management of construction activities for the project would be conducted in accordance with the City's Storm Water Standards and applicable state storm water requirements, including the State Water Resources Control Board (SWRCB) NPDES General Permit for Storm Water Discharges Associated with Construction Activity (General Construction Permit). A complete list of construction best management practices (BMPs) to be used on site is included in Section 4.16, Water Quality.

Project design also incorporates permanent low impact development (LID) BMPs, where feasible, to minimize impervious surface areas and promote infiltration and evaporation

of on-site runoff. LID facilities such as bioretention, pervious surfaces and/or flow-through planters would be utilized to retain, reuse, or promote evapotranspiration of storm water. A complete list of LID BMPs is included in Section 4.16. Implementation of construction and permanent LID BMPs would ensure consistency with Conservation Element Policy CE-B.4.

Historic Preservation Goals

· Preservation of the City's important historical resources.

Centennial Bridge. The alterations associated with the construction of the Centennial Bridge, as discussed under 4.2.2.1(b), would be inconsistent with SOI Rehabilitation Standards 2 and 9 for historic properties. Therefore, this project component would be inconsistent with this goal of the Historic Preservation Element.

Alcazar Parking Lot and Centennial Road. Project design calls for restoration of historic understory plantings on the edges of Palm Canyon that would be disturbed during construction of the Centennial Road. Although, this project component would be inconsistent with the SOI Rehabilitation Standards (2 and 9), no adverse impact to contributing historic resources within the NHLD would result; therefore, this project component would be consistent with this goal of the Historic Preservation Element.

Plaza de California, El Prado, Plaza de Panama, and the Mall. Through the removal of cars from El Prado, the Plaza de Panama, Plaza de California, the Mall and Pan American Road, the project would restore the historical condition of these areas. All new landscaping and other site amenities would be consistent with the historical context of the Park. This project component would therefore, be consistent with this goal of the Historic Preservation Element.

Parking Structure/ Rooftop Park/Arizona Street Landfill. All proposed improvements would be consistent with the historic use of the Central Mesa and any applicable Historic Resources Regulations, including the SOI Rehabilitation Standards. This project component would therefore, be consistent with this goal of the Historic Preservation Element.

Urban Design Goals

· A built environment that respects San Diego's natural environment and climate.

All Project Components

The project's landscaping would include plant species that reflect the long-established themes of the adjacent landscape, which may include non-native and non-drought tolerant plant species. All irrigation systems, however, would incorporate contemporary

water-saving technology. The project, therefore, would be consistent with the intent of this urban design goal.

- An improved quality of life through safe and secure neighborhoods and public places

All Project Components

Lighting would be upgraded or added throughout the project site to meet all City requirements and ensure a safe environment for park users. Existing lighting within the Alcazar parking lot would be upgraded and additional lighting would be placed along the Centennial Road. New lights would be added within the rooftop park and along the Pan American Promenade (Pan American Road East). Additionally, the proposed landscape improvements have been designed to incorporate Crime Prevention Through Environmental Design (CPTED) principles. Areas obscured by tall plantings would be minimized, improving visibility to visitors, and the overall circulation patterns created by pathways, provide multiple points of entry and exit from all areas. The project would be consistent with Urban Design goals pertaining to safety and security.

- Maintenance of historic resources that serve as landmarks and contribute to the City's identity.

Centennial Bridge. As described in Section 4.2, the Centennial Bridge would be inconsistent with SOI Rehabilitation Standards 2 and 9. Therefore, this project component would be inconsistent with this goal of the Urban Design Element.

Alcazar Parking Lot and Centennial Road. Construction of the Centennial Road would remove vegetation from Palm Canyon, resulting in temporary adverse visual and physical effects to the NHLD. However, project design calls for restoration of historic understory plantings and additional tree plantings on the edges of the canyon. The improvements associated with this project component would not result in an adverse change to the NHLD. Therefore, this project component would be consistent with this goal of the Urban Design Element.

Plaza de California, El Prado, Plaza de Panama, and the Mall. Urban design elements of the project, related to streetscape, landscaping, architectural treatments, lighting, and signage, are intended to help retain elements that comprise the historical context of the Central Mesa. Improvements associated with these project components would, therefore, be consistent with this goal of the Urban Design Element.

Parking Structure/Rooftop Park/Arizona Street Landfill. Design guidelines in both the BPMP and CMPP address streetscape, urban design elements such as landscaping, architectural treatments, among other items. These project components would be consistent with these design elements, and therefore, consistent with this goal of the Urban Design Element.

Urban Design Policies

Historic Character

UD-A.7. Respect the context of historic streets, landmarks, and areas that give a community a sense of place or history.

Centennial Bridge. As described in Section 4.2, the Centennial Bridge would be inconsistent with SOI Rehabilitation Standards 2 and 9. Therefore, this project component would be inconsistent with this goal of the Urban Design Element.

Alcazar Parking Lot and Centennial Road. Construction of the Centennial Road would remove vegetation from Palm Canyon, resulting in temporary adverse visual and physical effects to the NHLD. Project design calls for restoration of historic understory and tree plantings on the edges of the canyon; however, this project component would be inconsistent with SOI Rehabilitation Standards 2 and 9. As described in Section 4.2, this inconsistency would not result in an adverse impact to the NHLD; and therefore, this project component would be consistent with this policy of the Urban Design Element.

Plaza de California, El Prado, Plaza de Panama, and the Mall. Through the removal of cars from El Prado, Plaza de Panama, Plaza de California, the Mall, and Pan American Road, the project would restore the historical condition of these areas. All new landscaping and other site amenities would be consistent with the historical context of the Park. Therefore, this project component would be consistent with Urban Design policies pertaining to historic character.

Parking Structure/Rooftop Park/Arizona Street Landfill. All proposed improvements would be consistent with the historic use of the Central Mesa and any applicable Historic Resources Regulations, including the SOI Rehabilitation Standards. Therefore, this project component would be consistent with Urban Design policies pertaining to historic character.

Landscape

UD-A.8. Landscape materials and design should enhance structures, create and define public and private spaces, and provide shade, aesthetic appeal, and environmental benefits.

a. Maximize the planting of new trees, street trees, and other plants for their shading, air quality, and livability benefits.

b. Encourage water conservation through the use of drought-tolerant landscape.

c. Use landscape, especially revegetation, to support storm water management goals and BMPs for filtration, percolation, and erosion control.

h. Provide "shade over pavement" in concrete areas, especially parking areas (vehicular use areas).

k. Consider landscaped areas as useable and functional amenities for people activities.

m. Utilize "transitional landscaping" (landscape adjacent to natural features) to soften the visual appearance of a development and provide a natural buffer between the development and open space areas.

All Project Components

The project's landscaping would include plant species that reflect the long-established themes of the Central Mesa and Balboa Park. Wherever improvements are proposed, plant species have been selected that improve upon or enhance the palettes and themes of the adjacent landscapes. The plant palette for the project site includes a large variety of native, non-native and drought tolerant plant species. A passive bio-swale system for treating storm water runoff is proposed that would help reduce runoff and increase overall storm water infiltration. Landscaping within the reconfigured Alcazar parking lot would emphasize the creation of a "green" parking area through the provision of shade trees and smaller landscaped medians that function as water quality bio-swales. Within the Arizona Street Landfill disposal site, a hydroseeding mix of non-irrigated, non-invasive plantings would be employed for erosion control and aesthetic purposes and would be consistent with passive recreational use and MHPA adjacency. The landscape improvements would adhere to all standards of the City's Landscape Ordinance. In conclusion, the project would be consistent with Urban Design Element landscape policy.

Streets

UD-A.10. Design or retrofit streets to improve walkability, bicycling, and transit integration; to strengthen connectivity; and to enhance community identity.

Centennial Bridge. The Centennial Bridge is proposed to divert traffic from Cabrillo Bridge off El Prado and into the Alcazar parking lot. The intent of the bridge is to reduce pedestrian/vehicular conflicts on El Prado and within the Plaza de Panama, the Mall, and Pan American Road East. The new two-way Centennial Bridge would accommodate bikes within shared travel lanes and provide a sidewalk for pedestrians along the western/southern travel lane. This project component would be consistent with Urban Design policies pertaining to streets.

Alcazar Parking Lot and Centennial Road. From the Alcazar parking lot, pedestrian access to El Prado would be either north through the Alcazar Garden or east via a newly constructed House of Charm pedestrian bridge/walkway proposed as part of this project. Pan America Road East would be converted to the Pan American Promenade for

pedestrian/tram-only circulation. A grade-separated pedestrian walkway, at the intersection of Pan American Promenade and the new Centennial Road, would be constructed from the new park atop the Organ Pavilion parking structure over the new Centennial Road to avoid pedestrian/vehicular conflicts at this intersection. This project component would be consistent with Urban Design policies pertaining to streets.

Structured Parking

UD-A.11. Encourage the use of underground or above-ground parking structures, rather than surface parking lots, to reduce land area devoted to parking.

b. Design safe, functional, and aesthetically pleasing parking structures.

c. Design structures to be of a height and mass that are compatible with the surrounding area.

d. Use building materials, detailing, and landscape that complement the surrounding neighborhood.

e. Provide well-defined, dedicated pedestrian entrances.

f. Use appropriate screening mechanisms to screen views of parked vehicles from pedestrian areas, and headlights from adjacent buildings.

Parking Structure/Rooftop Park/Arizona Street Landfill. The existing Organ Pavilion surface parking lot would be converted to a subterranean parking structure with implementation of the project. The top of the structure would generally retain the existing grade within the area and would be designed as a rooftop park and passive open space. Pedestrian entrances would be provided from the top of the structure. The façade would be open on the eastern elevation, but partially screened with landscaping to blend with the surrounding landform. This project component would be consistent with Urban Design policies pertaining to structured parking.

Surface Parking

UD-A.12. Reduce the amount and visual impact of surface parking lots.

c. Design clear and attractive pedestrian paseos/pathways and signs that link parking and destinations.

d. Locate pedestrian pathways in areas where vehicular access is limited.

e. Avoid large areas of uninterrupted parking especially adjacent to community public view sheds.

h. Promote the use of pervious surface materials to reduce runoff and infiltrate storm water.

i. Use trees, shade structures, and other landscape to provide shade, and screening and filtering of storm water runoff, in parking lots including roof-level parking areas.

Alcazar Parking Lot and Centennial Road. The Alcazar parking lot would be reconfigured to provide clear, safe, and functional systems for drop-off, loading, valet stacking, and disabled access parking. The plan includes a raised pedestrian walkway along the rear (south) side of the House of Charm/Mingei Museum. The new walkway would provide direct pedestrian access from the Alcazar parking lot to the Plaza de Panama. The proposed landscape within the reconfigured Alcazar parking lot would be an extension of the Cabrillo Canyon landscape into the parking area. The landscape would highlight the creation of a "green" parking area with an emphasis on providing shade trees and smaller landscaped medians that function as water quality bio-swales. This project component would be consistent with Urban Design policies pertaining to surface parking.

Plaza de California, El Prado, Plaza de Panama, and the Mall. With the project, the existing surface parking and automobile circulation would be removed from the Plaza de Panama, which would be redesigned for pedestrian use. Elimination of surface parking from the Plaza de Panama would be consistent with Urban Design policies pertaining to surface parking.

Parking Structure/Rooftop Park/Arizona Street Landfill. The Organ Pavilion parking structure would replace the existing Organ Pavilion surface parking lot. This project component would be consistent with Urban Design policies pertaining to surface parking.

Lighting

UD-A.13. Provide lighting from a variety of sources at appropriate intensities and qualities for safety.

a. Provide pedestrian-scaled lighting for pedestrian circulation and visibility.

b. Use effective lighting for vehicular traffic while not overwhelming the quality of pedestrian lighting.

c. Use lighting to convey a sense of safety while minimizing glare and contrast.

d. Use vandal-resistant light fixtures that complement the neighborhood and character.

e. Focus lighting to eliminate spill-over so that lighting is directed, and only the intended use is illuminated.

All Project Components

Lighting would be upgraded or added throughout the project site to meet all City requirements and ensure a safe environment for park users. The project would also improve upon the existing lighting within the Central Mesa through the reproduction of the Historic 1915 light fixtures within the Plaza de Panama, El Prado, Plaza de California, and the Mall. The proposed fixture locations have been selected to match the original 1915 installation. Existing lighting within the Alcazar parking lot would be upgraded, and additional lighting would be placed along the Centennial Road. New lights would be added in the Organ Pavilion Parking Structure rooftop park, as well as, the Pan American Promenade to allow for day and night security of park visitors. The project would be consistent with Urban Design policies pertaining to lighting.

Signs

UD-A.14. Design project signage to effectively utilize sign area and complement the character of the structure and setting

a. Architecturally integrate signage into project design.

b. Include pedestrian-oriented signs to acquaint users to various aspects of a development. Place signs to direct vehicular and pedestrian circulation.

c. Post signs to provide directions and rules of conduct where appropriate behavior control is necessary.

d. Design signs to minimize negative visual impacts.

e. Address community-specific signage issues in community plans, where needed.

All Project Components

All signage would be consistent with the existing motifs established in the BPMP and CMPP, which would ensure continuity of the existing aesthetic and minimize visual impacts. Also, orientation signage would be added on both the east and west sides of the Plaza de Panama where they intersect with El Prado; and on the rooftop park adjacent to the elevator core/tram stop, and near the southwestern corner adjacent to the visitor center and tram stop. The project would be consistent with General Plan policy direction relative to signage.

Utilities

UD-A.16. Minimize the visual and functional impact of utility systems and equipment on streets, sidewalks, and the public realm.

All Project Components

The project would not require substantial changes to the current infrastructure. Existing 10- and 16-inch water mains would be moved to allow for the under grounding of the parking structure and a new sewer line spur would be required for the proposed new public restroom on top of the parking structure. The project would be consistent with Urban Design policies pertaining to infrastructure.

Safety and Security

UD-A.17. Incorporate CPTED measures, as necessary, to reduce incidences of fear and crime, and design safer environments.

a. Promote regulations, programs, and practices that result in the proper maintenance of the measures employed for CPTED surveillance, access control, and territoriality.

b. Consider pedestrian scale lighting and indirect techniques to provide adequate security but not glare and flood-light conditions.

All Project Components

Lighting would be upgraded or added throughout the project site to meet all City requirements and ensure a safe environment for park users. Existing lighting within the Alcazar parking lot would be upgraded and additional lighting would be placed along the Centennial Road. Within the Organ Pavilion parking structure and rooftop park and along the Pan American Promenade new lights would be added. Additionally, the landscape improvements have been designed to incorporate CPTED principles. Areas obscured by tall plantings would be minimized, improving visibility to visitors, and the overall circulation patterns created by pathways, provide multiple points of entry and exit from all areas. The project would be consistent with Urban Design Element policies pertaining to safety and security.

Community Identity

UD-F.1. Integrate public art and cultural amenities that respond to the nature and context of their surroundings. Consider the unique qualities of the community and the special character of the area in the development of public art and programming for cultural amenities.

b. Use public art and cultural amenities to improve the design and public support for public infrastructure projects.

d. Use public art and cultural amenities as a means to assist in implementation of community-specific goals and policies.

e. Use public art and cultural amenities as community landmarks, encouraging public gathering and wayfinding.

f. Encourage involvement of recognized community planning groups and other community stakeholders in the decision-making process regarding public art and cultural amenities.

Citywide Identity

UD-F.2. Use public art and cultural amenities to celebrate San Diego's diversity, history, and unique character.

b. Support public art and cultural amenities that explore, reflect, and respond to the diverse facets of historic and contemporary San Diego life.

c. Reinforce San Diego's commitment to diversity by using public art and cultural amenities to interpret and celebrate the histories and cultures of its population.

All Project Components

Two sculptures are located in front of the Mingei Museum adjacent to the Mall and within the area of improvement proposed by the project. These sculptures would be retained in an appropriate location within the Central Mesa. No new public art is proposed in conjunction with the project; however, the amendments proposed to the BPMP and CMPP would not preclude the future location of public art within the project area or Central Mesa. The project would be consistent with Urban Design goals pertaining to community identity.

Public Spaces

UD-F.3. Enhance the urban environment by animating the City's public spaces.

b. Ensure that public artworks respond to the nature of their surroundings both physically and conceptually.

c. Encourage the use of public art in highly visible places as a directional assistance that can be used to delineate access routes and entrance points.

d. In high foot-traffic areas, use pedestrian-oriented art interventions to enhance the pedestrian experience.

e. Highlight points of interest throughout the City through the use of artwork and cultural amenities.

f. Encourage artworks and activities that animate public spaces and energize the cityscape.

g. Encourage temporary public artworks to create a dynamic changing and engaging environment.

f. Encourage artist-designed infrastructure improvements within communities such as utility boxes, street-end bollards, lampposts, and street furniture.

h. Encourage incorporation of vandal-resistant and easily repairable materials in art to reduce maintenance requirements.

j. Encourage a range of activities, easy access, a clean and attractive environment, and a space for people to socialize in order to attract legitimate users and thereby discourage improper behavior.

All Project Components

Implementation of the project would allow parking and automobile circulation to be removed from the Plaza de Panama, which would be redesigned with non-asphalt specialty paving, shade trees, seating, 1915 replica lighting, and other amenities, such as water fountains that can be turned off to accommodate large events and festivals. Such amenities are intended to create a clean and attractive environment, and a space in which people can socialize. Also, two existing sculptures located in front of the Mingei Museum adjacent to the Mall and within the area of improvement proposed by the project, would be retained in an appropriate location within the Central Mesa. No new public art is proposed in conjunction with the project; however, the amendments proposed to the BPMP and CMPP would not preclude the future location of public art within the project area or Central Mesa. All amenities, art, and landscape enhancements would be in conformance with the BPMP and CMPP, as amended. The project would be in conformance with Urban Design Element policy pertaining to public spaces.

Recreation Goals

- Preserve, protect, and enhance the integrity and quality of existing parks, open space, and recreation programs citywide.

- Preserve, protect, and enrich natural, cultural, and historic resources that serve as recreation facilities.

- Preservation of the natural terrain and drainage systems of San Diego's open space lands and resource-based parks.

- Park and recreation facilities that are sited to optimize access by foot, bicycle, public transit, automobile, and alternative modes of travel.

All Project Components

The project would restore pedestrian uses in locations presently dominated by vehicular traffic within the Central Mesa. Additional open space would be created in place of the existing Organ Pavilion parking lot. The project would minimize disturbances to natural terrain, utilizing already developed areas for the majority of the proposed improvements. Finally, the project would implement an expanded tram system through the Central Mesa, connecting parking facilities and institutions, and enhancing access and circulation. Overall, the project would restore the historic integrity through landscape and hardscape improvements and enhance recreational opportunities through improved access and the creation of additional free and open parkland. Therefore, the project would be consistent with the Recreation Element goals of the General Plan.

Recreation Policies

RE-C.5. Design parks to preserve, enhance, and incorporate items of natural, cultural, or historic importance.

Centennial Bridge. The construction of the Centennial Bridge would have significant impacts on the historic visual and spatial relationship of the Cabrillo Bridge and the California Quadrangle complex and would, therefore, not comply with SOI Rehabilitation Standards 2 or 9. This, in turn, would result in impacts to the NHLD. Therefore, this project component would be inconsistent with this policy of the Recreation Element.

Alcazar Parking Lot and Centennial Road. Construction of the Centennial Road would result in temporary impacts to Palm Canyon. However, project design calls for restoration of historic understory plantings and additional tree plantings on the edges of the canyon that would be distributed during construction, and no adverse impacts to the NHLD would result. Therefore, this project component would be consistent with this policy of the Recreation Element.

Plaza de California, El Prado, Plaza de Panama, and the Mall. The project would enhance several areas within the Central Mesa. The Plaza de California, Plaza de Panama, El Prado and the Mall would be restored to pedestrian-only use and Pan American Road East converted to a promenade and made viable as public open spaces. Landscaping would be enhanced and other public amenities, such as seating, water features, and orientation signage would be added. Therefore, this project component would be consistent with this policy of the Recreation Element.

Parking Structure/Rooftop Park/Arizona Street Landfill. The existing Organ Pavilion parking lot would be replaced with a subterranean parking structure that would support an approximately two-acre rooftop park, expanding open parkland within the area. Therefore, this project component would be consistent with this policy of the Recreation Element.

In summary, the project would be consistent with the majority of the environmental goals, policies and objectives of the City of San Diego General Plan. However, the Centennial Bridge component would be in conflict with policies found within the Urban Design, Recreation and Historic Preservation Elements, as previously discussed.

b. Consistency with the Balboa Park Master Plan

The BPMP contains general goals, objectives, and design guidelines that apply both park-wide and to specific subareas within the Park. The project lies within subareas A and C (El Prado and the Palisades) and is adjacent to subareas B and D (Prado East and Inspiration Point North). The Arizona Street Landfill disposal site lies within Subarea H. The plan also contains guidelines, objectives, and design principles for specific elements (e.g., architecture, parking, security, and signage), which occur either park-wide or in some cases, only in specific areas. Many of these general and specific policies in the BPMP apply to the project. Table 4.1-2 states or summarizes applicable and relevant polices in the BPMP and provides an evaluation of the consistency of the project with each goal, policy, or relevant subarea master plan improvement. The BPMP also includes goals, policies, etc. that are not applicable to the project or are not relevant to the analysis and, therefore, are not discussed in this section.

c. Consistency with the Central Mesa Precise Plan

The BPMP calls for the use of precise plans that support the overall goals and policies to achieve specific improvement, maintenance, and implementation programs for areas within the Park. The CMPP serves this purpose for the project area. As with the BPMP, the CMPP controls some elements that are pertinent to the project, and others that are not applicable to the project or are not relevant to this analysis. Within the CMPP, the section titled "The Precise Plan" is the most applicable of the sections because it provides the goals, objectives, recommendations, and design guidelines for each of the major plan components. Components within this section that do not apply to the project are the "Management," "Maintenance," and "Implementation" components, and are therefore not analyzed here. The other components, which are applicable to the project, as well the general goals of the Precise Plan are reiterated or summarized in Table 4.1-3, along with an evaluation of the consistency of the project with the applicable policies of the CMPP.

In addition to the more general goals, objectives, recommendations, and design guidelines, the CMPP also establishes more specific land use and development standards for various areas within the Central Mesa. The land use plans relevant to the project include the West Prado and the Palisades. Many of the specific goals, objectives, recommendations, and design guidelines provided in the CMPP for the implementation of these land use plans and analysis of the project's consistency with these policies, are discussed as applicable in Table 4.1-3.

TABLE 4.1-2
BALBOA PARK MASTER PLAN - PROJECT CONSISTENCY

ID #	Master Plan Page #	Master Plan Goal, Policy, Objective, or Recommendation	Centennial Bridge Consistency Evaluation	Alcazar Parking Lot and Centennial Road Consistency Evaluation	Pedestrian Restoration - Plaza de Panama, El Prado, and the Mall Consistency Evaluation	Parking Structure/Rooftop Park Tram System and Arizona Street Landfill Consistency Evaluation
Goals, Objectives or Design Principles						
	Goals					
BP-1	7	Create within the Park a more pedestrian-oriented environment. Reduce automobile and pedestrian conflicts. Minimize through traffic.	Traffic would be rerouted via the Centennial Bridge to the Alcazar parking lot and new parking structure to be located south of the Organ Pavilion, thus reducing pedestrian/ vehicular conflicts on El Prado and Pan American Road East. This rerouting of the traffic via the Centennial Bridge would convert the Plaza de California, El Prado, and Plaza de Panama into pedestrian-only areas. As demonstrated in Section 4.4, Traffic, the project would maintain the same level of through traffic.	The reconfigured Alcazar parking lot would provide a drop-off area that is separated from the through traffic, thus allowing safe pedestrian access to the El Prado without vehicle crossings. The Centennial Road has been designed to provide a grade separated crossing at the intersection of the Centennial Road and Pan American Road East (which would become the Pan American Promenade). This would eliminate a pedestrian/vehicular conflict at a major pedestrian corridor between the Plaza de California and Palisades.	The project would eliminate vehicle traffic from several locations on the Central Mesa, thereby reducing conflicts and providing a more pedestrian-oriented environment within the Park. El Prado and Plaza de California, Plaza de Panama, the Mall, and Pan American Road East all would be restored to pedestrian-only circulation.	Traffic would be rerouted via the Centennial Road to the new parking structure to be located south of the Organ Pavilion, thus reducing pedestrian/vehicular conflicts on El Prado, Plaza de Panama, and Pan American Road.
BP-2	7	Improve public access to the Park through an improved integrated circulation system, convenient drop-off points, better parking management, and improved and increased security. The improved circulation system shall de-emphasize the automobile while increasing public access to the Park and Park facilities.	Public access to the Park would be improved through the implementation of the Centennial Bridge, which would provide a new circulation system that would allow pedestrian drop-off and access to the centralized parking structure with reduced pedestrian/vehicular conflicts.	The Alcazar parking lot would be regraded and reconfigured to provide convenient drop-off and accessible parking, with fully accessible routes to El Prado and the Mall.	Public access to the Park would be improved through the reduction of pedestrian/vehicular conflicts and restoring pedestrian-only circulation.	The parking structure would provide additional parking for a net gain of 273 spaces within the Central Mesa. The parking structure would be designed for operational and management flexibility to accommodate special events and additional security. A tram system would be established, to transport pedestrians from the Palisades and Organ Pavilion parking structure to and from the Plaza de California.
BP-3	7	Preserve, enhance, and increase free and open parkland and establish a program of ongoing landscape design, maintenance, and replacement.	Not applicable.	Not applicable.	Open parkland would be increased with implementation of the project. Parking and vehicles would be removed from the Plaza de Panama, El Prado, Plaza de California, the Mall, and Pan American Road East and these spaces would be restored as a pedestrian open space.	Open parkland would be increased with implementation of the project. The roof of the parking structure would provide an additional 2.2 acres of parkland and gardens.
BP-4	7	Restore or improve existing building and landscaped areas within the Park.	The Centennial Bridge would minimally impact the existing vegetation in Cabrillo Canyon. Where vegetation would be removed, the project would replant the area to match the historic vegetation.	The alterations associated with the construction of the Centennial Road would include the restoration of historic understory plantings on the edges of Palm Canyon, and enhance plantings within the Alcazar parking lot.	Presently predominantly used for parking and through traffic, the Plaza de Panama El Prado, Plaza de California, the Mall, and Pan American Road East would be restored as open landscape/plaza areas. A total of 6.3 acres would be restored for pedestrian use as a result of the project.	With construction of the Organ Pavilion parking structure, the existing surface lot would be removed and replaced with a 2.2-acre rooftop park that is at-grade with the Organ Pavilion and International Cottages.
BP-5	7	Preserve and enhance the mix of cultural, active, and passive recreational uses within Balboa Park that serve national, regional, community, and neighborhood populations.	Not applicable.	Not applicable.	Presently predominantly used for parking and through traffic, the Plaza de Panama, El Prado, Plaza de California, the Mall, and Pan American Road East would be restored as open landscaped/plaza areas for pedestrian and civic uses, thereby, enhancing their use as a cultural destination.	The new rooftop park and garden would provide an additional 2.2 acres of open space for both passive and active recreational uses.

TABLE 4.1-2
BALBOA PARK MASTER PLAN - PROJECT CONSISTENCY
(continued)

ID #	Master Plan Page #	Master Plan Goal, Policy, Objective, or Recommendation	Centennial Bridge Consistency Evaluation	Alcazar Parking Lot and Centennial Road Consistency Evaluation	Pedestrian Restoration - Plaza de Panama, El Prado, and the Mall Consistency Evaluation	Parking Structure/Rooftop Park Tram System and Arizona Street Landfill Consistency Evaluation
BP-6	7	Preserve Balboa Park as an affordable park experience for all citizens of San Diego.	Not applicable.	The Alcazar parking lot would be regraded and reconfigured to include a drop-off area, 32 accessible parking spaces, and a valet staging/stacking area. All parking within the Alcazar parking lot would be free, except valet parking.	Although much of the free parking presently available within the Park (Palisades, Federal Building, Inspiration Point, and the Zoo) would be retained, the project would remove some free parking from the Central Mesa. Free parking would be removed from the Plaza de Panama, resulting in a net loss of 54 free spaces at that location (including 33 standard spaces and 21 ADA spaces).	The project would remove a total of 367 (357 standard and 10 ADA) free parking spaces from Organ Pavilion parking lot. This would be replaced with a parking structure that would provide 798 spaces. It is anticipated that a fee of $5 for five hours would be charged for parking within the new structure. While some free parking would be removed from the Central Mesa, out of the 2,728 combined parking space provided at the Organ Pavilion, Palisades, Federal Building, Inspiration Point, and Gold Gulch parking lots, 1,928 would remain free to the public. Free tram service would be provided to visitors from parking locations on the Central Mesa and West Mesa of the Park at no charge.
	Policies	***Land Use***				
BP-7	7	FREE OPEN PARK: Free and open parkland is a dwindling resource which must be protected and recovered from encroaching uses whenever possible. The Arizona Street Landfill, Central Operations Station, and Inspiration Point shall be developed as free and open parkland emphasizing multi-use play, picnic, and passive uses.	Not applicable.	Not applicable.	Predominantly used for parking and through traffic, the Plaza de Panama, El Prado, Plaza de California, the Mall, and Pan American Road East would be restored/converted as open landscaped/plaza areas.	The new rooftop park and garden would provide an additional 2.2 acres of open space for both passive and active recreational uses. Additionally, the Arizona Street Landfill would be recontoured using export material from the parking structure excavation. The landfill would be hydroseeded and recaptured for passive recreational uses.
BP	7	SPECIAL EVENTS: New and redeveloped facilities of the Central Mesa would be designed to accommodate multiple uses, including special events and maximum public access.	Not applicable.	Not applicable.	By removing pedestrian/vehicular conflicts, the use of El Prado, Plaza de California, Plaza de Panama, Mall and Pan American Promenade would provide flexible open spaces that can accommodate a variety of uses including special events.	The project would provide an additional 273 parking spaces within the Central Mesa with the introduction of the parking structure, along with a tram which would facilitate access from the parking structure to the Plaza de Panama. These improvements would increase parking and improve access to the Central Mesa, both of which are especially critical during Special Events. The proposed rooftop park would provide open spaces that can accommodate a variety of active/passive and programmed/non-programmed uses.

TABLE 4.1-2
BALBOA PARK MASTER PLAN - PROJECT CONSISTENCY
(continued)

ID #	Master Plan Page #	Master Plan Goal, Policy, Objective, or Recommendation	Centennial Bridge Consistency Evaluation	Alcazar Parking Lot and Centennial Road Consistency Evaluation	Pedestrian Restoration - Plaza de Panama, El Prado, and the Mall Consistency Evaluation	Parking Structure/Rooftop Park Tram System and Arizona Street Landfill Consistency Evaluation
BP	8	COMMERCIAL SERVICES: Commercial services within the Park shall be limited to those endeavors that enhance the Park experience but are not destination oriented.	Not applicable.	The project would not alter existing commercial services presently offered in the Park.	The project would not alter existing commercial services presently offered in the Park.	The project would not alter existing commercial services presently offered in the Park. The proposed Organ Pavilion parking structure would provide parking for a fee. Revenue generated from parking fees would be used to repay bond obligations used to fund the structure and cover operation, and maintenance of the structure and tram system. Included in the rooftop park would be a new visitor center that would include park user related services, beverages and snacks for purchase.
BP-	8	PARKING: *With the exception of the Organ Pavilion parking structure*, existing parking areas would not be expanded and new parking facilities would not be located within the Park unless: It is demonstrated that site parking and/or transportation alternatives have not, after an adequate period of testing and use, provided adequate accessibility; and an equal or greater amount of usable open parkland is recovered through the provision of parking facilities.	Not applicable.	The Alcazar parking lot would be redesigned and regraded to include a drop-off, accessible parking, and valet staging service for a net loss of 104 parking spaces. No new standard parking is proposed in this location.	Parking would be removed from the Plaza de Panama, which would be restored as open, pedestrian park area. No new parking facilities would be located within this project component.	The project would add a 265,242-square-foot underground parking structure with 798 parking spaces on three levels and a 2.2-acre rooftop park in the location of the existing Organ Pavilion surface lot. The location, scale, and design of the structure would be generally consistent with that identified in the BPMP, given the physical constraints of the site. The structure would result in a net gain of 273 parking spaces within the Central Mesa. This project component is consistent with this parking-related policy.
BP	8	EXPANSION: Expansion of all Park uses, activities, and buildings would be guided by the adopted BPMP and expansion would not encroach on open parkland, landscaped areas or plazas; and access would be provided consistent with adopted circulation policies; and expansion would not be approved until adoption of a final Master Plan, Financing Plan and Precise Plans which would determine allowable building envelopes and architectural design guidelines for all Park facilities.	The Centennial Bridge would encroach into Cabrillo Canyon, through the placement of columns and abutments. Cabrillo Canyon contains the archery range and is presently a restricted use area. The presence of the Centennial Bridge would not preclude the current uses.	Planned improvements associated with the Alcazar parking lot and Centennial Road would not encroach into open parkland.	The project would not expand the number or type of uses or activities within the Central Mesa. Planned improvements would not encroach into open parkland. Pedestrian restoration of these areas is consistent with the BPMP goals and policies. Proposed changes to the circulation elements are addressed in the BPMP amendments, as part of this application.	The Organ Pavilion parking structure would not expand the number or type of uses or activities within the Central Mesa. Planned improvements would not encroach into open parkland, and the rooftop park would provide an additional 2.2 acres of open space within the Central Mesa. Proposed changes to this area would be consistent with the goals and objectives of the BPMP.

TABLE 4.1-2
BALBOA PARK MASTER PLAN - PROJECT CONSISTENCY
(continued)

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	Policies	***Circulation***				
BP	8	ACCESSIBILITY: Accessibility to and within Balboa Park shall be increased through alternative modes of transportation including transit, inter-park shuttles, an intra-park tram, and bicycle facilities. When off-site parking, transit, tram, and shuttle systems provide adequate access to the Prado and Palisades areas, consider closing Cabrillo Bridge to automobiles and consider recovering the parking facilities at Inspiration Point as productive parkland, provided, however, that sufficient close-in parking is retained to accommodate the handicapped.	The addition of Centennial Bridge would allow El Prado at Plaza de California to be closed to traffic, as the bridge would redirect traffic to the Alcazar parking lot to accommodate close in ADA parking and vehicle access to the planned Organ Pavilion parking structure.	As outlined in the BPMP amendment, the Alcazar parking lot would be retained for drop-off, ADA access, and valet staging and stacking. This would fulfill a goal to provide close in parking to accommodate the disabled.	The project would close El Prado at Plaza de California, Plaza de Panama, the Mall, and Pan American Road East to automobiles. Doing this would restore these areas to pedestrian uses only.	The project would include the provision of an intra-park tram, which would circulate visitors from the Palisades parking area and new Organ Pavilion parking structure to the Plaza de Panama. While the tram system proposed by the project leaves open the potential for expansion, it does not address off-site transit needs; therefore, consideration of bridge closure is not applicable at this time.
BP	9	DESIGN: Design of street and parking facilities shall acknowledge both day and night use of the Park.	Lighting would meet all City requirements and ensure a safe environment for park users both during the day and evening hours.	Existing lighting within the Alcazar parking lot would be upgraded and additional lighting would be placed along the Centennial Road to achieve a consistent level of light from dusk to dawn to ensure the safety of park users.	Not applicable.	New lights would be added within the rooftop park above the Organ Pavilion parking structure and along the pedestrian/tram promenade (Pan American Road East) to achieve a consistent level of light from dusk to dawn to ensure the safety of all park users. The parking within the structure would also have adequate lighting to ensure safety and security of the park users.
BP	9	DROP-OFF AND PICK-UP: Adequate drop-off, pick-up, emergency, and service/delivery access shall be provided in the Prado and Palisades areas.	With implementation of the Centennial Bridge, emergency access would continue to be provided via Cabrillo Bridge through El Prado to Plaza de Panama. Managed service/delivery access would be accommodated on an as-needed/approved basis for all buildings that front on the proposed pedestrian-only spaces.	The Alcazar parking lot would be redesigned to provide ADA parking, as well as, passenger drop-off, museum loading, and valet staging and stacking.	All parking, including ADA parking, would be removed from Plaza de Panama. Emergency access would continue to be provided via Cabrillo Bridge through El Prado to Plaza de Panama. Managed service/delivery access would be accommodated on an as-needed/approved basis for all buildings that front on the proposed pedestrian-only spaces.	Pick-up and drop-off would be accommodated at the terminus of Presidents Way at the Pan American Promenade.
BP	9	PRADO AND PALISADES RESTORATION: The Prado and Palisades plazas shall be restored as pedestrian-oriented plazas in which through vehicular traffic is minimized and conflicts with pedestrians are reduced.	By redirecting traffic onto the Centennial Bridge, the pedestrian restoration of the Prado including minimizing pedestrian and vehicle conflicts, would be possible.	Not applicable.	Implementation of the project would remove cars from the Plaza de Panama, El Prado, Plaza de California, the Mall, and Pan American Road East. Pedestrian uses on the west El Prado, Plaza de Panama, Plaza de California, and the Mall would be restored. The future restoration of the Palisades Plaza would not be prohibited by the implementation of this project.	The project would not provide improvements within the Palisades area; however, the proposed design has been developed to enable the Palisades area to be returned to pedestrian uses at a future time.

TABLE 4.1-2
BALBOA PARK MASTER PLAN - PROJECT CONSISTENCY
(continued)

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BP	9	REPLACEMENT PARKING: Replace parking displaced by the landscaping of the Prado and Palisades plazas by the construction of an Organ Pavilion parking structure. That structure shall be designed according to the following general design parameters: · The top of the structure shall not rise above the floor of the Organ Pavilion; · The structure shall be built within the existing footprint of the Organ Pavilion parking lot and would provide between 1,000–1,500 spaces; · All parking shall be contained within the structure, not on visible deck areas; and · The structure shall be screened from view through landscaping.	Not applicable.	Not applicable.	Parking displaced by the pedestrian restoration would be recovered in Organ Pavilion parking structure, for a net gain of 273 spaces.	A 265,242-square-foot underground parking structure would be constructed within the footprint of the existing Organ Pavilion surface lot. The structure would provide 798 parking spaces on three levels and would replace parking displaced from the Plaza de Panama, redesign of the Alcazar parking lot, and redesign of the Organ Pavilion parking lot. The top of the structure would generally match the existing grades of the Organ Pavilion and International Cottages. The parking structure would be approximately 202 spaces short of the minimum number specified in the BPMP. To accommodate 1,000 spaces, a fourth subterranean level would be required. The depth of this level would pose substantial engineering constraints, including shoring, mechanical ventilation, and special fire protection parameters. The structure would provide a new 2.2-acre rooftop park. The parking structure would be designed so that exterior elevations would be screened from views looking east and north toward the structure by landscaping and mounding of the adjacent grades.
BP	9	ADDITIONAL PARKING: Additional parking for the Central Mesa area of Balboa Park shall be provided through off-site shared parking facilities in a manner that supports increased transit and shuttle access to the Park.	No off-site parking is required as part of the project.	No off-site parking is required as part of the project.	No off-site parking is required as part of the project.	No off-site parking is required as part of the project.
BP	9	RETENTION OF PARKING: Shared off-site parking facilities, shuttle service, and transit shall be providing adequate access to the Park before any existing parking spaces are eliminated at Inspiration Point or Alcazar Garden.	Not applicable.	The Alcazar parking lot would be redesigned to provide ADA parking, as well as, passenger drop-off, museum loading, and valet services; 136 standard spaces would be lost in this location and recaptured in the Organ Pavilion parking structure. Additionally, as part of the project, a tram system would shuttle visitors from parking lots to various locations in the heart of the Park.	Not applicable.	As part of the project, a tram system would shuttle visitors from parking lots on both the Central Mesa and West Mesa to various locations in the heart of the Park.

TABLE 4.1-2
BALBOA PARK MASTER PLAN - PROJECT CONSISTENCY
(continued)

ID #	Master Plan Page #	Master Plan Goal, Policy, Objective, or Recommendation	Centennial Bridge Consistency Evaluation	Alcazar Parking Lot and Centennial Road Consistency Evaluation	Pedestrian Restoration - Plaza de Panama, El Prado, and the Mall Consistency Evaluation	Parking Structure/Rooftop Park Tram System and Arizona Street Landfill Consistency Evaluation
BP	9	PEDESTRIANS/BICYCLES: Provide pedestrian and bicycle access into the Park from public rights-of-way and City open space.	Pedestrian and bicycle access would be provided on the Centennial Bridge.	Bicycle access would be provided on the Centennial Road.	The Plaza de Panama would be closed to vehicle traffic, thus creating a solely pedestrian and bicycle connection from the Bridge through Plaza de California and El Prado and into the Central Mesa.	Dedicated pedestrian access routes from the Alcazar parking lot to the new rooftop park would be created by the Palm Canyon walkway. Pedestrians and bicycles would utilize the Pan American Promenade to access the Palisades area.
BP	9	HANDIPCAPPED ACCESS: Handicapped and elderly access to the Park shall be ensured.	The Centennial Bridge would be constructed as an ADA accessible path of travel.	The existing Alcazar parking lot would be regraded to create an ADA-compliant surface over the entire lot and redesigned to provide additional ADA parking as well as passenger drop-off, museum loading, and valet services/stacking. The proposed lot would include 32 ADA stalls and approximately 18 valet stacking stalls, and a passenger drop-off area adjacent to the historic Alcazar Garden. A new ADA accessible route between the Alcazar parking lot and the Plaza de Panama would be created and the existing ADA accessible route also would be retained through the Alcazar Garden and House of Charm arcades.	All parking, including ADA parking, would be removed from the Plaza de Panama.	ADA spaces would be provided within the new Organ Pavilion parking structure. An accessible tram system would carry passengers from the Palisades parking area and parking structure to the Plaza de Panama.
	Policies	***Architecture and Landscape Design***				
BP	9-10	VIEWS: Enhance major off-site viewpoints, internal viewpoints, and views from adjacent neighborhoods. Screen or buffer incompatible uses and views in a timely fashion and in a manner consistent with surrounding landscaping and Park atmosphere.	Implementation of the Centennial Bridge would not result in negative impacts to any established viewpoint. The view from the western entrance of the Park on the Cabrillo Bridge would be modified with construction of the Centennial Bridge. The Centennial Bridge would connect to Cabrillo Bridge before the Plaza de California. New and existing vegetation would provide screening. A detailed analysis of the visual impacts of the proposed improvements from key vantage points is provided in Section 4.3.	Implementation of these project components would not result in negative impacts to off-site or internal viewpoints. No established key public viewing locations are located in proximity to the parking lot or Centennial Road.	Implementation of these project components would not result in negative impacts to off-site or internal viewpoints. Vehicular traffic and parking would be removed from El Prado, Plaza de Panama, the Mall, and Pan American Road East, consistent with historical context of the Park. A detailed analysis of the visual impacts of the proposed project from key vantage points is provided in Section 4.3.	Implementation of the proposed parking structure would not result in negative impacts to off-site or internal viewpoints. The Organ Pavilion parking structure would be located primarily below grade. The new rooftop park would be consistent with the original California Garden, which once occupied the site. Additionally, the parking structure would be designed so exterior elevations would not be visible from the primary vantage points (looking east and north toward the structure). A detailed analysis of the visual impacts of the proposed project from key vantage points is provided in Section 4.3.
BP	10	LANDSCAPE STANDARDS: Standards of the City Landscape Ordinance shall be applied as a minimum to all existing, newly constructed, and rehabilitated Park structures and facilities.	The landscape improvements would adhere to all standards of the City's Landscape Ordinance. All landscape and open space improvements also would be consistent with the historic use of the Central Mesa and any applicable HRRs, including the SOI Rehabilitation Standards.	The landscape improvements would adhere to all standards of the City's Landscape Ordinance. All landscape and open space improvements also would be consistent with the historic use of the Central Mesa and any applicable HRRs, including the SOI Rehabilitation Standards.	The landscape improvements would adhere to all standards of the City's Landscape Ordinance. All landscape and open space improvements also would be consistent with the historic use of the Central Mesa and any applicable HRRs, including the SOI Rehabilitation Standards.	The landscape improvements would adhere to all standards of the City's Landscape Ordinance. All landscape and open space improvements also would be consistent with the historic use of the Central Mesa and any applicable HRRs, including the SOI Rehabilitation Standards.

TABLE 4.1-2
BALBOA PARK MASTER PLAN - PROJECT CONSISTENCY
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BP	10	LANDSCAPE THEMES: Maintain and enhance the long-established landscape themes developed Balboa Park.	Any vegetation affected by construction of the Centennial Bridge would be replaced in a manner consistent with the historic landscaping of the canyon.	The Centennial Road would traverse a series of different landscape themes within the Central Mesa including Palm Canyon and the northern edge of Australian Canyon to the south of the Organ Pavilion parking structure. The area that would be disturbed as part of the project's construction would be revegetated with plant species that reflect the long established themes of the adjacent landscape.	The rehabilitation design of the Plaza de Panama, El Prado, and Plaza de California would recall the original historic intent and appearance. While the Mall landscape would reflect the original historic intent, the east and west sides of the Mall would be revegetated with plant species that reflect the long-established themes of the adjacent landscapes of Palm Canyon and the Japanese Friendship Garden.	The rooftop park would be landscaped with a variety of garden spaces similar to the historic landscape of the Central Mesa, while also providing larger open lawn spaces to accommodate a variety of passive and active uses.
BP	10	ARCHITECTURE: Expansion, rehabilitation, and new construction would be designed according to adopted design guidelines such that appropriate architectural styles are incorporated or replicated and significant views, plazas, open space, and design symmetry are not disrupted.	The Centennial Bridge component of the project would not comply with SOI Rehabilitation Standards 2 or 9, primarily because the construction of the Centennial Bridge would not be consistent with the historical visual and spatial relationships of the Cabrillo Bridge and the California Quadrangle complex. The Centennial Bridge is, therefore, inconsistent with this BPMP policy.	The Centennial Road would have impacts on historic spatial characteristics and views, and circulation patterns of the district. The project proposes to restore small areas along the rim of the canyon impacted by grading. With the planned restoration, the impacted area would achieve its historic appearance. The Centennial Road and Alcazar parking lot improvements would, therefore, be consistent with BPMP policies related to architecture.	All proposed improvements would be consistent with the historic use of the Central Mesa and any applicable HRRs, including the SOI Rehabilitation Standards, along with the BPMP and CMPP.	This aspect of the project would comply with the SOI Rehabilitation Standards. The Organ Pavilion parking lot is not a historic feature of Balboa Park and it is not a contributor to the Balboa Park National Historic Landmark District. The proposed California Garden would also comply with the SOI Rehabilitation Standards, as there was a public garden built in this area for the 1935 California Pacific International Exposition.
	Policies	***Horticulture***				
BP	10	PLANT INVENTORY: Establish an inventory of existing plant materials and their condition and ensure their replacement and care through a thorough horticultural maintenance program, including a reforestation plan to replace trees lost in past years to wind and other natural forces.	A tree survey, which identified the location, species, condition, and diameter of each tree in the project area, was completed in conjunction with project. The tree survey includes detailed lists of trees to remain, trees to be removed, as well as trees to be removed and transplanted.	A tree survey, which identifies the species, condition, and diameter of each in the project area, was completed in conjunction with project. The tree survey includes detailed lists of trees to remain, trees to be removed, as well as trees to be removed and transplanted.	A tree survey, which identifies the species, condition and diameter of each in the project area, was completed in conjunction with project. The tree survey includes detailed lists of trees to remain, trees to be removed, as well as trees to be removed and transplanted.	A tree survey, which identifies the species, condition, and diameter of each in the project area, was completed in conjunction with project. The tree survey includes detailed lists of trees to remain, trees to be removed, as well as trees to be removed and transplanted.
	Policies	***Historic Preservation***				
BP	10	PRESERVATION, MAINTENANCE, AND ENHANCEMENT: Buildings, arcades, plazas, and horticultural elements which contribute to the local historic designation and national historic status of the Park should be preserved, maintained, and enhanced.	The Centennial Bridge component of the project would not comply with SOI Rehabilitation Standards 2 or 9, primarily because the construction of the Centennial Bridge would not be consistent with the historical visual and spatial relationships of the Cabrillo Bridge and the California Quadrangle complex. The Centennial Bridge is, therefore, inconsistent with this BPMP policy.	The Centennial Road would have impacts on historic spatial characteristics and views, and circulation patterns of the district. The project proposes to restore disturbed areas along the rim of the canyon impacted by grading. With the planned restoration, the impacted area would achieve its historic appearance. The Centennial Road and Alcazar parking lot improvements would, therefore, be consistent with BPMP policies related to architecture.	All proposed improvements would be consistent with the historic use of the Central Mesa and any applicable HRRs, including the SOI Rehabilitation Standards, along with the BPMP and CMPP. Also, the rehabilitation design of the Plaza de Panama, El Prado, and Plaza de California would recall the historic appearance. This project component would be consistent with BPMP policies related to historic preservation.	This aspect of the project would comply with the SOI Rehabilitation Standards. The Organ Pavilion parking lot is not a historic feature of Balboa Park and it is not a contributor to the Balboa Park National Historic Landmark District. The proposed California Garden would also comply with the SOI Rehabilitation Standards, as there was a public garden built in this area for the 1935 California Pacific International Exposition. This project component would be consistent with BPMP policies related to historic preservation.

TABLE 4.1-2
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BP	10	REHABILITATION and NEW CONSTRUCTION: Rehabilitation and new construction should respect the historical and architectural character of the existing historic structures, arcades, plazas, and horticultural element of the Park.	The Centennial Bridge component of the project would not comply with SOI Rehabilitation Standards 2 or 9, primarily because the construction of the Centennial Bridge would not be consistent with the historical visual and spatial relationships of the Cabrillo Bridge and the California Quadrangle complex. The Centennial Bridge is, therefore, inconsistent with this BPMP policy.	The Centennial Road would have impacts on historic spatial characteristics and views, and circulation patterns of the district. The project proposes to restore small areas along the rim of the canyon impacted by grading. With the planned restoration, the impacted area would achieve its historic appearance. The Centennial Road and Alcazar parking lot improvements would, therefore, be consistent with BPMP policies related to architecture.	All proposed improvements would be consistent with the historic use of the Central Mesa and any applicable HRRs, including the SOI Rehabilitation Standards, along with the BPMP and CMPP. Section 4.2 provides a more detailed analysis of the project's impacts on the historical and architectural character of the site. This project component would be consistent with BPMP policies related to historic preservation.	This aspect of the project would comply with the SOI Rehabilitation Standards. The Organ Pavilion parking lot is not a historic feature of Balboa Park and it is not a contributor to the Balboa Park National Historic Landmark District. The proposed California Garden would also comply with the SOI Rehabilitation Standards, as there was a public garden built in this area for the 1935 California Pacific International Exposition. This project component would be consistent with BPMP policies related to historic preservation.
	Policies	***Safety and Security***				
BP	10-11	SAFE ENVIRONMENT / LIGHTING: Provide adequate lighting in plazas, parking lots, along primary pedestrian routes, and in areas of nighttime activity.	Lighting would be provided on the Centennial Bridge to meet all City requirements and ensure a safe environment for park users.	The project would improve upon the existing lighting within the Alcazar lot and along the Centennial Road to create a more safe and secure environment.	The project would improve upon the existing lighting within the Central Mesa through the reproduction of the Historic 1915 light fixtures within the Plaza de Panama, El Prado, Plaza de California and the Mall. The proposed fixture locations have been selected to match the original 1915 installation.	The project would improve upon the existing lighting within the Organ Pavilion parking lot, through the addition of new lights within the rooftop park and along the pedestrian/tram promenade (Pan American Road East) to create a safer and secure environment. The parking within the structure would also have adequate lighting to ensure safety and security of the Park users.
	Policies	***Implementation***				
BP		NEIGHBORING COMMUNITIES: Planning and development within Balboa Park shall consider the community plans of, and potential Park impacts on, neighboring communities.	The project would not result in any policy inconsistencies with the community plans of neighboring communities including Greater Golden Hill, Greater North Park, or Uptown. Additionally, public outreach efforts have been conducted with numerous stakeholders including neighborhood community planning groups, residents, and other organizations. Impacts to surrounding communities have been addressed in relevant sections of this EIR, including land use and traffic. Eighteen alternatives, proposed by the public and stakeholder groups, are addressed in Section 9.0 of the EIR, each of which would minimize, to some degree, potential impacts of the project.	The project would not result in any policy inconsistencies with the community plans of neighboring communities including Greater Golden Hill, Greater North Park, or Uptown. Additionally, public outreach efforts have been conducted with numerous stakeholders including neighborhood community planning groups, residents, and other organizations. Impacts to surrounding communities have been addressed in relevant sections of this EIR, including land use and traffic. Eighteen alternatives, proposed by the public and stakeholder groups, are addressed in Section 9.0 of the EIR, each of which would minimize, to some degree, potential impacts of the project.	The project would not result in any policy inconsistencies with the community plans of neighboring communities including Greater Golden Hill, Greater North Park, or Uptown. Additionally, public outreach efforts have been conducted with numerous stakeholders including neighborhood community planning groups, residents, and other organizations. Impacts to surrounding communities have been addressed in relevant sections of this EIR, including land use and traffic. Eighteen alternatives, proposed by the public and stakeholder groups, are addressed in Section 9.0 of the EIR, each of which would minimize, to some degree, potential impacts of the project.	The project would not result in any policy inconsistencies with the community plans of neighboring communities including Greater Golden Hill, Greater North Park, or Uptown. Additionally, public outreach efforts have been conducted with numerous stakeholders including neighborhood community planning groups, residents, and other organizations. Impacts to surrounding communities have been addressed in relevant sections of this EIR, including land use and traffic. Eighteen alternatives, proposed by the public and stakeholder groups, are addressed in Section 9.0 of the EIR, each of which would minimize, to some degree, potential impacts of the project.

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Subarea Master Plan Concepts						
Subarea A - El Prado West						
BP	24	The Cabrillo Bridge would carry only eastbound automobile traffic, freeing the westbound lane for the intra-park tram, inter-park shuttle, bicycles, and pedestrian use. The direction of travel could be reversed or two-way traffic could be allowed if needed to facilitate traffic flow during certain times, such as after theater or during other special events.	The Cabrillo Bridge would continue to carry both east- and westbound vehicle traffic and would continue to allow for the intra-park tram. The Centennial Bridge would reroute vehicular traffic from the Cabrillo Bridge, just west of the Plaza de California. Traffic would be directed to the Alcazar parking lot and the new Organ Pavilion parking structure. Therefore, this project component would not be consistent with the BPMP circulation concept for Subarea A.	Not applicable.	Not applicable.	Not applicable.
BP	24	Automobile parking would be eliminated from the Plaza de Panama which would become a pedestrian area. Enhanced pavement, plantings, sculptural and/or water features, and appropriate and attractive site furnishings would be provided.	Not applicable.	Not applicable.	The Plaza de Panama would be redesigned in a manner consistent with its historic use. Vehicle parking would be removed from the Plaza, which would be restored as a solely pedestrian area with water features, landscaping, and sculptures. This would be consistent with BPMP concepts for Subarea A.	Not applicable.
BP	24	Shuttle stops would be provided in the center of the Prado to facilitate access to all institutions.	Not applicable.	Not applicable.	The tram would stop at the top of the Mall near the Plaza de Panama, facilitating access to institutions on the Central Mesa. The tram system is designed to be flexible and can be adjusted, or expanded to accommodate events and activities.	Not applicable.
Subarea C - Palisades						
BP	32	A parking structure would be developed on the Organ Pavilion parking lot. The top of the parking garage would function as a pedestrian use area.	Not applicable.	Not applicable.	Not applicable.	The proposed new parking structure and rooftop park would be constructed at the location of the existing Organ Pavilion surface lot. The new structure would also allow pedestrian and vehicular traffic to be safely separated. In addition, the new multi-level underground structure would allow reclamation of open space for landscape and pedestrian/park use on the top of the parking structure.

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BALBOA PARK MASTER PLAN - PROJECT CONSISTENCY
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BP	32	A pedestrian promenade would be created on the western side of the parking structure to create a strong pedestrian linkage with the Prado. Consideration should be given to realigning Presidents Way through the Organ Pavilion parking structure to further emphasize pedestrian uses along the promenade. Automobile access from the parking structure to the Prado would pass under the promenade.	Not applicable.	Not applicable.	Not applicable.	The new parking structure would allow for the separation of pedestrian and vehicular traffic. A new pedestrian walkway and bridge, the "Pan American Promenade," located along the western edge of the rooftop park, would be grade-separated from vehicular traffic, which would circulate via the portion of Centennial Road, located along the east side of the structure. The road would provide access to the parking structure from the east and would continue to Presidents Way and Park Boulevard.
BP	32	A drop-off and pick-up area would be created south of the parking structure on the Presidents Way alignment. This cul-de-sac may also be used as a shuttle stop.	Not applicable.	Not applicable.	Not applicable.	A tram stop and turn-around is proposed near the intersection of the Pan American Promenade and Presidents Way in proximity to the new parking structure.
BP	32	Automobiles would be eliminated from the central Palisades Plaza which would be returned to pedestrian use much as it was for the 1935 Exposition.	The central Palisades Plaza is not a part of the project; however, the proposed roadway alignments have been designed to enable restoration of the Palisades Plaza to pedestrian use in the future.	The central Palisades Plaza is not a part of the project; however, the proposed roadway alignments have been designed to enable restoration of the Palisades Plaza to pedestrian use in the future.	The central Palisades Plaza is not a part of the project; however, the proposed roadway alignments have been designed to enable restoration of the Palisades Plaza to pedestrian use in the future.	The central Palisades Plaza is not a part of the project; however, the proposed roadway alignments have been designed to enable restoration of the Palisades Plaza to pedestrian use in the future.
Inspiration Point North - Subarea D						
BP	27	The large parking lots to the southwest of the site would be retained for public parking. The intra-park tram system would shuttle park users from this parking lot to the main use areas of the Park. The parking lots would be landscaped to conform to the City Landscape Ordinance.	Not applicable.	Not applicable.	Not applicable.	A tram system which would circulate visitors from parking areas on potentially both the west and central mesas to areas within the center of the Park would be provided.
Morley Field and Arizona (Street) Landfill – Subarea H						
BP	58	The Arizona Street Landfill would be revegetated with open meadow areas, trees, botanical garden areas, pedestrian walks, picnic areas, a parking lot, and a tot lot.	Not applicable.	Not applicable.	Not applicable.	The Arizona Street Landfill would be recontoured using export material from the parking structure excavation. The landfill would be hydroseeded and recaptured for passive recreational uses.
Master Plan Elements						
Landscape, Architecture and Site Design						
BP	63	Because the Prado and Palisades areas have been designated National Historic Landmarks and are on the National Register of Historic Places, rehabilitation and new construction should follow the SOI Rehabilitation Standards.	The Centennial Bridge component of the project would not comply with SOI Rehabilitation Standards 2 or 9, primarily because the construction of the Centennial Bridge would not be consistent with the historical visual and spatial relationships of the Cabrillo Bridge and the California Quadrangle complex. The Centennial Bridge is, therefore, inconsistent with this BPMP policy.	The Centennial Road would have impacts on historic spatial characteristics and views and circulation patterns of the district. The project proposes to restore small areas along the rim of the canyon impacted by grading. With the planned restoration, the impacted area would achieve its historic appearance. The Centennial Road and Alcazar parking lot improvements would, therefore, be consistent with BPMP policies related to architecture.	All proposed improvements would be consistent with the historic use of the Mesa and any applicable Historic Resources regulations, including the SOI Rehabilitation Standards, along with the BPMP and CMPP. Also, the rehabilitation design of the Plaza de Panama, the El Prado, and Plaza de California would recall the their historic appearance.	All proposed improvements would be consistent with the historic use of the Mesa and any applicable HRR, including the SOI Rehabilitation Standards, along with the BPMP and CMPP.

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BP		This element also sets forth guidelines for mechanical equipment, street furniture, walls, and fencing, trash enclosures, etc. The guidelines generally govern siting and design of such treatments.	As illustrated in the concept plans, the project would incorporate design elements pursuant to these guidelines.	As illustrated in the concept plans, the project would incorporate design elements pursuant to these guidelines.	As illustrated in the concept plans, the project would incorporate design elements pursuant to these guidelines.	As illustrated in the concept plans, the project would incorporate design elements pursuant to these guidelines.
Access, Circulation and Parking						
BP	76	**Regional transportation**: A primary objective of the Master Plan is to provide better access to the Park, and to provide alternatives to the car as the principal means of transportation to and within the Park. This element discusses the proposed regional transportation network and identifies opportunities to connect the system to Balboa Park.	Connectivity to the regional transit network is outside the scope of the project. The project would not preclude connectivity to regional transportation.	Connectivity to the regional transit network is outside the scope of the project. The project would not preclude connectivity to regional transportation.	Connectivity to the regional transit network is outside the scope of the project. The project would not preclude connectivity to regional transportation.	Connectivity to the regional transit network is outside the scope of the project. The project would not preclude connectivity to regional transportation.
BP	78	**Local and Internal Park Circulation Pedestrian Access:** It is intended that Balboa Park become more pedestrian-oriented. Conflicts between automobiles and pedestrians should be minimized. One would be able to walk from the Zoo to the aerospace historical center without crossing a street.	The Centennial Bridge is proposed to improve internal Park circulation within the Central Mesa. The bridge would reroute traffic from El Prado, thus reducing pedestrian/vehicular conflicts, and provide a means for automobiles to access the new Organ Pavilion parking structure.	Pedestrian circulation would be enhanced because the Centennial Road would provide a dedicated, grade-separated route for vehicular circulation, thus reducing pedestrian/vehicular conflicts. The existing Palm Canyon walkway would be separated from, but parallel to the Centennial Road. This walkway would provide pedestrian access from the Alcazar parking lot to the International Cottages, Organ Pavilion parking structure, and Palisades.	Pedestrian connections would be enhanced and conflicts reduced through the restoration of these areas to pedestrian-only use.	The rooftop park would be connected to the Organ Pavilion via the Pan American Promenade, which would cross over Centennial Road, thus reducing pedestrian/vehicular conflicts between the new parking structure and the Plaza de Panama.
		Disabled Persons Access: All facilities within the Park shall be accessible to the disabled. Drop-off areas would be provided in the general vicinity (of every museum or facility). The paths between the facilities and the drop-off areas would be regulated by Title 24.	The Centennial Bridge would be constructed as an ADA-accessible route.	The Alcazar parking lot would be redesigned to provide additional ADA parking as well as passenger drop-off, museum loading, and valet services/ stacking. An existing ADA path of travel would be maintained from the Alcazar parking lot to El Prado and a new path of travel would be provided between the Alcazar parking lot and the Plaza de Panama.	Proposed trams would provide an accessible means of circulation throughout the project area. Plaza de Panama, El Prado, and the Mall improvements shall be ADA compliant.	Proposed trams would provide an ADA-accessible means of circulation throughout the project area.
		Bicycle Routes: Greater use of bicycles should be accommodated to enhance the overall recreational experience. In support of increasing bicycle access to the Park, bicycle lockers should be provided.	The bicycle circulation route would include bicycles accessing the Park via the Centennial Bridge and road similar to automobiles (see Figure 3-32). The Centennial Bridge and Road would accommodate a shared bike/car travel way.	The bicycle circulation route would include bicycles accessing the Park via the Centennial Bridge and Road, through the Alcazar parking lot, similar to automobiles (see Figure 3-32). The Centennial Bridge and Road would accommodate a shared14-foot bike/car travel way.	Bicycles would continue to be permitted along El Prado and within the Plaza de California, Plaza de Panama, and the Mall; however, consistent with the BPMP, no dedicated bicycle routes or facilities would be provided.	Bicycles would be accommodated on the Centennial Road via a shared 14-foot lane. Bicycle storage facilities would be conveniently located within the parking structure and on the rooftop park.

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BP	79	**Vehicular access**: Routes are identified on Figure 13 of the BPMP; Pershing Drive serving as the primary Park entrance.	Access to the Park at the western entrance would be altered with implementation of the project. The project would reroute vehicular traffic from the Cabrillo Bridge on El Prado at Plaza de California via a new Centennial Bridge. Traffic would be directed to the Alcazar parking lot and the new Organ Pavilion parking structure. The project would not impact the Pershing Drive entrance to the Park.	Not applicable.	Not applicable.	Not applicable.
BP	79	**Service, Delivery, and Emergency Access:** Service and emergency vehicles would be able to utilize certain pedestrian malls and plazas for access. Retractable bollards would keep traffic off the service and emergency access routes. These routes are identified on BPMP Figure 13.	In consultation with the San Diego Fire Department, the proposed Centennial Bridge concept has been designed to be in compliance with emergency access requirements. Retractable bollards would be in place west of the California Building's archway to allow emergency vehicles to access El Prado; but all other vehicular traffic would be routed south and east via the proposed Centennial Road.	Emergency vehicles would access the Alcazar parking lot via the Centennial Bridge from the west or via the Centennial Road from the southeast. The Centennial Road and Centennial Bridge would meet all emergency vehicle access requirements.	Emergency vehicles would be permitted within the Plaza de California, on El Prado, the Mall, and Pan American Road East and within the Plaza de Panama. Retractable bollards would be in place west of the California Building's archway to allow only emergency vehicles to access El Prado. Access to these areas would be provided via Cabrillo Bridge from the west and Presidents Way from the east. Retractable bollards would be located at the Pan American Promenade and Presidents Way.	Emergency vehicles would access the new Organ Pavilion parking structure and rooftop park from the west via Presidents Way and the Pan American Promenade and can access the east side of the structure via the Centennial Road. Retractable bollards would be located at the Pan American Promenade and Presidents Way.
BP	78	**Parking Management:** The Balboa Park Parking Management Plan includes five proposals relevant to the project site. These include: 1. Provide intra-park tram service. 2. Improve security in Central Mesa parking areas and walkways, especially at night. 3. Institute reserved employee parking lots which are currently poorly utilized. 4. Improve signage within and outside of the park. 5. Valet parking should be implemented especially at night.	Not applicable	The project would meet the applicable objectives of the parking management plan: 1) Intra-park tram service would be provided within the Central Mesa. 2) Existing lighting within the Alcazar parking lot would be upgraded and additional lighting would be placed along the Centennial Road to achieve a consistent level of light from dusk to dawn to ensure the safety of park users. 3) The project does not plan to implement an employee parking management plan. However, due to the changes proposed for the project, a "passive" form of employee parking management would occur. With the reduction of free, close-in parking, employees and staff would be expected to park in more remote parking lots. These include the Pan American lot, Federal Building lots, and the Inspiration Point parking lot. Demand studies have been completed to ensure that there is sufficient parking supply available for these parkers.	The project would meet the objectives of the parking management plan: 1) Intra-park tram service would be provided within the Central Mesa. 2) The project would improve upon the existing lighting within the Central Mesa through the reproduction of the Historic 1915 light fixtures within the Plaza de Panama, El Prado, Plaza de California, and the Mall. 3) The project does not plan to implement an employee parking management plan. However, due to the changes proposed for the project, a "passive" form of employee parking management would occur. With the reduction of free, close-in parking, employees and staff would be expected to park in more remote parking lots. These include the Pan American lot, Federal Building lots, and the Inspiration Point parking lot. Demand studies have been completed to ensure that there is sufficient parking supply available for these parkers.	The project would meet the objectives of the parking management plan: 1) Intra-park tram service would be provided within the Central Mesa. 2) New lights would be added within the rooftop park above the Organ Pavilion parking structure and along the pedestrian/tram promenade (Pan American Road East) to achieve a consistent level of light from dusk to dawn to ensure the safety of all park users. 3) The project does not plan to implement an employee parking management plan. However, due to the changes proposed for the project, a "passive" form of employee parking management would occur. With the reduction of free, close-in parking, employees and staff would be expected to park in more remote parking lots. These include the Pan American lot, Federal Building lots, and the Inspiration Point parking lot. The existing red trolley service and proposed

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				4) The project would implement applicable directional signage to facilitate efficient circulation and parking management, components of the 2006 Tilghman Parking Management Study, which apply to the Central Mesa. Off-site signage (outside of the limits of Balboa Park) is not anticipated, other than updating some existing directional signage that may exist at Park Boulevard and Presidents Way and/or at the west end of the Cabrillo Bridge. 5) Valet services (and stacking) would be provided within the Alcazar parking lot.	4) The project would implement applicable directional signage to facilitate efficient circulation and parking management, components of the 2006 Tilghman Parking Management Study, which apply to the Central Mesa. Off-site signage (outside of the limits of Balboa Park) is not anticipated, other than updating some existing directional signage that may exist at Park Blvd and Presidents Way and/or at the west end of the Cabrillo Bridge. 5) Valet services presently available in the Plaza de Panama would be relocated to the Alcazar parking lot.	tram system would operate during normal hours to service the employees and staff at the Park. Demand studies have been completed to ensure that there is sufficient parking supply available for these parkers. 4) The project would implement applicable directional signage to facilitate efficient circulation and parking management, components of the 2006 Tilghman Parking Management Study, which apply to the Central Mesa. Off-site signage (outside of the limits of Balboa Park) is not anticipated, other than updating some existing directional signage that may exist at Park Boulevard and Presidents Way and/or at the west end of the Cabrillo Bridge. 5) Valet parking spaces (not service) would be located in the Organ Pavilion parking structure.
BP	82	**Long-range Parking Strategies.** Solutions proposed include the Organ Pavilion parking structure and transit to the Park.	Not applicable.	Not applicable.	Not applicable.	The project includes a 265,242-square-foot underground Organ Pavilion parking structure, which would provide 798 parking spaces on three levels with a 2.2-acre rooftop park. An intra-park tram system would be provided; however, regional transit is outside the scope of the project.
BP	82	**Arizona Landfill Site.** According to demand estimates, the Inspiration Point lots could accommodate spillover demands from both the Central Mesa and the Zoo during peak summer weekends. The proposed tram system should include the Zoo, so that the use of the Arizona Landfill site can be phased out and eventually reclaimed**.**	Not applicable.	Not applicable.	Not applicable.	The Arizona Street Landfill would be recontoured using export material from the parking structure excavation. The landfill would be hydroseeded and recaptured for passive recreational uses. No overflow parking would be accommodated at this location.

TABLE 4.1-2
BALBOA PARK MASTER PLAN - PROJECT CONSISTENCY
(continued)

ID #	Master Plan Page #	Master Plan Goal, Policy, Objective, or Recommendation	Centennial Bridge Consistency Evaluation	Alcazar Parking Lot and Centennial Road Consistency Evaluation	Pedestrian Restoration - Plaza de Panama, El Prado, and the Mall Consistency Evaluation	Parking Structure/Rooftop Park Tram System and Arizona Street Landfill Consistency Evaluation
Historic Preservation						
BP	93	The overarching Policy Goal of this element is "to preserve, maintain and enhance the 1915 and 1935 Exposition buildings, arcades, plazas, landscape horticultural elements, as well as the other building and site features which contribute to the local significance and the National Historic Landmark status of the Park. Rehabilitation and new construction should respect the historical architectural character of the historic structures and site features in the Park."	The Centennial Bridge component of the project would not comply with SOI Rehabilitation Standards 2 or 9, primarily because the construction of the Centennial Bridge would have significant impacts on the Cabrillo Bridge and the California Quadrangle complex. The Centennial Bridge is, therefore, inconsistent with this BPMP policy.	The Centennial Road would have impacts on historic spatial characteristics and views, and circulation patterns of the district. The project proposes to restore small areas along the rim of the canyon impacted by grading. With the planned restoration, the impacted area would achieve its historic appearance. The Centennial Road and Alcazar parking lot improvements would, therefore, be consistent with BPMP policies related to architecture.	Improvements would be consistent with the historic use of the Central Mesa and any applicable HRRs, including the SOI Rehabilitation Standards, along with the BPMP and CMPP. Also, the rehabilitation design of the Plaza de Panama, El Prado, and Plaza de California would recall their historic appearance.	These aspects of the project would comply with the SOI Rehabilitation Standards. The Organ Pavilion parking lot is not a historic feature of Balboa Park and it is not a contributor to the Balboa Park Historic District. The California Garden, proposed within the rooftop park, would comply with the SOI Rehabilitation Standards, as there was a garden built in this area for the 1935 California Pacific International Exposition. The Arizona Street Landfill is located outside the NHLD, and is not an historical resource (see Appendix B-2).
Safety and Security						
BP	95	This element sets forth objectives for providing better security within the Park including: (1) improved lighting and (2) enhanced emergency access.	1) Lighting: Lighting would meet all City requirements and ensure a safe environment for park users. 2) Emergency Access: In consultation with the San Diego Fire Department, the proposed Centennial Bridge concept has been designed to be in compliance with emergency access requirements. Retractable bollards would be in place west of the California Building's archway to allow emergency vehicles to access El Prado; but all other vehicular traffic would be routed south and east via the proposed Centennial Road.	1) Lighting: Existing lighting within the Alcazar parking lot would be upgraded and additional lighting would be placed along the Centennial Road to achieve a consistent level of light from dusk to dawn to ensure the safety of all park users 2) Emergency Access: Emergency vehicles would access the Alcazar parking lot via the Centennial Bridge from the west or via the Centennial Road from the southeast. The Centennial Road and Centennial Bridge would meet all emergency vehicle access requirements.	1) Lighting: The project would improve upon the existing lighting within the Central Mesa through the reproduction of the Historic 1915 light fixtures within the Plaza de Panama, El Prado, Plaza de California, and the Mall. 2) Emergency Access: The proposed design for Plaza de California, El Prado, the Mall, Pan American Road East, and the Plaza de Panama would allow full-sized fire engines to access the interior of the west El Prado area in the event of an emergency. Access to these areas would be provided via Cabrillo Bridge from the west and Presidents Way from the east.	1) Lighting: New lights would be added within the rooftop park above the Organ Pavilion parking structure and along the pedestrian/tram promenade (Pan American Road East) to achieve a consistent level of light from dusk to dawn to ensure the safety of all park users. 2) Emergency Access: Emergency vehicles would access the new Organ Pavilion parking structure and rooftop park from the west via Presidents Way and the promenade and can access the east side of the structure via the Centennial Road. Retractable bollards would be located at the Pan American Promenade and Presidents Way.

TABLE 4.1-2
BALBOA PARK MASTER PLAN - PROJECT CONSISTENCY
(continued)

ID #	Master Plan Page #	Master Plan Goal, Policy, Objective, or Recommendation	Centennial Bridge Consistency Evaluation	Alcazar Parking Lot and Centennial Road Consistency Evaluation	Pedestrian Restoration - Plaza de Panama, El Prado, and the Mall Consistency Evaluation	Parking Structure/Rooftop Park Tram System and Arizona Street Landfill Consistency Evaluation
Horticulture						
BP	98	The Horticulture Element of the Plan establishes landscape guidelines for retaining the originally prescribed "naturalistic park appearance" throughout the Park. Relevant guidelines include: · Palms should continue to be utilized throughout the Park to accent certain features to act as focal points. · As (existing) Eucalyptus skyline trees die or are removed, they should be replaced with other "skyline" trees (of a similar species) · Plant trees in groves · Trees, grass, and ground cover should be dominant landscape materials · A simplified palette of plant materials, which maintains the Park visual theme should be used · Landscaping should enhance existing views or provides new view corridors · Effective screen parking and utility areas should be encouraged.	Construction of the Centennial Bridge would result in the removal of some existing eucalyptus trees. Where impacts to existing eucalyptus groves would occur, the project would revegetate the area to match the historic condition. Species to be planted in this area would consist of: · *Quercus agrifolia* (coast live oak) · *Cercis occidentalis* (western redbud) · *Eucalyptus ficifolia* (red-flowering gum) · *Eucalyptus diversicolor* (karrl tree) · *Eucalyptus gomphocephala* (tuart tree) · *Eucalyptus citriodora* (lemon-scented gum) · *Eucalyptus camalduiensis* (Red River gum) · *Platanus racemosa* (California sycamore; low areas only) · *Populus fremontii* (Fremont cottonwood; low areas only) · *Populus nigra 'Italica'* (lombardy poplar; low areas only). These species are consistent with the Eucalyptus species suggested in the BPMP Horticulture Element.	The small area that would be disturbed in conjunction with construction of the Centennial Road along the rim of Palm Canyon would be revegetated with plant species that reflect the long established themes of the adjacent landscape. The landscape proposed within the reconfigured Alcazar parking lot would be an extension of the Cabrillo Canyon landscape into the parking area. The landscape would emphasize the creation of a "green" parking area with an emphasis on providing shade trees and smaller landscaped medians that function as water quality bio-swales.	The rehabilitation design of the Plaza de Panama, El Prado, and Plaza de California would recall the original historic intent and appearance. While the Mall landscape would reflect the original historic intent, the east and west sides of the Mall would be replanted with species that reflect the long established themes of the adjacent landscapes of Palm Canyon and the Japanese Friendship Garden.	The rooftop park would be landscaped with a variety of intimate garden spaces similar to the historic landscape of the Central Mesa. The northern end of rooftop park, near the "programmed pavilions," would be landscaped to re-create the historic California Garden. Pedestrian paving would be placed around the northern elevator location and along the western edge of the park within the pedestrian promenade. Also, near the elevators pedestrian pavilions, benches and moveable tables would be provided. The Pan American Promenade along the western edge of the park would be lined with Medjool date palms, articulating the view corridor to the Organ Pavilion. The southern two-thirds of the rooftop park would consist of grass and shrubs. The visitor center and restrooms would be located at the southern end of the park.

TABLE 4.1-2
BALBOA PARK MASTER PLAN - PROJECT CONSISTENCY
(continued)

ID #	Master Plan Page #	Master Plan Goal, Policy, Objective, or Recommendation	Centennial Bridge Consistency Evaluation	Alcazar Parking Lot and Centennial Road Consistency Evaluation	Pedestrian Restoration - Plaza de Panama, El Prado, and the Mall Consistency Evaluation	Parking Structure/Rooftop Park Tram System and Arizona Street Landfill Consistency Evaluation
BP	103	The element also contains a conceptual landscape plan that assigns "planting themes" to various areas of the park. The theme for the Central Mesa includes: · Semi-tropical with palms, ficus and broadleaf evergreens · Eucalyptus, pines, and deciduous · Replace eucalyptus with theme species · Upgrade Palm Canyon.	Construction of the Centennial Bridge would result in the temporary removal of some existing eucalyptus trees. Where impacts to existing eucalyptus groves would occur, the project would revegetate the area to match the historic condition. Species to be planted in this area would consist of: · *Quercus agrifolia* (coast live oak) · *Cercis occidentalis* (western redbud) · *Eucalyptus ficifolia* (red-flowering gum) · *Eucalyptus diversicolor* (karrl tree) · *Eucalyptus gomphocephala* (tuart tree) · *Eucalyptus citriodora* (lemon scented gum) · *Eucalyptus camalduiensis* (Red River gum) · *Platanus racemosa* (California sycamore; low areas only) · *Populus fremontii* (Fremont cottonwood; low areas only) · *Populus nigra 'Italica'* (lombardy poplar; low areas only) These species are consistent with the Eucalyptus species suggested in the BPMP Horticulture Element.	The landscape proposed within the reconfigured Alcazar parking lot would be an extension of the Cabrillo Canyon landscape into the parking area. The landscape would emphasize the creation of a "green" parking area with an emphasis on providing shade trees and smaller landscaped medians that function as water quality bio-swales. Construction of the Centennial Road would remove vegetation from the rim of Palm Canyon; however, project design calls for restoration of historic understory plantings on the edges of the canyon.	The project's landscaping would include plant species that reflect the long-established themes of the Central Mesa and Balboa Park. Plant species have been selected that improve upon or enhance the palettes and themes of the adjacent landscapes. The proposed plant palette includes a large variety of native, non-native and drought-tolerant plant species.	The project's landscaping would include plant species that reflect the long-established themes of the Central Mesa and Balboa Park. Plant species have been selected that improve upon or enhance the palettes and themes of the adjacent landscapes. The proposed plant palette includes a large variety of native, non-native and drought-tolerant plant species, in accordance with the CMPP policy direction, including Medjool date palms, along the pedestrian promenade.

TABLE 4.1-2
BALBOA PARK MASTER PLAN - PROJECT CONSISTENCY
(continued)

ID #	Master Plan Page #	Master Plan Goal, Policy, Objective, or Recommendation	Centennial Bridge Consistency Evaluation	Alcazar Parking Lot and Centennial Road Consistency Evaluation	Pedestrian Restoration - Plaza de Panama, El Prado, and the Mall Consistency Evaluation	Parking Structure/Rooftop Park Tram System and Arizona Street Landfill Consistency Evaluation
Lighting						
BP	107	The Lighting Element establishes guidelines for both aesthetic lighting and security lighting within the Park. Generally, the guidelines recommend that aesthetic lighting be utilized to highlight certain architectural or landscape features, such as fountains, specimen trees or sculptural elements. It is recommended that security lighting be used in pedestrian malls, particularly those linking the central Prado with surrounding parking areas. BPMP Figure 19 illustrates where these areas are located.	No accent or aesthetic lighting is proposed for the Centennial Bridge. Lighting would be provided on the Centennial Bridge to meet all City requirements and ensure a safe environment for park users.	No accent or aesthetic lighting is proposed for the Alcazar lot or Centennial Road. The project provides/improves upon the existing lighting within the Alcazar lot and along the Centennial Road to create a more safe and secure environment.	The project would improve upon the existing lighting within the Central Mesa through the reproduction of the Historic 1915 light fixtures within the Plaza de Panama, El Prado, Plaza de California, and the Mall. The proposed fixture locations have been selected to match the original 1915 installation. Within the Mall, a combination of lighting styles would be installed to emphasize the space as an extension/connection between the Plaza de Panama and the Organ Pavilion. Reproductions of the historic 1915 fixtures would be spaced evenly on both sides of the Mall, while the proposed deciduous trees that line the Mall may be up-lit to create a lit edge to the space reminiscent of the space created by the buildings that used to line this space.	Lighting on the rooftop park would create a consistent level of lighting, while up-lighting and accent lighting would be used to highlight the architectural trellis structures associated with the main plaza and information building. Up-lighting and accent lighting would also be used sparingly to highlight some of the garden room spaces that occur throughout the rooftop park. The project would also improve upon the existing security lighting within the organ pavilion parking lot, through the addition of new lights within the rooftop park and along the pedestrian/tram promenade (Pan American Road) to create a safer and secure environment.
Signage						
BP	113	The Signage Element sets forth guidelines for various types of signs within the Park. It indicates that signage should be flexible to accommodate different parking demands. The element also specifies that all signs in Balboa Park should be consistent in terms of scale, color, design, and lettering. The signs should be distinctive, and match with the image, architecture, and layout of the Park.	All proposed signage would be consistent with Park standards.	All proposed signage would be consistent with Park standards.	All proposed signage would be consistent with Park standards.	All proposed signage would be consistent with Park standards.

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TABLE 4.1-3
CENTRAL MESA PRECISE PLAN - PROJECT CONSISTENCY

ID #	Precise Plan Page #	Precise Plan Goal, Policy, Objective, or Recommendation	Centennial Bridge Consistency Evaluation	Alcazar Parking Lot and Centennial Road Consistency Evaluation	Pedestrian Restoration - Plaza de Panama, El Prado, and The Mall Consistency Evaluation	Parking Structure/Rooftop Park, Tram System and Arizona Street Landfill Consistency Evaluation
Goals, Objectives or Design Principles						
Goals						
PP	144	Land Use - Provide a wide variety of cultural activities within a park environment.	Not applicable.	Not applicable.	Presently predominantly used for parking and through traffic, the Plaza de Panama, El Prado, Plaza de California, the Mall, and Pan American Road East would be restored as open landscaped/plaza areas for pedestrian and civic uses, thereby, enhancing their use as a cultural destination.	The new rooftop park and garden would provide an additional 2.2 acres of open space for cultural activities.
PP	144	Circulation - Establish a pedestrian park environment that features public transportation use while providing adequate vehicular access to and within the Central Mesa.	The Centennial Bridge would allow vehicular traffic to be removed from El Prado, Plaza de Panama, the Mall, and Pan American Road East, creating a more pedestrian-oriented environment in those areas of the Park.	Within the reconfigured Alcazar parking lot, the locations where pedestrians are required to cross the Centennial Road would include raised pedestrian walkways and pedestrian activated warning signals to create a more pedestrian-oriented experience, while the Centennial Road would be grade separated at the intersection between it and the pedestrian/tram promenade (Pan American Road East).	The project would remove vehicular traffic and restore the Plaza de Panama, El Prado, Plaza de California, and the Mall to pedestrian-only use. A tram also would be provided from parking areas to Park amenities.	The Pan American Promenade would be grade separated at the intersection between it and the Centennial Road adjacent to the Organ Pavilion parking structure. A tram also would be provided from parking areas to Park amenities.
PP	144	Architecture - Rehabilitate and modify the architecture of Central Mesa in a manner which preserves its historic and aesthetic significance while providing for functional needs.	The Centennial Bridge component of the project would not comply with SOI Rehabilitation Standards 2 or 9, primarily because the construction of the Centennial Bridge would not be consistent with the historical visual and spatial relationships of the Cabrillo Bridge and the California Quadrangle complex. The Centennial Bridge would be therefore, inconsistent with this principal.	The Centennial Road would have impacts on historic spatial characteristics and views, and circulation patterns of the district. The project proposes to restore small areas along the rim of the canyon impacted by grading. With the planned restoration, the impacted area would achieve its historic appearance. The Centennial Road and Alcazar parking lot improvements would, therefore, be consistent with CMPP policies related to architecture.	This project component would not modify any existing structures within the Central Mesa. All changes or additions to landscaping or other site amenities would be consistent with the historical character of the area.	This project component would not modify any existing structures within the Central Mesa. All changes or additions to landscaping or other site amenities would be consistent with the historical character of the area.
PP	144	Landscape - Rehabilitate and modify the Central Mesa's landscape in a manner which preserves its historic significance, accommodates a wide variety of public park activities, and increases public enjoyment of the Park environment.	The Centennial Bridge would impact the existing landscape of Cabrillo Canyon. Where impacts occur around the base of the bridge structure the project would revegetate the canyon landscape to match its historic intent.	All changes or additions to landscaping or other site amenities associated with this project component would be consistent with the historical character of the area. The Centennial Road would have impacts on the historic spatial characteristics views and circulation patterns of the historic district. The area that would be disturbed as part of the projects construction would be revegetated with plant species that reflect the long established themes of the adjacent landscape. Therefore, the Centennial Road and Alcazar parking lot improvements would be consistent with this CMPP policy.	This project component would not negatively modify the landscape of the Central Mesa. All changes or additions to landscaping or other site amenities would be consistent with the historical character of the area. The project would restore the Plaza de Panama and El Prado to pedestrian-only use, thereby, expanding the usable area for park activities. The rehabilitation design of the Plaza de Panama, El Prado, and Plaza de California would recall their historic intent and appearance. While the Mall landscape would reflect the original 1915 intent; however, the east and west sides of the Mall would be revegetated with plant species that reflect the long established themes of the adjacent landscapes of Palm Canyon and the Japanese Friendship Garden.	This project component would not negatively modify the landscape of the Central Mesa. All changes or additions to landscaping or other site amenities would be consistent with the historical character of the area. The project would add an additional 2.2 acres of open space above the Organ Pavilion parking structure, thereby, expanding the usable area for park activities. A portion of the new rooftop park would be consistent with the original California Garden, which once occupied the site.

TABLE 4.1-3
CENTRAL MESA PRECISE PLAN - PROJECT CONSISTENCY
(continued)

ID #	Precise Plan Page #	Precise Plan Goal, Policy, Objective, or Recommendation	Centennial Bridge Consistency Evaluation	Alcazar Parking Lot and Centennial Road Consistency Evaluation	Pedestrian Restoration - Plaza de Panama, El Prado, and The Mall Consistency Evaluation	Parking Structure/Rooftop Park, Tram System and Arizona Street Landfill Consistency Evaluation
Land Use - Objectives						
PP	171	Land for public park uses should be recovered from areas of the Central Mesa now used for parking, roads and restricted uses. (Restricted Use Areas are defined as lands restricted by admission fees, fencing, limited hours or lease agreements. The Archery Range, located in Cabrillo Canyon is considered a Restricted Use.)	Not applicable	Not applicable	This project component would remove vehicular traffic and parking and restore the Plaza de Panama, El Prado, Plaza de California, and the Mall to pedestrian-only use.	The existing Organ Pavilion parking lot would be redeveloped with a subterranean parking structure, with a rooftop park, thereby adding 2.2 acres of new usable park land to the Central Mesa.
PP	171	Park land to be converted for building expansions, roads, parking areas, or restricted uses should be minimized to preserve the historic resource and maintain existing relationships between the natural and built environment.	The footings of the Centennial Bridge would impact Cabrillo Canyon. Additionally, the Centennial Bridge would have a negative impact on the context of historic landmark. This project component would be inconsistent with this objective.	Park land would be converted for construction of the new Centennial Road. The design of the road includes landscape/terraced retaining walls to minimize the area required to accommodate the Centennial Road. However, construction of the Centennial Road would facilitate the conversion of Pan American Road East and the Mall to pedestrian-only use. Therefore, this project component is in conformance with this objective.	This project component would recapture parkland, currently used for vehicular circulation and parking.	The existing Organ Pavilion parking lot would be redeveloped with a subterranean parking structure, with a rooftop park, thereby reclaiming 2.2 acres of usable park land to the Central Mesa.
PP	171	Outdoor public spaces should be designed to accommodate a wide variety of cultural activities and public park uses.	Not applicable.	Not applicable.	By removing vehicular traffic and parking from the Plaza de Panama, El Prado, Plaza de California, and the Mall, these spaces would be able to accommodate cultural activities and other public uses.	The new rooftop park would be designed primarily as passive open space, and thereby able to accommodate a wide variety of activities.
PP	171	Visitor use of the Central Mesa should be more evenly distributed. Underutilized areas (such as the Palisades) should be utilized in a way that would attract visitors and relieve high visitor levels on the Prado.	Not applicable.	The Centennial Road alignment and grade separation where it crosses beneath the new Pan American Promenade would create a dedicated pedestrian/tram link between the Prado and Palisades. This would help distribute visitor use more evenly between the Prado and Palisades.	Not applicable.	The new 2.2-acre rooftop park located within the Palisades subarea would open this area for a variety of activities, including, picnicking, passive recreation, and children's play.
Circulation - Pedestrian Objectives						
PP	193	Create a pedestrian-oriented park environment: · Utilize pedestrian overpasses at major circulation crossings. · Concentrate parking in the proposed organ pavilion parking garage and restore plaza de panama to pedestrian use. · Separate pedestrian and vehicular routes wherever feasible.	The Centennial Bridge would redirect vehicular traffic and allow the Plaza de California, El Prado, Plaza de Panama, and the Mall to be restored for pedestrian-only circulation.	The Centennial Road would circulate vehicular traffic from the Alcazar parking lot to the Organ Pavilion parking structure. Within the reconfigured Alcazar parking lot, the locations where pedestrians are required to cross the Centennial Road would include raised pedestrian walkways and pedestrian-activated warning signals to create a more pedestrian-oriented experience, while the Centennial Road would be grade separated at the intersection between it and the Pan American Promenade.	The El Prado, Plaza de California, the Mall, Plaza de Panama, and Pan American Road East would all be restored to pedestrian-only use.	The Pan American Promenade would be grade separated at the intersection between it and the Centennial Road adjacent to the Organ Pavilion parking structure. A tram also would be provided from parking areas to Park amenities.

TABLE 4.1-3
CENTRAL MESA PRECISE PLAN - PROJECT CONSISTENCY
(continued)

ID #	Precise Plan Page #	Precise Plan Goal, Policy, Objective, or Recommendation	Centennial Bridge Consistency Evaluation	Alcazar Parking Lot and Centennial Road Consistency Evaluation	Pedestrian Restoration - Plaza de Panama, El Prado, and The Mall Consistency Evaluation	Parking Structure/Rooftop Park, Tram System and Arizona Street Landfill Consistency Evaluation
PP	193	Develop a comprehensive set of pedestrian walkways throughout the Mesa: · Provide disabled accessibility to all Park facilities. · Convert existing roads to pedestrian promenades wherever feasible.	The Centennial Bridge would redirect vehicular traffic and allow the Plaza de California, El Prado, Plaza de Panama, and the Mall to be restored for pedestrian-only circulation.	The Centennial Road would allow for the restoration of the Mall and Pan American Road East to pedestrian-only use. ADA parking would be provided in the Alcazar parking lot, and an ADA path of travel would be retained through the Alcazar Garden and the House of Charm arcades to the El Prado and the Plaza de California, while a new ADA-accessible path of travel would be created between the Alcazar parking lot and the Plaza de Panama. Within the reconfigured Alcazar parking lot, the locations where pedestrians are required to cross the Centennial Road would include raised pedestrian walkways and pedestrian-activated warning signals to create a more pedestrian oriented experience. The Centennial Road would be grade-separated at the intersection with the Pan American Promenade.	The project would remove vehicular circulation and parking and restore the Plaza de Panama, the Mall, El Prado, and Pan American Road East to pedestrian-only use.	A grade-separated independent pedestrian corridor that includes the Pan American Promenade would be provided from the north end of the Palisades to the Plaza de Panama. This would be an ADA route, thereby improving pedestrian circulation throughout this area of the Central Mesa.
PP	193	Enhance pedestrian entries to the Central Mesa: · Utilize focal features, accent plantings and paving, lighting, etc. · Provide enhanced amenities such as pedestrian drop-offs and tram stops.	The Centennial Bridge would redirect vehicular traffic and allow the Plaza de California, El Prado, Plaza de Panama, and the Mall to be restored for pedestrian-only circulation.	The project would introduce a drop-off area along the northern edge of the reconfigured Alcazar parking lot. Locating the drop-off at this location would enable park visitors to enter through the Alcazar Garden. An additional ADA-accessible path would be provided from the Alcazar parking lot eastward to the Plaza de Panama.	The project would remove vehicular circulation and parking and restore the Plaza de Panama, the Mall, El Prado, and Pan American Road East to pedestrian-only use.	At the intersection of Presidents Way and Pan American Promenade, the project would incorporate bus/vehicle drop-off and a tram stop. From there, pedestrians would enter onto the Promenade, highlighted by palm trees, enhanced pedestrian paving, and raised planters full of flowering plants intended to create an entry sequence in the heart of the Central Mesa.
Circulation - Vehicular Objectives						
PP	194	Simplify through traffic routes in the Central Mesa: · Confine vehicle use in the Prado to one east-only bound lane when tram is in service.	Through construction of the Centennial Bridge, the Prado would be closed to all vehicle traffic. Tram service would be used to circulate pedestrians from parking areas to amenities within the project area.	The Centennial Road would allow for separation of vehicular and pedestrian circulation throughout most of the Central Mesa. In locations where pedestrians and vehicles must intersect both traditional intersection designs and non-traditional treatments such as raised pedestrian walkways with pedestrian activated warning signals to highlight the intersection and provide safe crossing locations.	The Prado would be closed to all vehicle traffic with implementation of the project. Tram service would be used to circulate pedestrians from parking areas to amenities within the project area. This project component is inconsistent with this CMPP's circulation recommendations, but consistent with the overall goals to reduce pedestrian/ vehicular conflicts and providing a more pedestrian park environment.	Not applicable.
PP	195	Provide adequate service access to each Park building.	With construction of the Centennial Bridge, managed vehicle access would continue to be provided to all institutions located adjacent to the pedestrian-only areas via El Prado.	Not applicable.	Managed vehicle access would be provided to all institutions located adjacent to the pedestrian-only areas.	Not applicable.

TABLE 4.1-3
CENTRAL MESA PRECISE PLAN - PROJECT CONSISTENCY
(continued)

ID #	Precise Plan Page #	Precise Plan Goal, Policy, Objective, or Recommendation	Centennial Bridge Consistency Evaluation	Alcazar Parking Lot and Centennial Road Consistency Evaluation	Pedestrian Restoration - Plaza de Panama, El Prado, and The Mall Consistency Evaluation	Parking Structure/Rooftop Park, Tram System and Arizona Street Landfill Consistency Evaluation
PP	195	Increase parking spaces in the Central Mesa: · Construct a 1,000- to 1,500-space parking structure on the exiting Organ Pavilion Parking lot site.	Not applicable.	The existing Alcazar parking lot would be redesigned for only ADA parking, valet services and stacking, and passenger drop-off. The ADA spaces lost with conversion of the Plaza de Panama to pedestrian-only use would be recovered in this location. While there would be a net loss of standard parking spaces within the Alcazar parking lot, the project would yield a gain of a total of 273 spaces through construction of the parking structure.	The 54 spaces lost with conversion of the Plaza de Panama to pedestrian-only use, would be recaptured in the Organ Pavilion parking structure.	The new Organ Pavilion parking structure would replace the existing surface lot. The structure would provide 798 parking spaces on three levels and would be constructed within the footprint of the existing Organ Pavilion surface lot. The parking structure would be approximately 202 spaces short of the number specified in the CMPP. To accommodate 1,000 spaces that comply with contemporary parking standards, a fourth subterranean level would be required. The depth of this level would pose substantial engineering constraints including shoring, mechanical ventilation and special fire protection parameters.
PP	196	Prohibit large vehicles in the Prado.	Managed vehicle access would be permitted for maintenance and special events.	Not applicable.	The Prado would be restored to pedestrian-only access with implementation of the project. Managed access would be provided for special events and service access into the pedestrian-only spaces proposed as part of the design. The managed access would require the City to create a permit/approval process for groups wishing to drive within the pedestrian/tram only zones.	Not applicable.
PP	199	Provide adequate disabled parking throughout the Central Mesa.	Not applicable.	The existing Alcazar parking lot would be redesigned for only ADA parking, valet services and stacking, and passenger drop-off. A total of 32 ADA spaces would be included in the reconfigured lot – a net gain of 6 ADA spaces within proximity to El Prado.	ADA parking spaces removed from Plaza de Panama would be relocated in the Alcazar parking lot, resulting in a net gain of 6 ADA spaces in proximity to El Prado.	ADA spaces and vertical circulation devices would be provided within the parking structure. An accessible tram system would be provided from the parking structure.
Alternative Modes of Transportation – Objectives						
PP	200	Continue to enhance the free Park tram program. Key recommendations include: · Provide convenient tram stop locations with site amenities as described in the Landscape recommendations (see Proposed Tram Route Exhibit). · Tram appearance should be compatible with the historic character of the Park. · Ensure the Park tram system is accessible.	No tram stops provided.	No trams stops provided.	Eight potential tram stops have been identified in conjunction with the project – one on the west mesa, two on El Prado, on the Mall, one near the near Organ Pavilion parking structure, one at the intersection of the Pan American Promenade and Presidents Way, one in the Palisades parking lot and one near Inspiration Point. The tram system is designed to be flexible and can be adjusted to accommodate events and activities. The tram system proposed would be ADA accessible.	Eight potential tram stops have been identified in conjunction with the project – one on the west mesa, two on El Prado, on the Mall, one near the near Organ Pavilion parking structure, one at the intersection of the Pan American Promenade and Presidents Way, one in the Palisades parking lot and one near Inspiration Point. The tram system is designed to be flexible and can be adjusted to accommodate events and activities. The tram system proposed would be ADA accessible.

TABLE 4.1-3
CENTRAL MESA PRECISE PLAN - PROJECT CONSISTENCY
(continued)

ID #	Precise Plan Page #	Precise Plan Goal, Policy, Objective, or Recommendation	Centennial Bridge Consistency Evaluation	Alcazar Parking Lot and Centennial Road Consistency Evaluation	Pedestrian Restoration - Plaza de Panama, El Prado, and The Mall Consistency Evaluation	Parking Structure/Rooftop Park, Tram System and Arizona Street Landfill Consistency Evaluation
PP	201	Include bicycle facilities within the Central Mesa. Key recommendations: · Refrain from formally designated bike paths or lanes in the Central Mesa. · Encourage bicyclists to use vehicular circulation routes. · Provide well-marked bicycle storage opportunities. · Include bicycle storage as part of the Organ Pavilion parking structure.	The bicycle circulation route would include bicycles accessing the Park via the Centennial Bridge and road similar to automobiles (see Figure 3-32). The Centennial Bridge and Road would accommodate a shared bike/car travel way.	The bicycle circulation route would include bicycles accessing the Park via the Centennial Bridge and road, through the Alcazar parking lot, similar to automobiles (see Figure 3-32). The Centennial Bridge and Road would accommodate a shared14-foot bike/car travel way.	No dedicated bike paths or lanes would be located within El Prado, the Plaza de Panama, the Mall, and Pan American Road; however, bicyclists would be encouraged to use these areas as their means to travel through the Central Mesa, as is currently the case today. Dedicated bike storage facilities would be located in appropriate locations throughout the project site.	The rooftop park and Pan American Promenade would not include any designated bike paths or lanes; however, bicycles would be accommodated on the Centennial Road via a shared 14-foot lane. Bicycle storage facilities would be conveniently located within the parking structure and on the rooftop park.
Architecture - Guidelines and Recommendations						
PP	205	The Precise Plan sets forth five recommendations for both architectural modifications to individual structures and the "entire ensemble" of structures, which comprise the historic district. *Additions to existing structures*. Additions should be located in non-public areas that have minimal impact on original Exposition site relationships.	The project does not include renovations or modifications to any specific individual structures – with the exception of the Cabrillo Bridge. Therefore, most of the architectural guidelines and recommendations presented in the CMPP are not applicable to the project. The Centennial Bridge component of the project would not comply with SOI Rehabilitation Standards 2 or 9, primarily because the construction of the Centennial Bridge would not be consistent with the historical visual and spatial relationships of the Cabrillo Bridge and the California Quadrangle complex. The Centennial Bridge is, therefore, inconsistent with this recommendation.	This project component does not include renovations or modifications to any specific individual structures. Therefore, most of the architectural guidelines and recommendations presented in the CMPP are not applicable. The Centennial Road would have impacts on historic spatial characteristics and views, and circulation patterns of the historic district. The project proposes to restore small areas along the rim of the canyon impacted by grading. With the planned restoration, the impacted area would achieve its historic appearance.	This project component does not include renovations or modifications to any specific individual structures. Therefore, most of the architectural guidelines and recommendations presented in the CMPP are not applicable to the project. Alterations to the overall setting of the Central Mesa would occur through the reintroduction of specialty paving, shade trees, seating, lighting, and other amenities such as water features and/or sculpture. The renovations to the Central Mesa would unify the area and would complement the Spanish Colonial-Revival architecture of the 1915-1916 Panama-California Exposition.	This project component does not include renovations or modifications to any specific individual structures. Therefore, most of the architectural guidelines and recommendations presented in the CMPP are not applicable to the project. Alterations to the overall setting of the Central Mesa would occur through the reintroduction of specialty paving, shade trees, seating, lighting, and other amenities such as water features and/or sculpture. The renovations to the Central Mesa would unify the area and would complement the Spanish Colonial-Revival architecture of the 1915-1916 Panama-California Exposition.
Architecture - (Applicable) Design Guidelines						
PP	211	All architectural improvements on structures listed on the National Register of Historic Places must strictly adhere to the Secretary of the Interior's Standards for Historic Preservation projects.	The Centennial Bridge component of the project would not comply with SOI Rehabilitation Standards 2 or 9, primarily because the construction of the Centennial Bridge would not be consistent with the historical visual and spatial relationships of the Cabrillo Bridge and the California Quadrangle complex. The Centennial Bridge is, therefore, inconsistent with this recommendation.	This project component does not include renovations or modifications to any specific individual structures.	This project component does not include renovations or modifications to any specific individual structures.	This project component does not include renovations or modifications to any specific individual structures.
PP	212	All future improvement plans for projects within the Central Mesa National Historic Landmark area should be sent to the National Park Service and historic site boards for approval.	The National Park Service would be invited to comment on the project; however, in the past the agency has deferred to the local historic resources board. Because the project does not include any federal or state funding, the National Park Service may defer to the local historic resources board.	The National Park Service would be invited to comment on the project; however, in the past the agency has deferred to the local historic resources board. Because the project does not include any federal or state funding, the National Park Service may defer to the local historic resources board.	The National Park Service would be invited to comment on the project; however, in the past the agency has deferred to the local historic resources board. Because the project does not include any Federal or State funding, the National Park Service may defer to the local historic resources board.	The National Park Service would be invited to comment on the project; however, in the past the agency has deferred to the local historic resources board. Because the project does not include any Federal or State funding, the National Park Service may defer to the local historic resources board.

TABLE 4.1-3
CENTRAL MESA PRECISE PLAN - PROJECT CONSISTENCY
(continued)

ID #	Precise Plan Page #	Precise Plan Goal, Policy, Objective, or Recommendation	Centennial Bridge Consistency Evaluation	Alcazar Parking Lot and Centennial Road Consistency Evaluation	Pedestrian Restoration - Plaza de Panama, El Prado, and The Mall Consistency Evaluation	Parking Structure/Rooftop Park, Tram System and Arizona Street Landfill Consistency Evaluation
Architecture - (Applicable) Specific Recommendations						
PP	237	Organ Pavilion parking structure: · Construct a new parking garage that would accommodate 1,000 to 1,500 cars. · Construct a multiple use pedestrian plaza on the roof. · Terrace the south and west elevations to blend into the existing topography. · Provide facilities including restrooms, bike storage and park information.	Not applicable.	Not applicable.	Not applicable.	The project would include the construction of a new subterranean parking structure in the location of the existing Organ Pavilion parking lot. The structure would provide 798 parking spaces on three levels. The lot would be approximately 202 spaces short of the number specified in the CMPP. To accommodate 1,000 spaces that comply with contemporary parking standards, a fourth subterranean level would be required. The depth of this level would pose substantial engineering constraints, including shoring, mechanical ventilation and special fire protection parameter. A 2.2-acre open space park area would be created on the roof of the structure. Restrooms and a visitor center would be included within the new open space area. Bicycle storage facilities would be conveniently located within the parking structure and on the rooftop.
Landscape						
PP	245	The overarching goal of the Precise Plan's Landscape Element is "to restore, rehabilitate and modify the Central Mesa's Landscape in a manner that preserves its historic significance, accommodates a wide variety of public park activities, and increases public enjoyment of the Park environment." General landscape guidelines are presented for the whole of the Mesa and specific recommendations are made for each subarea.	The Centennial Bridge would impact the existing vegetation in Cabrillo Canyon and along the south slopes near Cabrillo Bridge. Where vegetation would be removed, the project would revegetate the area to match the historic vegetation.	The Centennial Road would traverse a series of different landscape themes within the Central Mesa, including but not limited to, Cabrillo Canyon, Palm Canyon, and the northern edge of Australian Canyon to the south of the Organ Pavilion parking structure. The area that would be disturbed as part of the project's construction would be re-vegetated with plant species that reflect the long established themes of the adjacent landscape.	The rehabilitation design of the Plaza de Panama, El Prado, and Plaza de California would recall the historic appearance. While the Mall landscape would reflect the historic intent, the east and west sides of the Mall would be revegetated with plant species that reflect the long established themes of the adjacent landscapes of Palm Canyon and the Japanese Friendship Garden.	The rooftop park would be landscaped with a variety of intimate garden spaces similar to the historic California Garden landscape of the Central Mesa, while also providing larger open lawn spaces to accommodate a variety of passive and active uses.
PP	259	Historic Preservation: The SOI Rehabilitation Standards should be adhered to in all landscape modifications and restorations. All landscape features should be consistent with historic architectural themes.	The Centennial Bridge would impact the existing vegetation in Cabrillo Canyon and along the south slopes near Cabrillo Bridge. Where vegetation would be removed, the project would revegetate the area to match the historic vegetation.	The Centennial Road would traverse a series of different landscape themes within the Central Mesa including but not limited to Cabrillo Canyon, Palm Canyon and the northern edge of Australian Canyon to the south of the Organ Pavilion parking structure. The area that would be disturbed as part of the projects construction would be re-vegetated with plant species that reflect the long established themes of the adjacent landscape.	The rehabilitation design of the Plaza de Panama, El Prado, and Plaza de California would recall their historic intent and appearance. While the Mall landscape would reflect the original 1915 intent; however, the east and west sides of the Mall would be revegetated with plant species that reflect the long established themes of the adjacent landscapes of Palm Canyon and the Japanese Friendship Garden.	The rooftop park would be landscaped with a variety of intimate garden spaces similar to the historic California Garden landscape of the area during the 1935 exposition, while also providing larger open lawn spaces to accommodate a variety of passive and active uses.

TABLE 4.1-3
CENTRAL MESA PRECISE PLAN - PROJECT CONSISTENCY
(continued)

ID #	Precise Plan Page #	Precise Plan Goal, Policy, Objective, or Recommendation	Centennial Bridge Consistency Evaluation	Alcazar Parking Lot and Centennial Road Consistency Evaluation	Pedestrian Restoration - Plaza de Panama, El Prado, and The Mall Consistency Evaluation	Parking Structure/Rooftop Park, Tram System and Arizona Street Landfill Consistency Evaluation
PP	259	Walkways: Historic walkways should be preserved; walkways should be accessible, and walkway construction materials should take into consideration various factors related to safety, aesthetics, and maintenance.	The Centennial Bridge would remove approximately 70 feet of the existing Cabrillo Bridge railing, while the historic walk from east to west along the south side of Cabrillo Bridge would be preserved through the introduction of a traditional "T" intersection complete with stop signs for vehicles to give pedestrians the priority movement.	The reconfigured Alcazar parking lot would channel ADA parking, drop-off, and valet users onto the historic walks through the Alcazar Garden. Although not part of the improvements the design would enable a future accessible connection to the historic Palm Canyon pedestrian bridge along the south edge of the lot.	The rehabilitation design of the Plaza de Panama, El Prado, and Plaza de California would recall the historic intent and appearance. While the Mall would reflect the historic intent, all paving materials would be monolithic in appearance similar to the original 1915 materials, however they would be upgraded to more durable materials.	A new Pan American Promenade would connect the rooftop park with the Mall and re-establish a pedestrian connection between the Palisades area and the Plaza de Panama.
PP	260	Seating: Seating should be plentiful, comfortable, well integrated into other landscape features, located to maximize views, and take into consideration lighting, circulation and proximity to other amenities.	Not Applicable	Benches and seating areas would be added adjacent to the drop-off area south of the Alcazar Garden and to the east of the valet stand to provide waiting areas.	The improvements within the Plaza de California and the Plaza de Panama would include the addition of movable tables and chairs to provide flexible seating for park users, while fixed bench style seats would be added along the restored El Prado and Mall.	Throughout the rooftop park and along the Pan American Promenade a variety of benches and seat walls would be included to provide a variety of seating alternatives.
PP	260	Lighting: · Pole lights should be utilized as much as feasible and be consistent with historic design. · Be replaced throughout the Mesa with recommended models. · Bollard lighting is not recommended. · Lighting should be used for increased public safety as well as aesthetics.	Lighting would be provided on the Centennial Bridge to meet all City requirements and ensure a safe environment.	The project would improve upon the existing lighting within the Alcazar parking lot through the addition of historic light fixture reproductions and other CMPP recommended lighting fixtures to create a safer and more secure environment. Appropriate lighting is proposed along Centennial Road to ensure public safety. Additionally, the new Palm Canyon walkway would include low-level lighting.	The project would improve upon the existing lighting within the Central Mesa through the reproduction of the historic 1915 light fixtures within the Plaza de Panama, El Prado, Plaza de California, and the Mall. The fixture locations have been selected to match the original 1915 installation.	The project would improve upon the existing lighting within the Organ Pavilion parking lot, through the addition of new lights within the rooftop park and along the new Pan American Promenade to create a safer and secure environment. The pole light fixture would utilize the CMPP recommended model.
PP	261	Site Amenities: · Site amenities should be consistent with historic design themes. · Orientation signage should be located at pedestrian gathering areas. · Public notice kiosks should be placed at the Plaza de Panama and Palisades tram stop.	Not applicable.	Not applicable.	Amenities to be added by this component such as landscaping, paving, lighting and seating which would recall the historic appearance. Orientation signage would be added at the east and west side of the Plaza de Panama where they intersect with El Prado. The project would maintain the existing Friends of Balboa Park kiosk in the Plaza de Panama.	Amenities to be added by this component such as landscaping, paving, lighting and seating would recall the historic appearance. Orientation signage would be added at the rooftop park adjacent to the elevator core/tram stop, and near the southwestern corner adjacent to the visitor center and tram stop. The orientation signage would be combined with a kiosk at the elevator core/tram stop on the rooftop park.
PP	261	Interior and Exterior Park Views: · Maintain and reestablish the pedestrian walkways located along formal axial views to major focal points · Pedestrian viewpoints to views outside the Park should be preserved or established.	One major view corridor is identified in conjunction with the Centennial Bridge location: El Prado from the Cabrillo Bridge looking east toward the California Tower. This area would be restored as a pedestrian-only corridor.	No established key public viewpoints would be impacted by construction of the Centennial Road or reconfiguration of the Alcazar parking lot.	A major view corridor is identified as the mall from the Museum of Art to the Organ Pavilion (i.e., Plaza de Panama and the Mall). Both of these areas would be restored as pedestrian-only corridors.	The CMPP identifies a pedestrian viewpoint from the Organ Pavilion parking structure location looking south to west, away from the project site, toward the ocean and city skyline. This external view would not be impacted with implementation of the project.

TABLE 4.1-3
CENTRAL MESA PRECISE PLAN - PROJECT CONSISTENCY
(continued)

ID #	Precise Plan Page #	Precise Plan Goal, Policy, Objective, or Recommendation	Centennial Bridge Consistency Evaluation	Alcazar Parking Lot and Centennial Road Consistency Evaluation	Pedestrian Restoration - Plaza de Panama, El Prado, and The Mall Consistency Evaluation	Parking Structure/Rooftop Park, Tram System and Arizona Street Landfill Consistency Evaluation
PP	263	Irrigation: · All irrigation systems should comply with City standards · Drip irrigation should be used, where feasible · All irrigation systems should be designed to accept reclaimed water when it becomes available.	All landscape and irrigation systems would conform to the City's LDC. The irrigation system would be designed to accommodate the potential use of reclaimed water in the future. The proposed system would also be consistent with the existing irrigation systems and designed per the 2011 Park and Recreation Department Consultants Guide to Park Design and Development.	All landscape and irrigation systems would conform to the City's LDC. The irrigation system would be designed to accommodate the potential use of reclaimed water in the future. The proposed system would also be consistent with the existing irrigation systems and designed per the 2011 Park and Recreation Department Consultants Guide to Park Design and Development.	All landscape and irrigation systems would conform to the City's LDC. The irrigation system would be designed to accommodate the potential use of reclaimed water in the future. The proposed system would also be consistent with the existing irrigation systems and designed per the 2011 Park and Recreation Department Consultants Guide to Park Design and Development.	All landscape and irrigation systems would conform to the City's LDC. The irrigation system would be designed to accommodate the potential use of reclaimed water in the future. The proposed system would also be consistent with the existing irrigation systems and designed per the 2011 Park and Recreation Department Consultants Guide to Park Design and Development.
PP	264	Planting: Landscape planting should accomplish the following design objectives: Provide shade, delineate space, enhance spatial identity, promote safety, preserve views, accent architectural forms, emphasize entries and focal features, establish a human scale, accommodate a variety of active and passive uses, and provide buffers and transition zones.	The Centennial Bridge would impact the existing vegetation in Cabrillo Canyon and along the south slopes near Cabrillo Bridge. Where vegetation would be removed, the project would revegetate the area to match the existing historic vegetation.	The Centennial Road would traverse a series of different landscape themes within the Central Mesa, including but not limited to Cabrillo Canyon, Palm Canyon and the northern edge of Australian Canyon to the south of the Organ Pavilion parking structure. The area that would be disturbed as part of the projects construction would be revegetated with plant species that reflect the long established themes of the adjacent landscape.	The rehabilitation design of the Plaza de Panama, El Prado, and Plaza de California would recall the historic intent and appearance. While the Mall landscape would reflect the original 1915 intent, the east and west sides of the Mall would be revegetated with plant species that reflect the long established themes of the adjacent landscapes of Palm Canyon and the Japanese Friendship Garden.	The rooftop park would be landscaped with a variety of intimate garden spaces similar to the historic California Garden landscape of the Central Mesa, while also providing open lawn to accommodate a variety of passive and active uses.
PP	265	Landscape planting should be designed to conserve water, as much as possible.	While landscape planting would be consistent with the historic vegetation, drought tolerant plants would be used where possible.	While landscape planting would be consistent with the historic vegetation drought tolerant plants would be used where possible.	While landscape planting would be consistent with the historic vegetation drought tolerant plants would be used where possible.	While landscape planting would be consistent with the historic vegetation drought tolerant plants would be used where possible.
PP	265	Existing landscape character and historic landscape themes should continue despite periodic drought conditions.	The project's landscaping would include plant species that reflect the long-established themes of the Central Mesa and Balboa Park. Plant species have been selected that improve upon or enhance the palettes and themes of the adjacent landscapes. The Centennial Bridge would minimally impact the existing vegetation, where impacts would occur, the project would revegetate the area to match the existing historic vegetation. The plant palette would include a large variety of native, non-native and drought tolerant plant species, in accordance with the CMPP policy direction. The landscape improvements would adhere to all standards of the City's Landscape Ordinance.	The Centennial Road would traverse a series of different landscape themes within the Central Mesa including Palm Canyon and the northern edge of Australian Canyon to the south of the Organ Pavilion parking structure. The area that would be disturbed as part of the projects construction would be re-vegetated with plant species that reflect the long-established themes of these areas. The plant palette would include a large variety of native, non-native and drought tolerant plant species, in accordance with the CMPP policy direction. The landscape improvements would adhere to all standards of the City's Landscape Ordinance.	The rehabilitation design of the Plaza de Panama, El Prado, and Plaza de California would recall the historic intent and appearance. The east and west sides of the Mall would be revegetated with plant species that reflect the long established themes of the adjacent landscapes of Palm Canyon and the Japanese Friendship Garden. The plant palette would include a large variety of native, non-native and drought tolerant plant species, in accordance with the CMPP policy direction. The landscape improvements would adhere to all standards of the City's Landscape Ordinance.	The rooftop park would be landscaped with a variety of intimate garden spaces similar to the historic California Garden landscape of the Central Mesa, while also providing larger open lawn spaces to accommodate a variety of passive and active uses. The plant palette would include a large variety of native, non-native and drought tolerant plant species, in accordance with the CMPP policy direction. The landscape improvements would adhere to all standards of the City's Landscape Ordinance.

TABLE 4.1-3
CENTRAL MESA PRECISE PLAN - PROJECT CONSISTENCY
(continued)

ID #	Precise Plan Page #	Precise Plan Goal, Policy, Objective, or Recommendation	Centennial Bridge Consistency Evaluation	Alcazar Parking Lot and Centennial Road Consistency Evaluation	Pedestrian Restoration - Plaza de Panama, El Prado, and The Mall Consistency Evaluation	Parking Structure/Rooftop Park, Tram System and Arizona Street Landfill Consistency Evaluation
PP	265	Existing significant plants and trees should be protected and well cared for. Significant plants and trees, which must be moved, should be relocated to another location within the Central Mesa. The Landscape Analysis Section of the Precise Plan includes an inventory of all plants located within the Central Mesa and identifies "Significant Plants and Trees." The 58 individual specimens identified within the Central Mesa are labeled in Figure 24 of the CMPP.	No significant tree specimens are located within the footprint of the Centennial Bridge. All significant trees located within the project area are further described in Table 4.1-4.	Five significant tree species exist within the footprint of these project components. One Magnolia tree would be removed in conjunction with construction of the Centennial Road, and one Torrey pine, south of the existing restrooms, would be removed or relocated. All other individual specimens would either be protected in place.	Three significant tree species exist within the footprint of these project components. All individual specimens would be protected in place.	Two significant tree species exist within the project footprint. One Torrey pine would be relocated if it is determined to be a hazard tree (has the potential to fall onto the Organ Pavilion.) Twelve Australian willows are located to the south of the Organ Pavilion parking structure. One would remain and 11 to be relocated to the adjacent Canyon. (At time of construction a certified arborist would be consulted to determine the suitability of each plant for transplantation. If survival is not likely, the trees would be replaced with a new plant of the same species.)
PP	273	Two general areas of landscape emphasis are applicable to the project area – Botanical Emphasis Areas and Naturalized Areas. **Botanical Emphasis Areas:** Plant materials should be arranged formally in major plazas and promenades. They should be arranged informally in other areas such as lawns, canyons, and parking lots. Plant materials should include: exotic species, tropical, and plants associated with San Diego or the 1915 Exposition. **Naturalized Areas**: Consists mostly of slopes planted with eucalyptus and other drought tolerant species and shrubs. The existing visual character of the areas should be retained by replanting Eucalyptus species that resemble the existing trees, but have deeper root systems and less brittle branches.	The Centennial Bridge would be located within a "naturalized area." Construction of the bridge would impact the existing vegetation within Cabrillo Canyon. Where impacts would occur, the project would revegetate the area to match the existing historic naturalized vegetation. The plant palette would include a large variety of native, non-native and drought tolerant plant species, in accordance with the CMPP policy direction. The landscape improvements would adhere to all standards of the City's Landscape Ordinance. These species are consistent with the long-established themes.	The Alcazar parking lot and the Centennial Road are generally located within a "Botanical Emphasis Area." The Centennial Road would traverse a series of different landscape themes within the Central Mesa including Palm Canyon and the northern edge of Australian Canyon to the south of the Organ Pavilion parking structure. The area that would be disturbed as part of the project's construction would be revegetated with plant species that reflect the long established themes of the adjacent landscape.	These project components are located within a "Botanical Emphasis Area." The rehabilitation design of the Plaza de Panama, El Prado, and Plaza de California would recall the historic intent and appearance. While the Mall landscape would reflect the original 1915 intent, however the east and west sides of the Mall would be revegetated with plant species that reflect the long established themes of the adjacent landscapes of Palm Canyon and the Japanese Friendship Garden.	The Organ Pavilion parking structure/rooftop park is located within a "Botanical Emphasis Area." The rooftop park would be landscaped with a variety of intimate garden spaces similar to the historic California Gardens landscape of the Central Mesa, while also providing lawn spaces to accommodate a variety of passive and active uses.
Specific Recommendations - West Prado						
PP	281	In addition to the general design guidelines and objectives, the CMPP also establishes specific recommendations for each subarea identified within the Central Mesa. For the areas applicable to the project, the Precise Plan contains details for subarea amenities such as furniture, lights, planters and trash receptacles.	Details pertaining to lighting, planters, street furniture, etc. can be found within the SDP. The project proposes to retain critical existing historical elements and themes. Minor variations from the "Specific Recommendations" are therefore, not considered to constitute a significant land use inconsistency.	Details pertaining to lighting, planters, street furniture, etc. can be found within the SDP. The project proposes to retain critical existing historical elements and themes. Minor variations from the "Specific Recommendations" are not considered to constitute a significant land use inconsistency.	Details pertaining to lighting, planters, street furniture, etc. can be found within the SDP. The project proposes to retain critical existing historical elements and themes. Minor variations from the "Specific Recommendations" are not considered to constitute a significant land use inconsistency.	Details pertaining to lighting, planters, street furniture, etc. can be found within the SDP. The project proposes to retain critical existing historical elements and themes. Minor variations from the "Specific Recommendations" are not considered to constitute a significant land use inconsistency.

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Finally, the Landscape Analysis Section of the Precise Plan includes an inventory of all plants located within the Central Mesa and identifies "Significant Plants and Trees." Fifty-eight individual specimens were identified within the Central Mesa, of which 45 are located within the project area (Figure 4.1-10). A summary of Significant Plants and Trees and the project's impacts to individual specimens is included below in Table 4.1-4.

TABLE 4.1-4
SIGNIFICANT TREES WITHIN THE PROJECT AREA

Species	No. of Individuals	Location	Notes
Evergreen maple (*Acer oblongum paxii*)	1	Eastern edge of the Mall	To remain
New Zealand kauri (*Agathis autralis*)	2	Southeast of the House of Charm (Mingei Museum)[1]	To remain
Mediterranean fan palm (*Chamaerops humilis*)	1	Northeast corner of the Plaza de Panama	To remain
Indian laurel fig (*Ficus retusa*)	3	Between the Alcazar Garden and parking lot	To remain
Australian willow (*Geijera paviflora*)	12	South of the Organ Pavilion parking lot	One to remain and 11 to be relocated to the adjacent canyon. (At time of construction a certified arborist would be consulted to determine the suitability of each plant for transplantation. If survival is not likely, the trees would be replaced with a new plant of the same species.)[2]
Southern magnolia (*Magnolia grandiflora*)	17	Near Pan American Road West	Seventeen magnolias exist in this area; one would be removed
Italian stone pine (*Pinus pinea*)	1	Eastern edge of the Mall	To remain
Torrey pine (*Pinus Torreyana*)	7	Between Pan American Roads East and West and south of the Organ Pavilion	Five of the six behind the Organ Pavilion to remain; one may need to be removed because it currently leans over the Organ Pavilion and poses a risk to the historic structure[3]. The individual south of the Organ Pavilion restroom would need to be removed or relocated. (At time of construction a certified arborist would be consulted to determine the suitability of this tree for transplanting. If survival is not likely, the tree would be removed and replaced with multiple trees of the same species.)
Holly oak (*Quercus ilex*)	1	Between Pan American Roads East and West	To remain
Total	**45**	**Project Area**	**31 to remain in place; 12 to be relocated and two would be removed.**

[1]The CMPP calls out 2 trees; one of these trees died and was removed as part of the House of Charm renovation

[2]At the time the CMPP was prepared, the Australian willow (Geijera paviflora) was not easily available as nursery stock; however, since then the plant popularity has increased and it is readily available as nursery stock throughout the region.

[3]The proposed project does not impact this specific tree. At the time of construction a certified arborist will be consulted to determine the potential for the tree to fall and cause damage to the Spreckel's Organ Pavilion structure.

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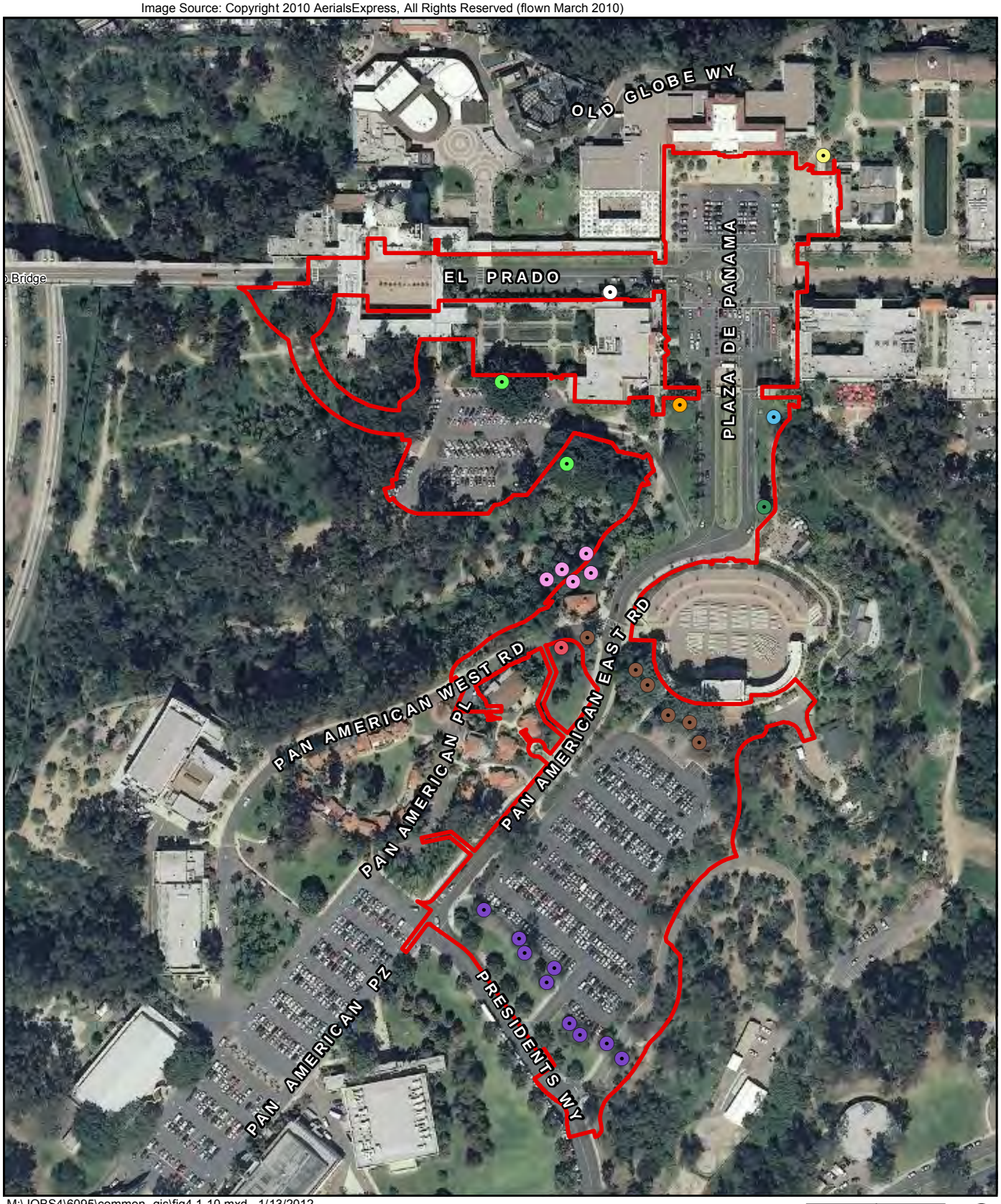

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Project Area

Significant Trees

- Australian Willow
- Evergreen Maple
- Holly Oak
- Indian Laurel Fig
- Italian Stone Pine
- Mediterranean Fan Palm
- New Zealand Kauri
- Southern Magnolia
- Torrey Pine
- Unknown Species

FIGURE 4.1-10

CMPP Significant Trees

d. East Mesa Precise Plan

All Project Components

The project proposes to export soil excavated from the construction of the parking structure to the Arizona Street Landfill on the East Mesa. The EMPP calls for reclamation of the landfill site, primarily for passive recreational uses. Redevelopment of the site should include a revegetation program with fields of grass above the landfill cover; the rehabilitation of a two-acre area for turf playfields, and picnic areas accessed by a new loop road with parking.

The project would be consistent with the reclamation program for the Arizona Street Landfill through the placement of additional fill material on top of the landfill. The project would include hydroseeding of the fill areas, to allow for passive recreational uses and would not preclude further restoration of the area, as described in the EMPP; therefore, the project would be consistent with the EMPP, and no secondary impacts would occur.

e. MSCP Subarea Plan

All Project Components

The project site lies within the City's MSCP Subarea. Two MHPAs (Florida Canyon and the Marston Hills Natural Area) are located within Balboa Park. However, neither of these areas is located within or adjacent to the project site, and the project is consistent with the Subarea Plan.

The project proposes to export soil excavated from the Organ Pavilion parking structure to the Arizona Street Landfill on the East Mesa. The aforementioned Florida Canyon MHPA is adjacent to a portion of the Arizona Street Landfill. The placement of fill and grading operations within the Arizona Street Landfill disposal site has the potential to result in significant indirect impacts to the MHPA associated with noise, lighting, drainage, and the introduction of invasive plants.

f. Summary of Plan Consistency

Consistency with the San Diego General Plan

The Centennial Bridge project component would be inconsistent with a number of goals and policies found within the Historic Preservation, Urban Design, and Recreation Elements pertaining to preservation of historic resources. All other project components are consistent with the General Plan's goals and policies.

Consistency with the Balboa Park Master Plan

The project, in its entirety, conforms to the six primary goals pertaining to: creating a more pedestrian-oriented environment, reducing automobile and pedestrian conflicts, increasing free and open parkland and restoring or improving existing building and landscaped areas. Summarized below are areas where the project is not consistent with the BPMP.

Circulation: The introduction of the Centennial Bridge and the resulting circulation concept of the project are not consistent with the BPMP, which calls for either allowing only eastbound traffic, when the tram is in operation or closing the Cabrillo Bridge at such a time when off-site parking, transit, tram, and shuttle systems provide adequate access to the Prado and Palisades areas. Although the overall circulation concept is not consistent, the alignment of the Centennial Road from the Mall to the Organ Pavilion parking structure and Presidents Way is consistent with the alignment of this road, as identified in the BPMP.

Parking Structure. The BPMP calls for the development of a parking structure in the location of the existing Organ Pavilion surface parking lot. The BPMP specifies that the structure should hold 1,000 to 1,500 spaces; however, the structure that is proposed would only contain 798 spaces. (The shortfall of spaces is due to substantial engineering constraints that make simultaneously achieving all design parameters as specified by the BPMP impractical.) As discussed in Section 4.4.4.1, the project would provide an additional 273 parking spaces and would not increase the overall parking demand in Balboa Park. Parking in adjacent areas outside of Balboa Park would not be affected. Since the project would not increase the demand for off-site parking, impacts would be less than significant. This inconsistency with the BPMP would, therefore, be considered less than significant.

Historic Preservation. The Centennial Bridge component of the project is not consistent with several policies of the BPMP, which relate to the preservation of elements that contribute to the local historic designation and national historic status of the Park.

The project proposes an amendment to the BPMP, which proposes:

- Changes to the Master Plan's circulation patterns, including two-way traffic on Cabrillo Bridge; the addition of the Centennial Bridge, and the removal of vehicular traffic from El Prado and Plaza de Panama.

- A reduction in the required number of parking spaces in the Organ Pavilion parking structure from 1,000–1,500 to 500–1,000.

- Revisions to several policies relating to preservation of historic resources.

With approval of the amendment, the project would no longer be inconsistent with the BPMP. Changes in the circulation pattern and reduction of parking spaces in the Organ Pavilion parking structure would not result in secondary impacts and would, therefore, be less than significant. Changes associated with the historic policies would result in secondary impacts to the NHLD, as described in Section 4.2, and therefore, would be significant.

Consistency with the Central Mesa Precise Plan

The project conforms with the six major policies, as described in the CMPP's executive summary: recover open parkland; create multiple use outdoor plazas to accommodate cultural activities; maintain public accessibility; reduce pedestrian and automobile conflicts; use a park-tram system and restore the Plaza de Panama to a multiple use pedestrian plaza. The Centennial Bridge component of the project and resulting changes in circulation patterns would, however, conflict with several policies and concepts, as summarized below.

Circulation. The CMPP calls for the Cabrillo Bridge and El Prado to allow eastbound only traffic for access to the Organ Pavilion parking structure, while the tram is in service; otherwise two-way traffic would be permitted. The westbound lane would be used by the intra-park tram, bicycles, and pedestrians. The overall circulation concept of the project, which would continue to allow two-way traffic on the Cabrillo Bridge and close El Prado to through traffic, is not consistent with the CMPP. Although the overall circulation concept is not consistent, the alignment of the Centennial Road from the Mall to the Organ Pavilion parking structure and Presidents Way is consistent with the alignment of this road as identified in the CMPP.

Parking Structure. The CMPP calls for the development of a parking structure in the location of the existing Organ Pavilion surface parking lot. The CMPP specifies that the structure should hold 1,000 to 1,500 spaces; however, the structure that is proposed would only contain 798 spaces. The shortfall of spaces is due to substantial engineering constraints that make simultaneously achieving all design parameters of the parking structure impractical. This inconsistency with the CMPP would, therefore, be considered less than significant.

Historic Preservation. The Centennial Bridge would be inconsistent with policy objectives that pertain to preservation of historic and aesthetic significance.

The project includes an amendment to the CMPP, which generally entails:

- Changes to the Master Plan's Circulation patterns, including two-way traffic on Cabrillo Bridge; the addition of the Centennial Bridge and the removal of vehicular traffic from El Prado and Plaza de Panama.

- A reduction in the required number of parking spaces in the Organ Pavilion parking structure from 1,000–1,500 to 500–1,000.
- Revisions to several policies relating to preservation of historic resources.

With approval of the amendment, the project would no longer be inconsistent with the CMPP. Changes in the circulation pattern and reduction of parking spaces in the Organ Pavilion parking structure would not result in secondary impacts and would, therefore, be less than significant. Changes associated with the historic policies would result in secondary impacts to the NHLD, as described in Section 4.2, and therefore, would be significant.

Consistency with the East Mesa Precise Plan

The project would be consistent with the EMPP's recovery plan for the Arizona Street Landfill. No secondary environmental impacts would occur.

MSCP Subarea Plan

The off-site soil export and grading operations at the Arizona Street Landfill disposal site could result in indirect impacts to the adjacent MHPA.

4.1.3.2 Significance of Impacts

a. Centennial Bridge

The Centennial Bridge would be inconsistent with goals and policies found in the Historic Preservation, Urban Design, Recreation Elements of the General Plan, BPMP, and CMPP. The project's inconsistency with the historic preservation policies would result in secondary impacts to the NHLD, and would therefore, be significant.

This project component also would be inconsistent with policies of the BPMP and the CMPP related to circulation. These inconsistencies would yield less than significant secondary impacts because the project would result in fewer intersection and roadway segment failures in both 2015 and 2030 than the CMPP. The Centennial Bridge would be consistent with the MSCP Subarea Plan and no impacts would occur.

b. Alcazar Parking Lot and Centennial Road

The Centennial Road would be consistent with General Plan, BPMP and CMPP goals and policies; impacts would be less than significant.

The Alcazar parking lot and Centennial Road would be consistent with the MSCP Subarea plan; no impacts would occur.

c. Plaza de California, El Prado, Plaza de Panama, and the Mall

Improvements to the Plaza de California, El Prado, Plaza de Panama, and the Mall would be consistent with the goals, policies, and recommendations of all applicable plans; therefore, impacts would be less than significant.

d. Parking Structure/Rooftop Park/Arizona Street Landfill

Improvements associated with construction of the Organ Pavilion parking structure and rooftop park would be consistent with the goals and policies of the General Plan; therefore, impacts would be less than significant.

This project component would be inconsistent with the number of spaces specified in the BPMP and the CMPP relative to the parking structure; however, with the adoption of the amendments to the BPMP and CMPP, conflicts would be resolved, and no secondary impacts would result; therefore, impacts would be less than significant.

The export generated from construction of the Organ Pavilion parking structure would be disposed on the East Mesa within the Arizona Street Landfill. The disposal of fill at the existing Arizona Street Landfill site is consistent with the EMPP, and no secondary impacts would result. However, grading activities within the landfill have the potential to result in significant indirect impacts to the adjacent MHPA, and thus mitigation is required.

4.1.3.3 Mitigation, Monitoring, and Reporting

Centennial Bridge

No feasible mitigation for the impacts related to the NHLD as a result of land use policy consistency is available.

Parking Structure/Rooftop Park /Arizona Street Landfill

LU-1

I. Prior to Permit Issuance

A. Prior to issuance of any construction permit, the DSD Environmental Designee (ED) shall verify the Applicant has accurately represented the project's design in the Construction Documents (CDs) that are in conformance with the associated discretionary permit conditions and Exhibit "A," and also the City's MSCP Land Use Adjacency Guidelines for the MHPA, including identifying adjacency as the potential for direct/indirect impacts where applicable. In addition, all CDs where applicable shall show the following:

1. **Land Development/Grading/Boundaries** – MHPA boundaries on-site and adjacent properties shall be delineated on the CDs. The ED shall ensure that all grading is included within the development footprint, specifically manufactured slopes, disturbance, and development within or adjacent to the MHPA.

2. **Drainage/Toxins** – All new and proposed parking lots and developed area in and adjacent to the MHPA shall be designed so they do not drain directly into the MHPA, All developed and paved areas must prevent the release of toxins, chemicals, petroleum products, exotic plant materials prior to release by incorporating the use of filtration devices, planted swales and/or planted detention/desiltation basins, or other approved permanent methods that are designed to minimize negative impacts, such as excessive water and toxins into the ecosystems of the MHPA.

3. **Staging/Storage, Equipment Maintenance, and Trash** – All areas for staging, storage of equipment and materials, trash, equipment maintenance, and other construction related activities are within the development footprint. Provide a note on the plans that states: "All construction related activity that may have potential for leakage or intrusion shall be monitored by the Qualified Biologist/Owners Representative to ensure there is no impact to the MHPA."

4. **Barriers** – All new development within or adjacent to the MHPA shall provide fencing or other City approved barriers along the MHPA boundaries to direct public access to appropriate locations, to reduce domestic animal predation, and to direct wildlife to appropriate corridor crossing. Permanent barriers may include, but are not limited to, fencing (6-foot black vinyl coated chain link or equivalent), walls, rocks/boulders, vegetated buffers, and signage for access, litter, and educational purposes.

5. **Lighting** – All building, site, and landscape lighting adjacent to the MHPA shall be directed away from the preserve using proper placement and adequate shielding to protect sensitive habitat. Where necessary, light from traffic or other incompatible uses, shall be shielded from the MHPA through the utilization of including, but not limited to, earth berms, fences, and/or plant material.

6. **Invasive Plants** – Plant species within 100 feet of the MHPA shall comply with the Landscape Regulations (LDC142.0400 and per table 142-04F, Revegetation and Irrigation Requirements) and be non-invasive. Landscape plans shall include a note that states*:* "The ongoing maintenance requirements of the property owner shall prohibit the use of any planting that

are invasive, per City Regulations, Standards, guidelines, etc., within 100 feet of the MHPA."

7. **Brush Management** – All new development adjacent to the MHPA is set back from the MHPA to provide the required Brush Management Zone 1 area (LDC Sec. 142.0412) within the development area and outside of the MHPA. Brush Management Zone 2 may be located within the MHPA and the Brush Management Zone 2 management shall be the responsibility of the City.

8. **Noise -** Due to the site's location adjacent to or within the MHPA, construction noise that exceeds the maximum levels allowed shall be avoided, during the breeding seasons for protected avian species such as: California Gnatcatcher (3/1-8/15); Least Bell's vireo (3/15-9/15); and Southwestern Willow Flycatcher (5/1-8/30). If construction is proposed during the breeding season for the species, U.S. Fish and Wildlife Service protocol surveys shall be required in order to determine species presence/absence. When applicable, adequate noise reduction measures shall be incorporated.

II. Prior to Start of Construction

A. Preconstruction Meeting

The Qualified Biologist/Owners Representative shall incorporate all MHPA construction related requirements, into the project's Biological Monitoring Exhibit.

The Qualified Biologist/Owners Representative is responsible to arrange and perform a focused pre-con with all contractors, subcontractors, and all workers involved in grading or other construction activities that discuss the sensitive nature of the adjacent sensitive biological resources.

III. During Construction

B. The Qualified Biologist/Owners Representative, shall verify that all construction-related activities taking place within or adjacent to the MHPA are consistent with the CDs, the MSCP Land Use Adjacency Guidelines. The Qualified Biologist/Owners Representative shall monitor and ensure that:

1. **Land Development/Grading Boundaries -** The MHPA boundary and the limits of grading shall be clearly delineated by a survey crew prior to brushing, clearing, or grading. Limits shall be defined with orange construction fence and a siltation fence (can be combined) under the supervision of the Qualified Biologist/Owners Representative who shall provide a letter of verification to RE/MMC that all limits were marked as required. Within or adjacent to the

MHPA, all manufactured slopes associated with site development shall be included within the development footprint.

2. **Drainage/Toxics -** No direct drainage into the MHPA shall occur during or after construction and that filtration devices, swales and/or detention/desiltation basins that drain into the MHPA are functioning properly during construction, and that permanent maintenance after construction is addressed. These systems should be maintained approximately once a year, or as often a needed, to ensure proper functioning. Maintenance should include dredging out sediments if needed, removing exotic plant materials, and adding chemical-neutralizing compounds (e.g., clay compounds) when necessary and appropriate.

3. **Staging/storage, equipment maintenance, and trash** - Identify all areas for staging, storage of equipment and materials, trash, equipment maintenance, and other construction-related activities on the monitoring exhibits and verify that they are within the development footprint. Comply with the applicable notes on the plans.

4 **Barriers -** New development adjacent to the MHPA provides City-approved barriers along the MHPA boundaries

5. **Lighting -** Periodic night inspections are performed to verify that all lighting adjacent to the MHPA is directed away from preserve areas and appropriate placement and shielding is used.

6. **Invasives -** No invasive plant species are used in or adjacent (within 100 feet) to the MHPA and that within the MHPA, all plant species must be native.

7. **Brush Management –** Brush Management Zone 1 is within the development footprint and outside of the MHPA, and that maintenance responsibility for the Brush Management Zone 2 located within the MHPA is identified as the responsibility of a homeowners association or other private entity.

8. **Noise –** For any area of the site that is adjacent to or within the MHPA, construction noise that exceeds the maximum levels allowed shall be avoided, during the breeding seasons, for protected avian species such as: California Gnatcatcher (3/1-8/15); Least Bell's vireo (3/15-9/15); and Southwestern Willow Flycatcher (5/1-8/30). If construction is proposed during the breeding season for the species, U.S. Fish and Wildlife Service protocol surveys will be required in order to determine species presence/absence. When applicable, adequate noise reduction measures shall be incorporated.

IV. Post Construction

A. Preparation and Submittal of Monitoring Report

The Qualified Biologist/Owners Representative shall submit a final biological monitoring report to the Resident Engineer (RE)/Mitigation Monitoring Coordinator (MMC) within 30 days of the completion of construction that requires monitoring. The report shall incorporate the results of the MMRP/MSCP requirements per the construction documents and the Biological Monitoring Exhibit to the satisfaction of RE/MMC.

4.1.3.4 Significance of Impacts after Mitigation

No feasible mitigation for the impacts related to the NHLD as a result of land use policy consistency is available; therefore, impacts would remain significant and unmitigated.

Implementation of mitigation measure **LU-1** for MHPA Adjacency would reduce impacts to less than significant.

4.1.4 Issue 3: Land Use Incompatibility

Would the proposal result in land uses that are not compatible with existing or planned surrounding land uses?

Pursuant to the City's Significance Determination Thresholds, land use compatibility impacts may be considered significant should the following result:

- Inconsistency/conflict with an adopted land use designation or intensity and indirect or secondary environmental impacts occur.

4.1.4.1 Impacts

ALL PROJECT COMPONENTS

The project would be consistent with the adopted land use designation and intensity compatible with surrounding land use, in that the project would improve circulation within the vicinity, reduce vehicle-pedestrian conflicts, and facilitate better access to Park amenities located within the Central Mesa, all goals articulated by the BPMP and CMPP.

The project would remove cars from the Plaza de Panama, El Prado, Plaza de California, the Mall, and Pan American Road and reestablish pedestrian-only circulation to the Prado and Plaza de Panama, thereby alleviating some land use compatibility issues associated with vehicular and pedestrian use. Through these improvements, the

project would restore the historical pedestrian use of the Prado and Plaza de Panama and fulfill the goals of both the BPMP and CMPP for the project site.

4.1.4.2 Significance of Impacts

The project would be consistent with the adopted land use designation and development intensities and be compatible with existing land uses both on and surrounding the project site; therefore, impacts associated with land use compatibility would be less than significant.

4.1.4.3 Mitigation, Monitoring, and Reporting

No significant land use compatibility impacts have been identified, and no mitigation is required.

4.1.5 Issue 4: San Diego International Airport ALUCP Compatibility

Would the proposal result in land uses that are not compatible with an adopted ALUCP?

Pursuant to the City's Significance Determination Thresholds, land use compatibility impacts may be considered significant should the following result:

- Incompatible uses as defined in an airport land use plan or inconsistency with an ALUCP as adopted by the ALUC to the extent that the inconsistency is based on valid data.

4.1.5.1 Impacts

ALL PROJECT COMPONENTS

As described above, the project site lies within the AIA and the 60–65 dB CNEL contour of the SDIA, as established in the adopted ALUCP. The project does not propose to introduce any new land use within the project area and would not require a General Plan Amendment. However, when a project is proposed that would require an amendment or update to a land use plan, airport plan, development regulation, or zoning ordinance within an airport influence area, the City is required to submit these proposals to the ALUC for a consistency determination prior to approval of the project. Because the project proposes to amend the BPMP (which serves as the Community Plan for the Park), the project was submitted to the ALUC for review of consistency with SDIA ALUCP.

The ALUC issued a determination on May 4, 2011, that the project is consistent with the SDIA ALUCP because:

1. The project is located within the 60-65 dB CNEL noise contours.
2. The project is not located within the City's AAOZ. Additionally, a determination of "no hazard" to air navigation has been issued by the FAA.
3. The project is not located within the RPZ.

Therefore, in accordance with these findings, the project would not result in land uses that are incompatible with the adopted ALUCP.

4.1.5.2 Significance of Impacts

The project would be consistent with the SDIA ALUCP, and impacts would be less than significant.

4.1.5.3 Mitigation, Monitoring, and Reporting

Impacts would be less than significant. No mitigation is required.

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4.2 Historical Resources

A Historical Preservation Technical Report was prepared by VerPlanck Preservation Architects (November 2011). That report is the basis for this historic/built environment portion of this section and included as Appendix B-1. An Historical Resources Survey Report was prepared by RECON for the project (January 2012; Appendix B-2). The report summarizes results of a field and archival investigation of the project site conducted in March 2011, September 2011, and January 2012, along with the testing programs undertaken in June and August 2011. The survey consisted of a record search of the included archaeological databases maintained at the South Coastal Information Center (SCIC) and the San Diego Museum of Man, as well as an intensive on-foot survey of the project site and construction access road.

4.2.1 Existing Conditions

4.2.1.1 Known Prehistoric/Historical Resources

a. Prehistoric Setting

The prehistoric cultural sequence in San Diego County is generally conceived as comprising three basic periods: the Paleoindian, dated between about 11,500 and 8,500 years ago and manifested by the artifacts of the San Dieguito Complex; the Archaic, lasting from about 8,500 to 1,500 years ago (A.D. 500) and manifested by the cobble and core technology of the La Jollan Complex; and the Late Prehistoric, lasting from about 1,500 years ago to historic contact (i.e., A.D. 500 to 1769) and represented by the Cuyamaca Complex. This latest complex is marked by the appearance of ceramics, small arrow points, and cremation burial practices.

The Paleoindian Period in San Diego County is most closely associated with the San Dieguito Complex, as identified by Rogers (1938, 1939, 1945). The San Dieguito assemblage consists of well-made scraper planes, choppers, scraping tools, crescentics, elongated bifacial knives, and leaf-shaped points. The San Dieguito Complex is thought to represent an early emphasis on hunting.

The Archaic Period brings an apparent shift toward a more generalized economy and an increased emphasis on seed resources, small game, and shellfish. The local cultural manifestations of the Archaic Period are called the La Jollan Complex along the coast and the Pauma Complex inland. Pauma Complex sites lack the shell that dominates many La Jollan sites. Along with an economic focus on gathering plant resources, the settlement system appears to have been more sedentary. The La Jollan assemblage is dominated by rough, cobble-based choppers and scrapers, and slab and basin metates. Large side-notched and Elko series projectile points appeared. Large deposits of marine

shell at coastal sites argue for the importance of shellfish gathering to the coastal Archaic economy.

Near the coast and in the Peninsular Mountains beginning approximately 1,500 years ago, patterns began to emerge which suggest the ethnohistoric Kumeyaay. This period is characterized by higher population densities and elaborations in social, political, and technological systems. Economic systems diversify and intensify during this period, with the continued elaboration of trade networks, the use of shell-bead currency, and the appearance of more labor-intensive, but effective technological innovations.

The late prehistoric archaeology of the San Diego coast and foothills is characterized by the Cuyamaca Complex. It is primarily known from the work of D. L. True at Cuyamaca Rancho State Park (True 1970). The Cuyamaca Complex is characterized by the presence of steatite arrowshaft straighteners, steatite pendants, steatite comales (heating stones), Tizon Brownware pottery, ceramic figurines reminiscent of Hohokam styles, ceramic "Yuman bow pipes," ceramic rattles, miniature pottery various cobble-based tools (e.g., scrapers, choppers, hammerstones), bone awls, manos and metates, mortars and pestles, and Desert side-notched (more common) and Cottonwood Series projectile points.

The Kumeyaay occupied the southern two-thirds of San Diego County and lived in semi-sedentary, politically autonomous villages or rancherias. The most basic social and economic unit was the patrilocal extended family. Their economic system consisted of hunting and gathering, with a focus on small game, acorns, grass seeds, and other plant resources. A wide range of tools was made of locally available and imported materials such as obsidian. Ground stone objects of the Kumeyaay included mortars and pestles typically made of locally available, fine-grained granite. The Kumeyaay also made fine baskets that employed either coiled or twined construction. The Kumeyaay also made pottery. Most were a plain brown utility ware called Tizon Brownware, but some were decorated.

b. Archaeological Resources

Records Search

Record searches of the databases at the SCIC were conducted to check for previously recorded historic or prehistoric resources on and adjacent to the property. Three previously recorded archaeological resources were identified within the project area, CA-SDI-15826, CA-SDI-15827, and P-37-019074. The three resources were found by Brian F. Smith and Associates (BFSA) during monitoring for the City of San Diego Sewer and Water Group 619 project.

Previous Investigations

As a result of monitoring activity for the City of San Diego Sewer and Water Group 619 project, two historic trash deposits were identified within the project area. These deposits were recorded at the SCIC as CA-SDI-15827 and CA-SDI-15826. According to information from the BFSA Sewer and Water Group 615 Monitoring Report (2001) both date from between 1910 and 1915 and consist of a variety of ceramic bottles, plates, and glass. Both deposits were encountered between 31-47 centimeters (cm; 12–18 inches) in depth and approximately 36 inches long and 6–12 inches thick and up to a depth of 2 feet.

The BFSA report states the deposits are possibly associated with the construction of the 1915 Exposition in Balboa Park. The 1915 Exposition was a major event in San Diego history as it brought an increased awareness of San Diego as a commercial port of call to the rest of the country, and to other potential trading nations around the world. The 1915 Exposition also radically changed Balboa Park, as it was the reason for the construction of many of the buildings that define the Park's physical appearance to this day.

CA-SDI-15826 is a historic trash deposit found in a utility trench south of the House of Hospitality and north of the Japanese Garden, on the east side of the Mall. This small deposit included bottle glass, ceramics, building material, shellfish, and animal bone.

CA-SDI-15827 is a second historic trash deposit found in a utility trench on Presidents Way, where it forms the north end of Pan American Plaza. This deposit included bottle glass, stoneware bottle fragments, ceramic tableware fragments, window glass, and shell. This small deposit is believed to date to between 1880 and 1920.

P-37-019074 consists of a single ceramic bowl fragment found in a trench in El Prado, approximately 50 meters west of the Museum of Man.

Field Inspection

A field inspection was conducted on foot by RECON archaeologist Harry Price and Native American Monitor Clinton Linton of Red Tail Monitoring and Research Inc. In addition, the staging area and access road for the Centennial Bridge within Cabrillo Canyon was surveyed by RECON. RECON also completed a field check of the Arizona Street Landfill.

The field survey found two previously unidentified small shell scatters within the project area. The site 6095-HJP-1 is a scatter of approximately 25 small *Chione* sp. and *Pecten* sp. fragments in a dirt area around a set of irrigation valve boxes in the landscaped area between the south end of the Organ Pavilion parking lot and Presidents Way. No prehistoric artifacts were found with the shell. The area has been impacted in

the past by the construction of the parking lot, road, and landscaping, and most recently, installation of irrigation system control boxes.

The second shell scatter, 6095-HJP-2, consists of approximately 20 fragments of *Chione* sp. The shells are scattered on a small cut slope immediately south of the Organ Pavilion, between a sidewalk and a service road. No prehistoric artifacts are associated with the shell.

The three previously recorded cultural resources within the project area, CA-SDI-15826, CA-SDI-15827, and P-37-019074 were not relocated during the field survey. All were subsurface historic trash deposits found during trenching for water lines, and as such have no surface component to relocate.

No cultural material was found at the proposed fill disposal sites at the Arizona Street Landfill or the temporary access road and staging area next to SR-163.

Test Excavations

6095-HJP-1 and 6095-HJP-2 (Shell Scatter) – A testing program was conducted by RECON archaeologists and a Native American observer. Six shovel test pits (STPs) each were excavated in 6095-HJP-1 and 6095-HJP-2 to define the area of deposits and evaluate their integrity. The locations of the STPs were based on surface evidence of shell. Each STP measured 30 by 50 cm and was hand dug in 10 cm increments with shovels and trowels, and heavier tools as soil conditions dictated.

CA-SDI-15826 (Trash Deposit) – As discussed above, because of the age of the deposit and its possible association with the 1915 Exposition and the development of Balboa Park, a testing program was implemented for CA-SDI-15826. Eight STPs were excavated in the location of CA-SDI-15826. The STPs were located on either side of the utilities line, four on the north and four on the south. During the original excavation of the trench the upper half was cut back at an angle for safety reasons, making it approximately 15 feet wide at the top (7.5 feet on either side of centerline). Because of this, the STPs were placed from 8.5 to 12 feet distant from the centerline of the utility line to avoid the disturbed trench area. The original deposit was encountered between 31 and 47 cm below surface, so all STPs were excavated down to 40 cm, which was sufficient to locate any extension of the original deposit.

c. Historic Setting

The historic era in San Diego County begins with the establishment of Mission San Diego de Alcalá in 1769 and continues to the present. This era is divided into three periods that coincide with changes in sovereignty. They include the Spanish Period: 1769-1822, the Mexican Period: 1822-46, and the Early American Period: 1846 to 1888.

The Spanish Period (1769–1822) represents a time of European exploration and settlement. Military and naval forces along with a religious contingent founded the San Diego Presidio, the pueblo of San Diego, and the San Diego Mission in 1769 (Rolle 1998). Native American culture in the coastal strip of California rapidly deteriorated despite repeated attempts to revolt against the Spanish invaders (Cook 1976). The Spanish mission system used forced Native American labor to produce goods and provide services needed for European settlement. Also with the arrival of the Spanish came devastating epidemics and very high death rates. According to available mission records, the worst year was 1806 when a measles epidemic hit southern California. An estimated 33.5 percent of the Indian population along the coast died (Cook 1976:424). The mission system also introduced horses, cattle, sheep, and agricultural goods and implements and provided new construction methods and architectural styles. One of the hallmarks of the Spanish colonial scheme was the rancho system. In an attempt to encourage settlement and development of the colonies, large land grants were made to meritorious or well-connected individuals.

In 1821, the Spanish colony of New Spain revolted and became the independent nation of México. Many settlers from México began arriving in San Diego. Between 1820 and 1834 – when San Diego was designated a pueblo – the town's population had grown to more than 600 residents. During the Mexican Period (1822–1846), the mission system was secularized by the Mexican government and these lands allowed for the dramatic expansion of the rancho system. The southern California economy became increasingly based on cattle ranching. Native American communities continued to decline, particularly those close to the coast. However, some Native Americans found jobs as vaqueros, laborers, gardeners, and housekeepers. The Mexican Period ended when Mexico signed the Treaty of Guadalupe Hidalgo on February 2, 1848, concluding the Mexican-American War (1846–1848; Rolle 1998). The great influx of Americans and Europeans resulting from the California Gold Rush in 1848-49 eliminated many remaining vestiges of Native American culture. Indian rancherias were supposed to be recognized by the American government by the terms of the Treaty of Guadalupe Hidalgo, but they were not.

In 1850, during the early American Period (1846-1888), California was admitted to the Union, and San Diego County was established as one of California's original 27 counties. San Diego was also incorporated as a city, although its population was only 650. San Diego and the rest of Southern California changed very little between statehood and the Civil War. Although Northern California's population exploded during the Gold Rush, Southern California saw little in-migration. San Diego's population actually plummeted after 1850. San Diego's biggest early real estate boom began in 1884 after the California Southern Railroad built a spur line between San Diego and Los Angeles. San Diego's population exploded, achieving a peak population of 40,000 in 1887. Many prominent civic landmarks such as the Hotel del Coronado took shape during this period. The real estate boom ended with a severe crash in 1888. Many

speculators were ruined overnight and San Diego's population dropped by more than half.

Continuing European encroachments eventually made traditional band level lifeways progressively unviable. A few impoverished bands were able to retain traditional patterns in remote mountain areas until the early twentieth century, but the broader and complex Kumeyaay social system was effectively dismantled by the mid nineteenth century. As more and more land was claimed by Europeans farming and ranching subsistence for Native Americans decreased and reliance on wage and subsistence labor increased (Shipek 1978). Reservations had begun to be set up in in the 1870s in San Diego County, but not until the 1891 Act for the Relief of Mission Indians was legal title to reservation lands secured (Shipek 1978). After this an increase in Native American farm and ranching activity occurred, both for subsistence and for cash sale.

Balboa Park

On February 15, 1868, one year after Alonzo Horton founded "New Town," three Trustees of the City of San Diego – Ephraim W. Morse, Thomas Bush, and M. S. Manasse – voted to approve a resolution to set aside two 160-acre "Pueblo Lots" for the purpose of securing to the inhabitants of the City of San Diego a suitable park. Alonzo Horton and Board of Trustees President José Estudillo suggested enlarging it from two to nine pueblo lots – or 1,400 acres. On February 4, 1870, "City Park" was confirmed by the California Legislature, which declared that the land "*be held in trust forever by the municipal authorities of said city for the use and purpose of a public park, and for no other or different purpose.*" During the remainder of the nineteenth century there were no real attempts to develop a master plan for the Park. Nearly all of it remained in its natural state – several mesas covered in coastal sage scrub and bisected by deep canyons.

In October 1902, philanthropist George Marston announced his intention to spend $10,000 of his own money to hire Samuel Parsons, Jr. to devise a plan for City Park. Parsons, who had served as Superintendent of New York's Central Park for 15 years, was a disciple and close friend of the ailing Frederick Law Olmsted. By July 30, 1903, Parsons (with assistance from Kate Sessions) completed his first plan for City Park. Soon work began in the southwest corner of the Park, the most level and easy-to-grade section, as well as the closest part of the Park to downtown San Diego.

Similar to what exists today, Parsons had suggested placing more formally irrigated landscapes toward the west side (closer to downtown) and around the entrances where irrigation could be used to create more traditional eastern-style greenswards. He proposed keeping the mesa tops largely free of tall trees – instead planting eucalyptus in the canyons and on the slopes of the mesas. By doing this he hoped to emphasize the site's unimproved dramatic topography.

On July 9, 1909, G. Aubrey Davidson, Chamber of Commerce president, set in motion a chain of events that led to the design and construction of the 1915 Panama-California Exposition in Balboa Park. Aubrey advocated that San Diego should host an international exposition celebrating the opening of the Panama Canal in January 1915. Davidson proposed that an exposition could help San Diego by boosting its stagnating population of 39,000 and would help to finance improvements to the Park.

In 1911, Bertram Goodhue, a New York architect, was appointed "Advisory and Consulting Architect" for the implementation of Exposition Plan. He and Frank Allen, Director of Works, finished the plan for the Central Mesa in the fall of 1911. Although the plan they developed was modified several times, it became the basis of what was actually constructed between 1912 and 1914. The architectural team of Bertram Goodhue and his employees took charge of the design of the buildings. Frank Allen took over the landscape design.

Goodhue decided to employ Spanish Colonial Revival style for the Panama-California Exposition, including the most dramatic and ornamental varieties of Hispanic architecture – the Spanish Churrigueresque and Plateresque styles. The centerpiece of the group was the California Building (now the Museum of Man). Based on México's Santa Prisca and San Martín churches, the California Building was one of three buildings designed to remain after the Exposition (the others being the Botanical Building and the Spreckels Organ Pavilion).

The design of the Exposition grounds began to reach its final built form by early 1913. Primarily laid out by Goodhue's associate Clarence S. Stein, the Exposition plan was axial in composition. The centerpiece of the exposition was El Prado, a pedestrian street running east-west across the center of the Mesa. El Prado was to begin at the eastern end of Cabrillo Bridge (itself aligned with Laurel Street) and continue east to Park Boulevard. El Prado was split into two sections, with West El Prado bracketed by Plaza de California on the west and Plaza de Panama on the east. East El Prado continued eastward, beginning at the eastern edge of Plaza de Panama and terminating at Plaza de Balboa on the east. Plaza de Panama formed a hinge to the composition, linking El Prado to the Plaza de los Estados and the site of the Spreckels Organ Pavilion via a subordinate north-south axis called La Esplanada, or simply, "the Mall." A secondary north-south axis would extend from the Botanical Building and the Lily Pond across East El Prado to a courtyard between the Food Products Building (now the House of Hospitality) and the Commerce and Industries Building (now Casa de Balboa).

Fewer than 100 acres of Balboa Park were formally planted by the time construction began in 1913. An aerial photograph taken ca. 1915 after the opening of the Panama-California Exposition illustrates how most of the park remained in its close-to-natural condition. Plantings included the hundreds of eucalyptus Samuel Parsons had planted in Cabrillo Canyon and on the slopes of the West and Central Mesas between 1905 and 1909. Landscape crews seeded lawns, and planted around 50,000 trees, including

700 orange, lemon, and grapefruit trees in the demonstration citrus orchard. In addition to general landscaping improvements, the 1915 Exposition featured several formal gardens and thousands of trees, foundation plantings; as well as dozens of lawns, denoted as "parks" on the original plans. In total it has been reported that the Panama-California Exposition featured over two million plants representing 1,200 varieties.

The hardscaped plazas, including the Plaza de California, Plaza de Panama, Plaza de Balboa, and Plaza de los Estados, were just as important as the lawns, trees, hedges, and other plantings. The most important of these plazas was the Plaza de Panama, the centerpiece of the El Prado group and the fulcrum of the entire Exposition's axial layout. Based on Spanish, Italian, and Mexican prototypes, Plaza de Panama was intended to function like a "city in miniature," much like its precedents in Latin America and the Mediterranean.

Everything but the Cabrillo Bridge, California Quadrangle, the Botanical Building, and the Spreckels Organ Pavilion was planned to be demolished and returned to parkland after the Exposition closed. After the Exposition ended, San Diego offered the Navy the use of the Exposition buildings as a place to train new recruits. After the Navy relinquished use of the structures, the City eventually capitulated to public pressure, and in 1922, most of the buildings along El Prado were repaired using both private and public funds prior to reopening to the public. Automobiles were also fully introduced to Balboa Park, appearing in early photographs parked on Plaza de Panama, Plaza de California, and all along El Prado. The surface material of the plazas may have also been changed from bitumen and decomposed granite to asphalt in response to the introduction of automobiles. In search of a use for the exhibition buildings, the City of San Diego began letting local museums and other cultural organizations lease space in the buildings.

Substantial community effort that went into saving the El Prado/Plaza de Panama complex from deterioration and neglect in 1933–34 served as a catalyst for another world's fair. In order to plan and construct a world's fair site in less than a year, much of the original 1915 complex was reused. Constructed for the 1935 Exposition were the International Cottages, the Spanish Village, Plaza de America, a landscaped park at the center of a cluster of large exhibit halls in the southern part of the Palisades and the Old Globe Theatre.

Aside from the Zocalo area, very little of the 1935–36 California Pacific International Exposition was demolished after it closed in 1936. Most of the exhibition halls were permanent structures, and like the El Prado buildings, they were gradually put into various civic uses. After the Exposition, vehicles were once again allowed throughout the Exposition grounds and that several new areas had been converted into parking lots in addition to the existing plazas of the El Prado/Plaza de Panama group, including most of Pan American Plaza, and the former site of the California Gardens behind the Spreckels Organ Pavilion (now the Spreckels Organ Pavilion parking lot).

In 1960, the new Balboa Park Master Plan, the Bartholomew Plan prepared by Harland Bartholomew & Associates, was adopted. The plan called for the demolition of nearly all the 1915 temporary buildings and their replacement with entirely new facilities – not reproductions of the original buildings. From 1960 through the 1980s, many changes occurred in the Central Mesa, including the demolition of two Goodhue-designed buildings and introduction of two Modernist structures, the construction of a new Plaza de Balboa and the destruction and rebuilding of the Old Globe Theatre.

The growing influence of historic and cultural landscape preservation both resulted in a gradual shift in approach to planning in Balboa Park. Whereas the 1960 Bartholomew Plan had called for the destruction of nearly all the 1915 Exposition buildings, the 1992 Central Mesa Precise Plan, as amended, calls for the rehabilitation of the architecture of the Central Mesa that "preserves its historic and aesthetic significance while providing for functional needs." Throughout the 1980s and 1990s, most of the rest of the temporary 1915 buildings were reconstructed.

d. Historical Resources (Built Environment)

The project site lies within the Balboa Park NHLD, site number P-37-028239. The NHLD is on the National Register of Historic Places (NRHP; designation number 77000331), California Register of Historic Resources, and the City of San Diego Register of Historical Resources (San Diego Historic Landmark 1).

Balboa Park was designated a NHLD on December 22, 1977. The nomination provides a brief and very general assessment of Balboa Park in the statement of significance: "Balboa Park is the cultural center of San Diego as well as being a beautifully designed urban area—one of the best planned and landscaped in America. The buildings are some of the finest Spanish Baroque revival architecture extant."

The statement of significance does not include any other detail, omitting any discussion about which National Historic Landmark criteria Balboa Park appears to fulfill. The nomination form is also ambiguous over the boundaries of the NHLD. Although the nomination appears to designate Balboa Park in its entirety, the only buildings and landscapes discussed in the nomination form (with the exception of the Ford Building) are located within the El Prado/Plaza de Panama area. However, the boundary description indicates that the area covered by the NHLD encompasses the majority of the Central Mesa – everything south of the San Diego Zoo and including both the El Prado/Plaza de Panama area and the Palisades. Based on this boundary description, the boundaries of the NHLD include Cabrillo Bridge; SR-163 (Cabrillo Historic Parkway) to the west, a line running east from Quince Drive and the Cabrillo Freeway to Florida Canyon to the north; Park Boulevard to the east; and I-5 to the south. The approximate boundaries of the NHLD are shown on Figure 4.2-1.

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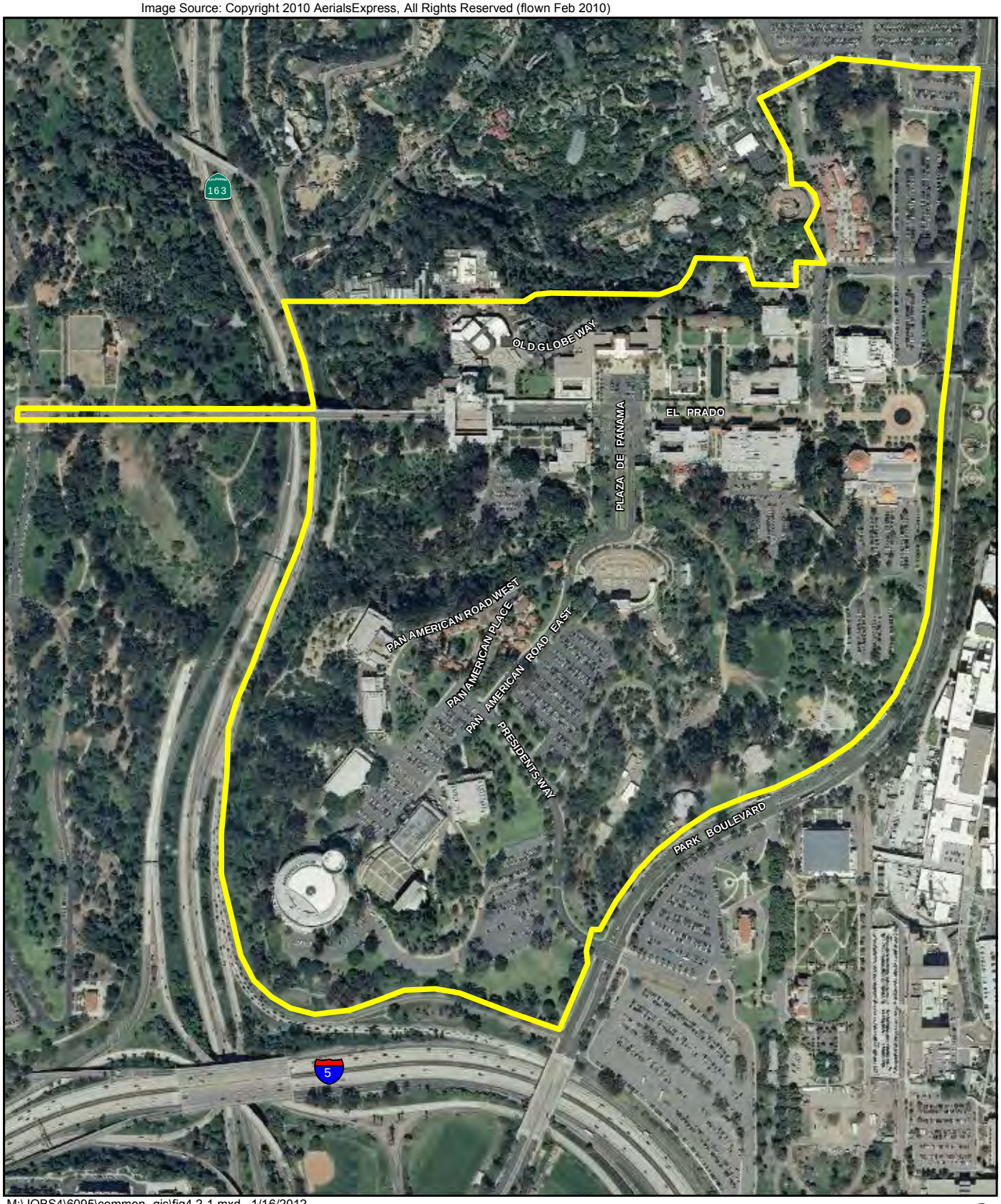

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Approximate Boundary of the Balboa Park National Historic Landmark District

FIGURE 4.2-1

National Historic Landmark District

Based on the period of significance listed in the various nominations, it is apparent that all buildings, structures, landscapes, and objects constructed for the 1915 Panama-California Exposition and the 1935 California Pacific International Exposition that retain integrity should be considered to be contributors to the Balboa Park National Historic Landmark.

The existing and historic context of key components within the project area is described below. Please refer to Appendix B-1 for additional detail.

Cabrillo Bridge (1912-14)

Cabrillo Bridge (sometimes called the Laurel Street Bridge) is, along with the California Quadrangle, the foremost architectural symbol of Balboa Park. The reinforced concrete bridge stands 135 feet above Cabrillo Canyon and consists of seven arches, as well as solid concrete abutments. The bridge carries two lanes of traffic and two sidewalks for pedestrians. The quarter-mile long bridge has hollow piers and a solid balustrade, and it is illuminated by decorative light standards.

As the exposition's largest structure, the bridge was designed by Frank Allen and construction began in September 1912. Goodhue had originally designed a three-arch bridge, based on the Alcántara Bridge in Toledo, Spain, to span Cabrillo Canyon. Judging this design to be too costly, the exposition directors selected Allen's alternate seven-arch design. Upon its completion on April 12, 1914, it was a 40-foot-wide, 1,500-foot-long, and 120-foot-high concrete bridge.

California Quadrangle (1914-15)

The California Quadrangle is a large complex consisting of the San Diego Museum of Man, the former Fine Arts Building, and the two linking wings that connect them. The linking wings both have arched portals that provide pedestrian and vehicular passage through the complex from Cabrillo Bridge to El Prado. The area enclosed within the California Quadrangle is called Plaza de California. Designed as the primary entrance to (as well as the focal point of) the Exposition, it features a Greek-cross plan with a tile-covered dome at the center and a soaring 180-foot tower at the southeast corner. The plaza is now paved with contemporary interlocking pavers.

Of all the planned permanent buildings, the California Quadrangle was the most important due to its size and presence on San Diego's skyline. Together, the California Quadrangle and the adjoining Cabrillo Bridge have become one of the "iconic" images of Balboa Park. Over time, the eucalyptus forest planted on the slopes of Cabrillo Canyon has hidden much of the lower portion of the California Quadrangle complex, partially obscuring views of the lower portion of the south wing.

Plaza de Panama (1914-15; 1935)

Originally a hardscaped plaza covered in bitumen and decomposed granite, today Plaza de Panama is a paved surface parking lot. Its northern half retains little integrity as it is bounded by three buildings that did not exist in 1915 and there is no original landscaping. The southern half retains a higher level of integrity. The plaza itself is paved in asphalt and features painted parking spaces as well as traffic lanes. At its center is a fountain donated to Balboa Park ca. 1997.

Designed to resemble a town square of an idealized Spanish or Mexican city, Plaza de Panama was hardscaped with decomposed granite (possibly over asphalt). Some of the more prominent exposition buildings surrounded the plaza, including the Science and Education, Sacramento Valley Building, Home Economy, Foreign Arts, and Indian Arts buildings. The Plaza de Panama was the central gathering place of the Exposition. After the Navy returned Balboa Park to the City in 1919, Plaza de Panama was repurposed as a parking lot. By the late 1920s, it had been paved in asphalt and striped for its new use. In 1935, Richard Requa retained the Plaza de Panama as a central gathering place (renaming it "Plaza del Pacifico") for the California Pacific International Exposition. He redesigned the plaza, adding two reflecting pools on either side of a temporary 50-foot high tower called the Arco de Porvenir, meaning "Arch of the Future." The tower, used to mount speakers and host colored light shows, was demolished after the 1935 exposition. Not long after, the Plaza de Panama was returned to its use as a parking lot.

The Mall (1914-15)

Located on a narrow isthmus between Palm Canyon and Gold Gulch, the Mall is a landscaped lawn bounded by flower beds and roadways located between Plaza de Panama and the Spreckels Organ Pavilion. The Mall, which forms the central portion of the north-south axis of the entire El Prado/Plaza de Panama complex, is bounded to the north by a pair of large wood balustrades that define a pedestrian walkway linking the arcades of the House of Charm and the House of Hospitality. The Mall consists of two paved single-lane roadways (one southbound and one northbound, plus a lane for bus parking on the east curb) enclosing a roughly rectangular lawn panel that tapers to a point at its south end. The lawn panel is bounded by flower beds oriented parallel to the roadways.

The Mall appears on the earliest depictions of the 1915 Panama-California Exposition. Contemporary photographs and postcards indicate that its design has not changed appreciably since then, although its surroundings have changed. Originally bounded by two buildings (both of which were demolished prior to the 1935 exposition), the Mall was originally lined by what appeared to be ornate light standards (no longer extant). The wood balustrades at its northern end appear in early images, confirming that they are historic structures.

Palm Canyon (1914-15)

Palm Canyon is a steep natural declivity located between the Alcazar parking lot and the Mall. The canyon is primarily accessed by a wood stair that leads down into the canyon from a wooden foot bridge linking Alcazar parking lot to a paved path that follows the eastern rim of Palm Canyon. It is also accessed by a stone stair leading down into the canyon from the southern edge of the Alcazar parking lot. An informal foot trail connects Palm Canyon to the Old Cactus Garden behind the Balboa Park Club. The trail at the bottom of the canyon also connects to the Archery Range where gated access is provided to Archery Club members. Palm Canyon, which is a little over two acres in extent, contains around 450 individual palms representing 58 different species, as well as several large Moreton bay figs and other plantings that thrive in a damp, subtropical environment.

Palm Canyon was originally the location of several deep wells, as well as San Diego's animal pound, hence its early name of "Pound Canyon." The earliest plantings in Palm Canyon were Mexican fan palms planted in 1912, likely by Kate Sessions. Palm Canyon was fully planted in time for the 1915 Panama-California Exposition. Richard Requa made a few changes in 1935, including building a footbridge over the canyon. This bridge was removed many years later. The existing walkway and stairs were both built in 1976. Stone abutments and steps from the original remain.

Organ Pavilion Parking Lot Area (ca. 1940)

The Organ Pavilion parking lot is irregularly shaped, conforming to its canyon-side location and is bounded by the Spreckels Organ Pavilion to the north, Gold Gulch to the east, Presidents Way to the south, and Pan American Road East to the west. A narrow belt of eucalyptus and other trees screen views of the parking lot from the Spreckels Organ Pavilion to the north. To the west of the lot is a narrow planting strip as well as trees along Pan American Road East. To the south is a more formally landscaped area consisting of irregularly shaped lawn panels with trees and planting beds. To the east, the land steps down into Gold Gulch. Gold Gulch, which is accessed by a paved service road that loops up to the western wall of the canyon, contains several maintenance buildings, staging areas, and other utilitarian functions.

On early maps and aerial photographs of the Panama-California Exposition, the area behind the Spreckels Organ Pavilion appears undeveloped apart from some saplings. With the focus of the 1935 Exposition shifted toward the south, Richard Requa decided to landscape the area with a formal flower garden called "California Gardens." Sometime between 1936 and 1940, California Gardens and a portion of Gold Gulch were graded and filled, creating space for a large surface parking lot which is identified on early post-World War II maps of Balboa Park.

"Cabrillo Freeway" (SR-163)

The Cabrillo Freeway was under construction from 1942 to 1948 within the base of a canyon that formerly contained a meandering stream and a roadway on the eastern slope. An artificial lagoon/lily pond (also known as Laguna de Puente) was created at the base of Cabrillo Bridge after the bridge construction, but was drained due to vector control issues (Amero [No Date], Crawford 2008). The freeway originally opened in 1948 as U.S. 398 and was the first freeway in San Diego County. U.S. 398 was decommissioned in 1964 and renamed to SR-163. The Cabrillo Freeway was constructed as a four-lane freeway and remains as such today. Freeway expansion and other freeway connection improvements have not been completed due to potential historic impacts and impacts to Balboa Park (AARoads 2012).

A portion of SR-163, located within Balboa Park, was designated as a California State Scenic Highway in 1992. In addition to the Scenic Highway designation, SR-163 has been designated as a California Historic District (1996), which encompasses most of the 1947 Cabrillo Freeway project limits. The Cabrillo Freeway Historic District extends from just south of the Cabrillo Bridge to the Sixth Avenue on-ramp undercrossing. The east-west boundary of the Cabrillo Freeway Historic District coincides with the Caltrans right-of-way limits. The Cabrillo Freeway Historic District contributing elements within the project area includes the roadway, landscaping, and the Cabrillo Bridge (California Highways 2012).

In September 2000, the City of San Diego listed the Cabrillo Freeway as a City of San Diego Historic Landmark (Listing No. 441). In August of 2002, the roadway beginning from A Street to the Sixth Avenue on-ramp was designated as an official Historic Parkway (e.g., Cabrillo Historic Parkway) by the California State Legislature (AB 3025). The following resources appear to be non-contributors to the Balboa Park National Historic Landmark because they were constructed or planted after 1935 and were not original design features of either the 1915 or the 1935 Exposition.

Archery Range

The Archery Range is located on the eastern slope of Cabrillo Canyon. The Archery Range consists of 40 targets placed throughout the canyon both north and south of the Cabrillo Bridge abutment. A narrow arroyo within the archery range is planted with hundreds of palms. This area also contains an unidentified brick culvert of unknown origins. Remnants of a stone path, retaining walls, and water pipes are also located throughout the area.

Alcazar Parking Lot (ca. 1956)

Alcazar parking lot is located immediately south of Alcazar Gardens; it is accessible from the east only via a drive connecting it to the Mall. The parking lot has a large Moreton

bay fig tree near its northeast corner, a footpath that wraps around its southern side, and an early 1960s-era toilet room structure on the west side.

It is not known when Alcazar parking lot was constructed. Before it was built ca. 1956, the area was occupied by gardens with footpaths and a pergola that connected with the Palm Canyon Bridge. The gardens had been built in 1915. The gardens appear as late as 1953 on aerial photographs. The existing parking lot first appears on 1964 aerial photographs.

Arizona Street Landfill

The 70-acre area now known as the Arizona Street Landfill site was originally a canyon that was filled in with debris. Initially, the northern landfill area was called the "Balboa Park Landfill" and was used for construction debris from 1935 to 1936. The southern area was opened as the "Arizona Street Landfill" in 1952 and it primarily accepted household waste and construction waste until it was closed in 1974. The landfill was capped (3 to 15 feet in depth) and trash associated with the landfill is not visible. A portion of the site was formerly used as a "casting pond" for fly fishing training from approximately 1949 to the 1970s. Currently, the landfill site is used for passive recreation, a City maintenance yard and associated parking lot, and archery range. A methane gas collection system also exists, due to previous methane gas issues that resulted in the 1987 explosion.

4.2.1.2 Regulatory Context

a. National Historic Preservation Act (1966)

The National Historic Preservation Act, enacted in 1966, established the NRHP, authorized funding for state programs with participation by local governments, created the Advisory Council on Historic Preservation, and established a review process for protecting cultural resources. The National Historic Preservation Act provides the legal framework for most state and local preservation laws.

b. National Register of Historic Places (1975)

The NRHP is the nation's most comprehensive inventory of historical resources. The NRHP is administered by the National Park Service and includes buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level. Typically, resources over fifty years of age are eligible for listing in the NRHP if they meet any one of the four significance criteria and if they sufficiently retain historic integrity. Resources under fifty years of age can be determined eligible if it can be demonstrated that they are of "exceptional importance," or if they are contributors to a potential historic district.

c. National Historic Landmark Program (1977)

National Historic Landmarks are properties with the highest level of significance to history of the United States and its territories. National Historic Landmarks are architecturally or historically significant properties designated by the SOI for their ability to illustrate and interpret the history and culture of the United States. Managed by the National Park Service, the National Historic Landmarks Survey consists of approximately 2,400 properties (136 in California). In comparison to the NRHP, the National Historic Landmark Survey includes only those properties that have direct national significance.

d. Secretary of the Interior's Standards for Rehabilitation and Illustrated Guidelines for Rehabilitating Historic Buildings (1992)

The U.S. Department of Interior National Park Service Cultural Resources, Preservation Assistance Division, SOI *Standards for Rehabilitation and Illustrated Guidelines for Rehabilitating Historic Buildings* (the SOI Rehabilitation Standards and the Guidelines, respectively) provide guidance for reviewing proposed work to historic properties. The SOI Rehabilitation Standards are used as an analytic tool for understanding and describing the potential impacts of substantial changes to historical resources. The 10 SOI Rehabilitation Standards are stated below.

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.

2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize the property will be avoided.

3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.

4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.

5. Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize a property will be preserved.

6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.

7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

9. 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 its environment.

10. 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.

e. California Register of Historical Resources (1992)

The California Register of Historical Resources (CRHR) was established in 1992, through amendments to the Public Resources Code, as an authoritative guide to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected from substantial adverse change. The CRHR includes resources that are formally determined eligible for, or listed in, the NRHP, State Historical Landmarks numbered 770 or higher, Points of Historical Interest recommended for listing by the State Historical Resources Commission (SHRC), resources nominated for listing and determined eligible in accordance with criteria and procedures adopted by the SHRC, and resources and districts designated as city or county landmarks when the designation criteria are consistent with California Register criteria.

f. San Diego General Plan (2008)

The San Diego General Plan is the City's blueprint for guiding development and resource protection. The Historic Preservation Element discusses archaeological and historic site preservation in San Diego, including the roles and responsibilities of the Historical Resources Board (HRB), the status of cultural resource surveys, the Mills Act, conservation easements, and other public preservation incentives and strategies. The Historic Preservation Element concludes with a discussion of criteria used by the HRB to designate landmarks and includes a list of recommended steps to strengthen historic preservation in San Diego.

g. San Diego Register of Historical Resources (1967; 1988, amended)

Any improvement, building, structure, sign, interior element and fixture, feature, site, place, district, area, or object may be designated as a historical resource by the City's HRB if it meets the specified criteria. The first site designated as a historical resource by the City of San Diego was Balboa Park's El Prado in 1967. Historical resources designated by the HRB are subject to the City's Historical Resources Regulations (LDC Section, §143.0201), as are sites listed in the state and federal registers.

h. San Diego Historical Resources Regulations

The purpose of the City's Historical Resources Regulations (Section §143.0201 of the City's LDC) is to protect, preserve and, where damaged, restore the historical resources of San Diego, which include historical buildings, historical structures or historical objects, important archaeological sites, historical districts, historical landscapes, and traditional cultural properties. These regulations are intended to assure that development occurs in a manner that protects the overall quality of historical resources. The HRR require that development affecting designated historical resources or historical districts shall provide full mitigation for the impact to the resource, in accordance with the Historical Resources Guidelines of the Land Development Manual, as a condition of approval. If development cannot to the maximum extent feasible comply with the development regulations for historical resources, then an SDP in accordance with Process Four is required.

i. Historical Resources Guidelines

The Historical Resources Guidelines, located in the City's Land Development Manual, provide property owners, the development community, consultants, and the general public explicit guidance for the management of historical resources located within the City's jurisdiction. These guidelines are designed to implement the historical resources regulations and guide the development review process. The guidelines also address the need for a survey and how impacts are to be assessed, available mitigation strategies, and report requirements. They include appropriate methodologies for treating historical resources located in the City.

j. Balboa Park Master Plan (1989)

The Historical Sites Board, on June 22, 1988, gave unanimous approval to recommend to the Park and Recreation Board and to the City Council the inclusion of an historic preservation element and that the following policy statements be incorporated and adopted as part of the BPMP:

> To preserve, maintain and enhance the 1915 and 1935 Exposition buildings, arcades, plazas, landscape horticultural elements, as well as the other building and site features which contribute to the local significance and the National

Historic Landmark status of the Park. Rehabilitation and new construction should respect the historical architectural character of the historic structures and site features in the Park.

The BPMP was adopted in 1989 to give definition and guidance to the future development of Balboa Park. As an update to the Bartholomew Plan, the BPMP includes goals and policies which form the basis for each of the recommendations in the plan. The overall vision of the BPMP is stated as "to nurture and enhance the cultural, recreational and passive resources of the Park to meet the needs of the region and surrounding community, while respecting its physical, cultural and historical environment."

Additional detail regarding the BPMP and its goals and policies is provided in Section 4.1, Land Use.

k. Central Mesa Precise Plan (1992)

The CMPP contains specific recommendations for treating the Central Mesa's historic buildings, circulation, and landscape features. The plan calls for rehabilitating existing historic features "in a manner which preserves its historic and aesthetic significance while providing for functional needs." The CMPP emphasizes the important interrelationship "between the built and the outdoor environment" and recommends restoring not just individual buildings but also that the "entire ensemble in its original composition should be preserved and restored wherever possible. Additional detail regarding the CMPP is provided in Section 4.1, Land Use.

4.2.2 Issue 1: Historical Resources (Built Environment)

Would the proposal result in an alteration, including the adverse physical or aesthetic effects and/or the destruction of an historic building (including an architecturally significant building), structure, or object?

Pursuant to the City of San Diego's Significance Determination Thresholds, the significance of cultural resources impacts is made by:

- Determining the significance of identified cultural resources
- Determining direct and indirect impacts that would result from project implementation.

Direct and indirect impacts to significant historical resources resulting from project implementation are assessed pursuant to the City of San Diego's 2011 Significance Determination Thresholds and CEQA. The City Thresholds state that the City's

determination of significance of impacts on historical resources is based on the criteria found in Section 15064.5 of the State CEQA Guidelines.

According to the CEQA Guidelines Section 15064.5, an "historical resource" is defined as "a resource listed in, *or determined to be eligible for listing* in" the CRHR.

Section 15064.5 (b) states that "a project that may cause a substantial adverse change in the significance of an historical resource may be found to have a significant effect on the environment." Furthermore, a significant effect is considered per CEQA as follows:

(1) Substantial adverse change in the significance of an historical resource means a physical destruction, relocation, or alteration of the resource or its immediate surroundings were to occur, such that the significance of an historical resource would be materially impaired.

(2) The significance of an historical resource is materially impaired when a project:

(A) 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 Historic Resources: or

(B) Demolishes or materially alters in an adverse manner those physical characteristics that account for the inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

(C) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

(3) Generally, a project that follows the SOI's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the SOI's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings shall be considered as mitigated to a level of less than a significant impact on significant impact on the historical resource.

4.2.2.1 Impacts

a. Determination of Resource Significance and Methodology for Assessing Impacts

National Register

The project site lies within the Balboa Park NHLD. It is a, National Register-designated historic district (site number P-37-028239). The following buildings and structures are specifically called out as contributors to the National Register district:

- Cabrillo Bridge
- House of Charm
- House of Hospitality
- Electrical Building (Casa de Balboa)
- Organ Pavilion
- Alcazar Gardens
- Plaza de Panama
- El Prado Arcade
- Fine Arts Gallery (San Diego Museum of Art)
- Casa del Prado
- Natural History Museum

The Palisades complex was not included. Although encompassed within these boundaries the California Quadrangle complex was specifically omitted from the nomination; this complex was listed separately in 1974.

The Cabrillo Freeway Historic District is not on the National Register, but it was deemed eligible in 1996 (California Highways 2012). The contributing elements within the project area include the roadway, landscaping, and the Cabrillo Bridge. The Cabrillo Freeway Historic District is listed as a California Historic District (1996). Also, it is listed as a City of San Diego Historic Landmark (Listing No. 441) and as an official Historic Parkway by the California State Legislature (Assembly Bill 3025).

National Historic Landmark

The Balboa Park's Central Mesa area was designated a National Historic Landmark on December 22, 1977 (designation number 77000331). The specific buildings and structures listed as contributors appear to have been taken from the 1975 National Register nomination.

The Central Mesa is also listed on the CRHR and the City of San Diego Register of Historical Resources (San Diego Historic Landmark No.1). As such, the project site is considered a significant historical resource pursuant to CEQA and the City's 2011 Significance Determination Thresholds.

Methodology

The SOI's Rehabilitation Standards and the Guidelines provide guidance for reviewing work to historic properties. These have been adopted by local government bodies across the country, including the City of San Diego, for reviewing proposed work to historic properties under local preservation ordinances. The SOI Rehabilitation Standards are a useful analytic tool for understanding and describing the potential impacts of changes to historical resources. The 10 SOI Rehabilitation Standards are identified in Section 4.2.1.5 (d).

Conformance with the SOI Rehabilitation Standards does not determine whether a project would cause a substantial adverse change in the significance of a historical resource under CEQA. Rather, projects that comply with the Standards benefit from a regulatory presumption that they would have a less-than-significant adverse impact on a historical resource. Projects that do not comply with the SOI Rehabilitation Standards may or may not cause a substantial adverse change in the significance of an historical resource and would require further analysis to determine whether the historical resource would be "materially impaired" by the project under *CEQA Guidelines* 15064.5(b).

Rehabilitation is the *only* one of the four treatments (the others are Preservation, Restoration, and Reconstruction) that allows for the construction of an addition or other alteration to accommodate a change in use or program. It is important to note that the SOI Rehabilitation Standards do not prevent modifications or limited alteration of historic structures or landscape features. The SOI Rehabilitation Standards do allow for the modification of historic structures and landscapes where necessary, so long as the material integrity of the property is not permanently impaired.

Where rehabilitation is proposed, the following design guidelines contained in the Standards and Guidelines are applicable.

- New structures must respect historic structures and be compatible additions.
- New structures must be designed to be secondary elements, so as not to draw attention away from the historic structures.
- New structures should relate to the scale, massing, and datum of the historic structures.
- The material and color palette of the new structures should relate to the historic structures.
- New structures should be a simple and direct response to their proposed use.
- New structures should reflect elements of the historic place without mimicking historic features or details which would create a "false sense of history."
- New structures should "be of their own time" rather than artificial reproductions.

b. Project Impacts

Impacts of each of the six major components of the project are evaluated below. Following this description is an evaluation of the project's compliance with individual SOI Rehabilitation Standards and conclusion of the significance of impacts based on the City's thresholds which in turn is based on the criteria found in Section 15064.5 of the State CEQA Guidelines. Please refer to Appendix B-1 for additional detail. In addition, the project impact to the Arizona Street Landfill was evaluated per the State CEQA Guidelines.

Centennial Bridge

The Centennial Bridge component of the project would require the removal of 70 linear feet of the south balustrade of Cabrillo Bridge at its eastern end, the construction of a new abutment, and the construction of a curvilinear concrete bridge over Cabrillo Canyon located southwest of the California Quadrangle.

Centennial Bridge would have a limited physical impact on Cabrillo Bridge, resulting from the removal of a small portion of the balustrade and associated sidewalk (about 2 percent). The balustrade is made of hollow clay tile and covered in stucco. It has a molded handrail at the top; this is the only detail. The balustrade and sidewalk is part of the historic bridge and is considered historic fabric. The balustrade and associated sidewalk itself cannot be classified as representing "distinctive materials, features, finishes, construction techniques, or examples of craftsmanship" (City of San Diego's Historic Resources Regulations; 2004).

Temporary access would be provided adjacent to SR-163, but there would be no significant physical impacts to this historically designated freeway. The temporary

access would be taken via the Caltrans Cabrillo Bridge Overcrossing Seismic Retrofit/Rehabilitation and Lighting projects access roadway. The project itself would not result in a new construction access roadway. Furthermore, the Cabrillo Freeway Historic District and Cabrillo Historic Parkway designations are limited to the Caltrans right-of-way. The Centennial Bridge improvements would be located outside of this designated area and would not be visible from SR-163.

As described in Section 4.3 and illustrated in Appendix C, Centennial Bridge would be visible from the most easterly span of Cabrillo Bridge and the west side of Cabrillo Canyon, including Nate's Point Dog Park and other areas of the West Mesa. In these areas the Centennial Bridge would be clearly or partly visible. The bridge would also be visible from some locations on the east side of Cabrillo Canyon south of Cabrillo Bridge, including the Archery Range and the southern edge of the Alcazar parking lot. The bridge would be slightly visible from the northwestern corner of the Palisades area, in particular the Old Cactus Garden. The Centennial Bridge would not be visible from the north side of El Prado, historically designated SR-163 within Cabrillo Canyon, or from Pan American Road West.

Presence of the Centennial Bridge would alter views of Cabrillo Bridge and the California Quadrangle. The presence of the bridge would have the most noticeable effect on the "iconic" view of the two structures from portions of the West Mesa, and to a lesser degree the Balboa Park NHLD as a whole.

As addressed in Appendix B-1, the Centennial Bridge would not comply with SOI Rehabilitation Standards 2 and 9. Although it has partially been obscured by the eucalyptus forest, the relationship of Cabrillo Bridge to the California Quadrangle complex is one of the most important designed relationships in the Balboa Park NHLD. Centennial Bridge would partially disrupt this relationship by removing a portion of the southern balustrade and sidewalk of the bridge and building a bridge around the west and south side of the old Fine Arts Museum section of the California Quadrangle.

For these reasons, the Centennial Bridge would have a significant impact on elements of the Balboa Park NHLD.

Alcazar Parking Lot and Centennial Road

Alcazar Parking Lot. Improvements associated with the Alcazar parking lot would involve limited regrading around the perimeter of the lot. A small portion of the north rim of Palm Canyon would be regraded to provide ADA-accessible slopes throughout the entire lot and along the footpath that would be built around the southern and eastern edges of the parking lot. In addition, a small portion of the western edge of the parking lot would be physically impacted by the construction of an abutment in this area. Areas that are disturbed would be restored to their original condition by harvesting and relocating existing trees, planting new trees (similar species as existing), and planting

new understory plantings to match the existing landscape features. The replanted areas would consist of species already located within Cabrillo and Palm canyons, making use of relocated or new plants and trees. Therefore, this aspect of the project would comply with the SOI Rehabilitation Standards.

Another physical and visual impact of this component of the project would include the construction of a small, seven-foot-wide bridge and walkway connecting Alcazar parking lot with the Mall. This feature would pass behind the House of Charm, introducing a new feature into the historic district. The impact of the House of Charm pedestrian bridge/walkway would be reduced by its relatively small size and inconspicuous location. This feature would also face the rear, utilitarian elevation of the House of Charm, where there is presently an asphalt-paved driveway and service area added in 1996 that is used by the Mingei Museum. The Alcazar parking lot is not a contributor to the historic district, thus impacts would be less than significant.

Palm Canyon Walkway. The existing paved pedestrian walkway that runs along the east rim of Palm Canyon would be replaced by a raised walkway on piers that would run inside the eastern rim of Palm Canyon, to a new "Palm Canyon Overlook" that would be constructed near the site of the existing restroom. The extension of the walkway in Palm Canyon would have both physical and visual impacts on a limited portion of Palm Canyon, a contributing feature of the NHLD. Although the removal of existing plantings to build the walkway would have a temporary physical impact, the walkway itself would be compatible with similar features that have been built in Palm Canyon in the past. The existing walkway and stair were built in 1976 and are not historic features of Palm Canyon or Balboa Park. Overall, the Palm Canyon walkway extension would be a beneficial addition to this landscape by allowing people to see more of the inner canyon.

Centennial Road. Centennial Road would displace the existing ca. 1960 Alcazar parking lot road, and cause the relocation or replacement of the 1981 Community Christmas Tree. Construction of Centennial Road would necessitate grading and construction of several stacked-stone and concrete and stucco retaining walls as the road would travel eastward under Pan American Road and toward the parking structure. In addition, the Centennial Road would add a new circulation feature to the NHLD. As a result, the Centennial Road component of the proposed project would cause a physical change to the historic setting with the NHLD. Through grading and landform alteration, construction of retaining walls a maximum of 24 feet in height and change in the pedestrian circulation between the Palisades area and the Promenade, the Centennial Road would alter the historic character and spatial relationships of the District and, therefore, would not be consistent with SOI Rehabilitation Standards 2 and 9.

In accordance with the City's thresholds, the significance of any adverse effects on historical resources is based on CEQA criteria identified in CEQA Guidelines Section 15064.5 (b) which state that "a project with an effect that may cause a substantial adverse change in the significance of an historic resource is a project that may have a

significant effect on the environment." As described above, the CEQA Guidelines define substantial adverse change in the significance of an historical resource as "physical demolition, destruction, relation 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 by the CEQA Guidelines to be "materially impaired" when a project demolishes or materially alters in an adverse manner those physical characteristics that convey its historical significance and justify its inclusion or eligibility for listing.

According to the Historical Resources Report, although there is no definitive list of contributors and non-contributors for either the National Register or the National Historic Landmark districts, it is apparent that all buildings, structures, landscapes, and objects constructed for the 1915 Panama-California Exposition and the 1935 California Pacific International Exposition that retain integrity should be considered contributors to the NHLD. Based on these criteria, the area within the vicinity of the proposed Centennial Road is not considered a district contributor.

The area in which the Centennial Road would be constructed does not contain any historical structures and much of the area is not intact from the period of significance (1915 or 1935). The pedestrian circulation pattern changed following the demolition of the old "Honeymoon" Bridge over Palm Canyon ca.1950, requiring the construction of the paved footpath along the eastern edge of Palm Canyon. The irregularly shaped lawn panel bounded by Palm Canyon to the west and Pan American Road East to the east has also been altered, especially after 1960 when driveways were built across it to access the new Alcazar parking lot. The existing area surrounding the proposed Centennial Road is currently dominated by Pan American Road and the Organ Pavilion parking lot and is not considered historically significant.

In summary, although the construction of Centennial Road would alter the existing circulation network, it would not impact any contributing features of the historic district, aside from the eastern rim of Palm Canyon, and as described above, those impacts would be largely imperceptible after several years of regrowth. As such, although the landform alteration and retaining walls associated with the Centennial Road would not be consistent with SOI Rehabilitation Standards 2 and 9, the adverse effect would not be considered significant according to the CEQA Guidelines (and thus the City) since it would not demolish, destroy, relocate or alter the NHLD such that it would be materially impaired. Thus, the impact of the Centennial Road would be less than significant.

Plaza de California, El Prado, Plaza de Panama, and the Mall

Plaza de California/El Prado

New compatible paving types would replace the existing asphalt and non-historic pavers in Plaza de California and the non-historic asphalt in El Prado. Historic reproductions of

the original 1915 light standards as well as trees that replicate the original design intent would be introduced along El Prado partially restoring the area's 1915 design. Although the original Blackwood acacia trees would not be used, a compatible counterpart would be used in the place of the original trees. This component of the project would comply with the SOI Rehabilitation Standards in that it would remove non-character-defining features and materials and it would enhance the historic appearance of this important pedestrian circulation route by restoring missing features and materials.

Plaza de Panama

The Plaza de Panama complex would be redesigned for pedestrian only uses. The project would substitute pavers in place of the non-historic asphalt paving, would restore lawn panels that were historically located around the perimeter of the plaza, and reintroduce shade trees along the east and west sides of the plaza. The existing non-historic fountain at the center of Plaza de Panama, donated by Elizabeth North in 1996, would remain. To either side of the fountain are proposed two new shallow reflecting pools. These features would resemble similar features installed for the 1935 California Pacific International Exposition. The non-historic steps to the San Diego Museum of Art would also be restored to match their 1926 design to facilitate ADA access and to tie them into the repaved plaza.

This component would remove non-character-defining features and materials and would enhance the historic appearance of this very important public plaza while differentiating new work from old and would be in compliance with the SOI Rehabilitation Standards and Guidelines.

The Mall/Pan American Road East

The Mall /Pan American Road East would be converted from vehicular to pedestrian usage, as well as for use by trams. The existing asphalt- paved roadway would be a compatible paving material that matches Plaza de California, El Prado, and Plaza de Panama. The existing sidewalk would be replaced with sod and trees to resemble conditions existing in both 1915 and 1935. The central landscaped area would be widened to more closely match its original 1915 dimensions but otherwise it would be left much as it is, with sod panels at the center and flower beds lining the outer edges. Pan American Road East would retain its existing alignment; the only change to this feature would be the replacement of the existing asphalt surface with a new paving system more appropriate to a pedestrian environment and complementary to the Plaza de California, El Prado, and Plaza de Panama. Therefore, the restoration of historic pedestrian circulation along both the Mall and Pan American Road East would be consistent with SOI Rehabilitation Standards. Furthermore, all new elements introduced by these project components would be designed in a manner that makes clear what is new and what is historic. These four project components to the project would comply with all SOI Rehabilitation Standards and impacts would therefore be less than significant.

Organ Pavilion Parking Structure and Rooftop Park

The Organ Pavilion parking lot is not a historic feature of Balboa Park, and it is not a contributor to the Balboa Park NHLD. Physical impacts would include removing a portion of the existing mature vegetation from behind Spreckels Organ Pavilion to build the Centennial Road. The existing Torrey Pines and the largest eucalyptus trees would remain in place. These trees were planted ca. 1940 to conceal the Organ Pavilion parking lot from the Spreckels Organ Pavilion. The eucalyptus trees that would be removed are not identified as "Significant Trees" in the CMPP. The proposed project would also add a landscaped garden park atop the Organ Pavilion Parking Structure. The public garden would feature lawn panels, flower beds, children's play areas, seating areas, palm trees, and several small structures, including a large open-air shade pavilion, a visitor center, and restrooms near Presidents Way.

The Organ Pavilion parking lot is identified in the CMPP as the best location for a parking structure within the Central Mesa area, because it is relatively inconspicuous in relation to the El Prado/Plaza de Panama complex and also most of the Palisades area. In addition, the existing landform in this area allows for the design of a rooftop park and garden over an underground parking structure.

This project element would have a visual and physical change on the area, but it would not be adverse. The non-historic surface parking lot would be replaced with an underground parking structure and landscaped parkland where the historic California Gardens once existed. The only part of the parking structure that would be visible would be its eastern side, which would open to daylight toward Gold Gulch, a largely utilitarian area of maintenance sheds and other non-public uses. This elevation would be concealed behind a landscaped berm, blocking views of it from Park Boulevard and points east. Retaining walls would be built along the eastern side of the parking structure to prevent soil slippage. In certain areas thin guardrails would be used to protect park visitors from steep slopes.

All new elements proposed in conjunction with the parking structure and rooftop park would be designed in a contemporary idiom that does not imitate the aesthetic of historic buildings, structures, or roadways. These components to the project would comply with all SOI Rehabilitation Standards and impacts would therefore be less than significant.

Arizona Street Landfill

The proposed project would involve placing fill dirt on top of the existing landfill cap within the southern area of the Arizona Street Landfill and modifying the existing landfill gas collection system. As a part of the gas collection system improvements, minor excavation within the landfill refuse layer may be required. The Arizona Street Landfill is not considered a significant historical resource (see Appendix B-2), thus the project

potential impacts to the landfill would be less than significant. As such, the below SOI Rehabilitation Standards would not apply to the proposed landfill modifications.

c. Conformance with SOI Rehabilitation Standards

The following is a summary of the project in relation to each of the 10 standards. Please refer to Appendix B-1 for additional detail.

SOI Rehabilitation Standard 1*: A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces and spatial relationships.*

The proposed project would not change the use of Balboa Park. Various aspects of the proposed project would change how certain parts of Balboa Park are used, particularly the plazas of the El Prado/Plaza de Panama complex, which would be redesigned for their historic pedestrian use. The Organ Pavilion parking lot would also undergo a partial change in use with the reclamation of the rooftop with additional parkland. Overall, the project would comply with SOI Rehabilitation Standard 1.

SOI Rehabilitation Standard 2: *The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize the property will be avoided.*

As described above, the Centennial Bridge component of the project would adversely impact important visual and spatial relationships within a relatively small area of the Balboa Park NHLD. Other aspects of the proposed project would retain, preserve, and enhance important character-defining features of Balboa Park. In summary, the Centennial Bridge would not comply with SOI Rehabilitation Standard 2. In addition, the Centennial Road component would not comply with SOI Rehabilitation Standard 2 because it would alter the spatial relationships that characterize the property. While the Centennial Road component of the project would not comply with this standard; the effect would not be considered significant according to the CEQA Guidelines (and thus the City) since it would not demolish, destroy, relocate or alter the NHLD such that it would be materially impaired. All other components of the project would be in compliance with SOI Rehabilitation Standard 2.

SOI Rehabilitation Standard 3: *Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.*

The proposed project would avoid adding any conjectural features or elements from other historic properties to any building, structure, landscape, or object within the Balboa Park NHLD. Rather, the project would rehabilitate many of the missing historic elements

of the area, including replicating historic light standards, trees, and some plantings, but otherwise much of the new work would be designed in a contemporary yet compatible design vocabulary in compliance with the SOI's Standards. Centennial Bridge, Centennial Road, and Organ Pavilion parking structure and ancillary structures would be designed in a contemporary idiom that does not imitate the aesthetic of Cabrillo Bridge or any other historic buildings, structures, or roadways in the area. In summary, the proposed project would comply with SOI Rehabilitation Standard 3.

SOI Rehabilitation Standard 4: *Changes to a property that have acquired historic significance in their own right will be retained and preserved.*

The proposed project would physically impact several features that were added to Balboa Park after 1936, including the Archery Range (after 1940), Alcazar parking lot (ca. 1956), the community Christmas tree (1981), the restroom structure near Palm Canyon (ca. 1990), and the Organ Pavilion parking lot (ca. 1940). None of these features are contributors to the Balboa Park NHLD and none are identified in the Precise Plan as having any cultural or aesthetic value. None of these features appear to have gained significance in their own right because all were constructed or installed after the end of the period of significance and none have architectural or historical significance. In summary, the proposed project would comply with SOI Rehabilitation Standard 4.

SOI Rehabilitation Standard 5: *Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize a property will be preserved.*

The proposed project would have limited physical impacts on historic structures and landscapes. As mentioned above, the construction of Centennial Bridge would result in the removal of about 70 feet of the south balustrade of Cabrillo Bridge, near its eastern end. This balustrade is made of hollow clay tile and covered in stucco. It has a molded handrail at the top – its only detail. The balustrade is part of the historic bridge and is therefore "historic fabric." Nevertheless, the balustrade is built of common and easily reproduced materials; it does not embody "distinctive materials, features, finishes, or craftsmanship."

In regard to hardscaped areas, the proposed project would change the paving materials in the Plaza de California, El Prado, Plaza de California, the Mall, and Pan American Road areas; and the recreated stair design in front of the San Diego Museum of Art would be reproduced consistent with the 1926 design. None of these areas feature historic materials, features, finishes, construction techniques, or examples of craftsmanship that characterize Balboa Park. In summary, the proposed project would comply with SOI Rehabilitation Standard 5.

SOI Rehabilitation Standard 6: *Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive*

feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.

Since no historic features or materials are proposed to be replaced, the proposed project would comply with SOI Rehabilitation Standard 6.

SOI Rehabilitation Standard 7: *Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.*

The proposed project would not use chemical or physical treatments on any historic materials or features; the proposed project therefore would comply with SOI Rehabilitation Standard 7.

SOI Rehabilitation Standard 8: *Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.*

As discussed above and in Appendix B-2, the project would not affect any known archaeological resources. Mitigation in the form of monitoring would be required to recover any subsurface resources that may be uncovered during construction. Therefore, the project would comply with SOI Rehabilitation Standard 8.

SOI Rehabilitation Standard 9: *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 its environment.*

As previously described, the Centennial Bridge would add a new element that would alter historic spatial characteristics and views of Cabrillo Bridge and the California Quadrangle from several points within the West Mesa and from the western part of the Central Mesa. Thus, this component of the project would not comply with SOI Rehabilitation Standard 9. In addition, the Centennial Road component would not comply with SOI Rehabilitation Standard 9 because it would alter the spatial relationships that characterize the property. While the Centennial Road component of the project would not comply with this standard; the effect would not be considered significant according to the CEQA Guidelines (and thus the City) since it would not demolish, destroy, relocate or alter the NHLD such that it would be materially impaired. All other components of the project would comply with SOI Rehabilitation Standard 9 as they would return pedestrian use of the plazas, replace non-historic elements with contemporary but compatible materials such as paving materials and lighting, and

disturbed areas would be restored to avoid long-term visual impacts. All of these components would be similar, but differentiated from historic materials.

SOI Rehabilitation Standard 10: *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.*

Although unlikely, it would be possible to remove each of the elements of the proposed project and restore the existing conditions. The most notable physical effect from the perspective of the SOI's Standards – the proposed Centennial Bridge – could be removed without significantly impairing the canyon or Cabrillo Bridge form and integrity. The Centennial Bridge would be structurally and seismically separated from the Cabrillo Bridge by an expansion joint, and would rest on minimal abutments and piers that do not significantly alter the canyon landform. If the Centennial Bridge were to be removed, minor Cabrillo Bridge balustrade and sidewalk repair would be required. These repairs would not affect the essential form or integrity of the bridge, and would return it to the previous appearance.

Likewise, Centennial Road could also be removed and re-landscaped without harm to historical resources. While the Centennial Road requires significant earthwork, returning the landform to its current condition could be done with new fill and landscaping. Since no historic fabric would be significantly impacted by the road, no special materials or craftsmanship would be required to return it to it the current condition.

While the removal of the proposed Organ Pavilion Parking Structure would be impractical and would require substantial earthwork, it could be removed without affecting any historical resources since it is a non-contributing feature of the Balboa Park NHLD. In summary, the proposed project would comply with SOI Rehabilitation Standard 10.

As summarized in this subsection, all components of the project would comply with SOI Rehabilitation Standards 1, 3–8, and 10. All components, with the exception of the Centennial Bridge, would also comply with SOI Rehabilitation Standards 2 and 9. The Centennial Bridge would not comply with SOI Rehabilitation Standards 2 and 9 due to the physical and visual impacts to the historic relationship of the Cabrillo Bridge and California Quadrangle and to a lesser extent to the District as a whole.

4.2.2.2 Significance of Impacts

Centennial Bridge

The Centennial Bridge would be inconsistent with SOI Rehabilitation Standards 2 and 9, and would constitute a substantial adverse change to an historical resource. Therefore, this component would result in a significant adverse impact.

Alcazar Parking Lot and Centennial Road

The Alcazar parking lot is not a contributor to the historic district, thus, impacts would be less than significant.

Although the landform alteration and retaining walls associated with the Centennial Road would not be consistent with SOI Rehabilitation Standards 2 and 9, the adverse effect would not be considered significant according to CEQA (and thus the City) since it would not demolish, destroy, relocate, or alter the NHLD such that it would materially impair a district contributor. Thus, the impact of the Centennial Road would be less than significant.

Plaza de California, El Prado, Plaza de Panama, and the Mall

The restoration of these project components would be consistent with all SOI Rehabilitation standards. Impacts would be less than significant.

Organ Pavilion Parking Structure and Rooftop Park

Construction of the Organ Pavilion parking structure and rooftop park would be consistent with all SOI Rehabilitation standards. Impacts would be less than significant.

Arizona Street Landfill

The proposed project placement of fill and gas collection system modifications within the Arizona Street Landfill would result in a less than significant historical resource impact, as the landfill is not considered a significant historical resource. SOI Rehabilitation standards are not applicable to the proposed landfill modifications.

4.2.2.3 Mitigation, Monitoring, and Reporting

No feasible mitigation is available for historic impacts associated with the Centennial Bridge. Section 9 includes alternatives which would reduce or avoid significant historic impacts associated with the project.

4.2.2.4 Significance of Impacts After Mitigation

Impacts would remain significant and unmitigable.

4.2.3 Issue 2: Archaeological Resources

Would the proposal result in an alteration, including the adverse physical or aesthetic effects and/or the destruction of a prehistoric or historic site?

Pursuant to the City of San Diego's Significance Determination Thresholds, the significance of cultural resources impacts is made by:

- Determining the significance of identified cultural resources
- Determining direct and indirect impacts that would result from project implementation.

Direct and indirect impacts to significant archaeological resources resulting from project implementation are assessed pursuant to CEQA and the City of San Diego's 2011 Significance Determination Thresholds, as described below.

a. CEQA

A project that may cause a substantial adverse change in the significance of an historical resource may be found to have a significant effect on the environment. Adoption and implementation of a project would result in a substantial adverse change in the significance of an historical resource if physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings were to occur, such that the significance of an historical resource would be materially impaired.

A project's impacts on unique archaeological resources must be evaluated. Pursuant to CEQA Section §21083.2, "unique archaeological resource" means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

b. City of San Diego

The City's thresholds for significance for a historical resource include the following:

1. The impact assessment is based on the Area of Potential Effect which includes the area of both the direct and indirect impacts of a project on a historical resource.

2. The potential for cumulative impacts to archaeological resources must also be assessed for significance. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time. In the built environment, cumulative impacts most often occur to districts, where several minor changes to contributing properties, their landscaping, or to their setting over time could result in a significant loss of integrity to the district as a whole.

3. All components of a development must be considered in evaluating potential impacts to archaeological resources. Direct impacts generally result from activities that will cause damage to or have an adverse effect on the resource, such as but not limited to grading, road construction, trenching for utilities, staging areas, demolition, relocation, and new additions.

4. For archaeological resources and traditional cultural properties, indirect impacts are often the result of increased public accessibility to resources not otherwise subject to impacts which may result in an increased potential for vandalism and site destruction.

Under City of San Diego's historical resource guidelines, there are cultural resource types which are typically considered insignificant for planning purposes. These are isolates, sparse lithic scatters, isolated bedrock milling features, shellfish processing stations, and sites and buildings less than 45 years old (City of San Diego 2004).

Unless demonstrated otherwise, archaeological sites with only a surface component are not typically considered significant. The determination of an archaeological site's significance depends on a number of factors specific to that site, including size, type, integrity; presence or absence of a subsurface deposit, soil stratigraphy, features, diagnostic artifacts, or datable material; artifact/ecofact density; assemblage complexity; cultural affiliation; association with an important person or event; and ethnic importance. Under City guidelines, all other archaeological sites are considered potentially significant (City of San Diego 2011).

4.2.3.1 Impacts

a. Determination of Resource Significance

P-37-019074

P-37-019074 is an isolate in a disturbed context, adjacent to the El Prado roadbed, and is not a potentially significant resource under CEQA or City of San Diego criteria.

6095-HJP-1 and 6095-HJP-2

These two small shell scatters were located in the vicinity of the proposed parking structure. The results of the testing program indicated that neither were intact cultural deposits, but highly disturbed areas with, especially in the case of HJP-1, deposition of soil from off-site. Since both areas have been subject to disturbance from construction in the past, they do not qualify under any of the criteria for eligibility for listing on the CRHR or the criteria for listing on the City's Historical Resources Register. They are not an historical resource under CEQA or a potentially significant resource City of San Diego criteria.

Site CA-SDI-15826

Site CA-SDI-15826 is within the area of proposed improvements to the Mall in an area subject to grading from 12–18 inches in depth. The BFSA report states the trash deposits are possibly associated with the construction of the 1915 Exposition in Balboa Park. Since the significance of this deposit was not previously assessed, a testing program was implemented for CA-SDI-15826. The testing program carried out for this site concluded that this is not a historical resource under CEQA or a potentially significant resource under City of San Diego criteria (see Appendix B-1 for details).

b. Project Impacts

P-37-019074

The isolate P-37-019074 was found during the 2001 BFSA monitoring of construction of sewer and water lines in Balboa Park, and is not a potentially significant resource under CEQA or City of San Diego criteria. Therefore, impacts to the isolate would be less than significant.

6095-HJP-1 and 6095-HJP-2

The results of the testing program indicated that neither were historical resources under CEQA or a potentially significant resource City of San Diego criteria. Therefore, while these sites would be disturbed by project grading and landscaping activities; impacts would be less than significant. Thus, project construction would not be a significant impact to these resources.

Site CA-SDI-15826

Site CA-SDI-15826 is within the area of proposed improvements to the Mall in an area subject to grading from 12–18 inches in depth. The current testing of the area immediately around CA-SDI-15826 indicates there is no evidence of the recorded deposit in the current area of potential effect. The deposit was uncovered and salvaged during the 2000 trenching and no potentially significant historic trash deposit associated with CA-SDI-15826 remains in the project area. Therefore, project grading and landscaping activities would not impact this site and impacts would be less than significant.

CA-SDI-15827

Improvements associated with the tram turnaround in proximity to the parking structure are in the vicinity of historic trash deposit, CA-SDI-15827. However, the location of these historic deposits is within the proposed tram turnaround area where restriping would occur, but no grading. Thus, the project would not impact this historic trash deposits in this location.

Unknown Archaeological Resources

Since the extent of grading for past construction in the project area of Balboa Park is unknown, there is the possibility of unknown subsurface prehistoric or historic deposits to be present. Because there is a potential for uncovering subsurface prehistoric/ historical resources on the project site, a potentially significant impact could result from implementation of the project.

4.2.3.2 Significance of Impacts

P-37-019074

Impacts to the isolate would be less than significant.

6095-HJP-1 and 6095-HJP-2

Testing of HJP-1 and HJP-2 determined both were not intact cultural deposits but disturbed areas containing trash. As such, they are not cultural resources and would not qualify under any of the four criteria for eligibility for listing on the NRHP or the California Register of Historic Resources. Impacts to shell deposits 6095-HJP-1 and 6095-HJP-2 from grading and excavation for the parking structure would be less than significant, as testing determined them not significant according to CEQA and City criteria.

Site CA-SDI-15826

Testing of the area immediately around CA-SDI-15826 indicates there is no evidence of the recorded deposit in the area of potential effect. The deposit was uncovered and salvaged during the 2000 trenching and no potentially significant historic trash deposit associated with CA-SDI-15826 remains in the project area. Therefore, impacts to this former site due to project grading and landscaping activities would be less than significant.

CA-SDI-15827

The subsurface historic trash deposits, CA-SDI-15827, is within the tram turnaround that is proposed for restriping but no grading. Thus the project would not impact this site.

Unknown Archaeological Resources

Since there is the possibility of subsurface prehistoric or historic deposits to be present that could be uncovered during construction activities, a potentially significant impact could result from the development of the project.

4.2.3.3 Mitigation, Monitoring, and Reporting

a. Archaeological Resources

HR-1 Due to the potential for buried cultural resources to be encountered on-site, a qualified archaeological monitor and a Native American monitor shall be present during project-related grading activities. This shall include removal of existing pavement and concrete hardscaping such as walkways. The following measures shall be implemented:

I. Prior to Permit Issuance

A. Entitlements Plan Check

1. Prior to issuance of any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits or a Notice to Proceed for Subdivisions, but prior to the first preconstruction meeting, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for archaeological monitoring and Native American monitoring have been noted on the applicable construction documents through the plan check process.

B. Letters of Qualification have been submitted to ADD

1. The applicant shall submit a letter of verification to the MMC identifying the Principal Investigator (PI) for the project and the names of all persons involved in the archaeological monitoring program, as defined in the City of San Diego Historical Resources Guidelines (HRG). If applicable, individuals involved in the archaeological monitoring program must have completed the 40-hour HAZWOPER training with certification documentation.

2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the archaeological monitoring of the project meet the qualifications established in the HRG.

3. Prior to the start of work, the applicant must obtain written approval from MMC for any personnel changes associated with the monitoring program.

II. Prior to Start of Construction

A. Verification of Records Search

1. The PI shall provide verification to MMC that a site-specific records search (¼-mile radius) has been completed. Verification includes, but is not limited to, a copy of a confirmation letter from South Coastal Information Center, or, if the search was in-house, a letter of verification from the PI stating that the search was completed.

2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.

3. The PI may submit a detailed letter to MMC requesting a reduction to the ¼-mile radius.

B. PI Shall Attend Precon Meetings

1. Prior to beginning any work that requires monitoring; the Applicant shall arrange a Precon Meeting that shall include the PI, Native American consultant/monitor (where Native American resources may be impacted), Construction Manager (CM) and/or Grading Contractor, RE, Building Inspector (BI), if appropriate, and MMC. The qualified Archaeologist and Native American Monitor shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Archaeological Monitoring program with the Construction Manager and/or Grading Contractor.

a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.

2. Identify Areas to be Monitored

a. Prior to the start of any work that requires monitoring, the PI shall submit an Archaeological Monitoring Exhibit (AME) (with verification that the AME has been reviewed and approved by the Native American consultant/monitor when Native American resources may be impacted) based on the appropriate construction documents (reduced to 11x17) to MMC identifying the areas to be monitored including the delineation of grading/excavation limits.

b. The AME shall be based on the results of a site-specific records search as well as information regarding existing known soil conditions (native or formation).

3. When Monitoring Will Occur

a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.

b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate site conditions such as depth of excavation and/or site graded to bedrock, etc., which may reduce or increase the potential for resources to be present.

III. During Construction

A. Monitor(s) Shall be Present During Grading/Excavation/Trenching

1. The Archaeological Monitor shall be present full-time during all soil disturbing and grading/excavation/trenching activities which could result in impacts to archaeological resources as identified on the AME. **The CM is responsible for notifying the RE, PI, and MMC of changes to any construction activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances Occupational Safety and Health Administration safety requirements may necessitate modification of the AME.**

2. The Native American consultant/ monitor shall determine the extent of their presence during soil disturbing and grading/excavation/trenching activities based on the AME and provide that information to the PI and MMC. If prehistoric resources are encountered during the Native American consultant/ monitor's absence, work shall stop and the Discovery Notification Process detailed in Section III.B-C and IV.A-D shall commence.

3. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as modern disturbance post-dating the previous grading/trenching activities, presence of fossil formations, or when native soils are encountered that may reduce or increase the potential for resources to be present.

4. The archaeological and Native American consultant /monitor shall document field activity via the Consultant Site Visit Record (CSVR). The CSVRs shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion)**, and in the case of ANY discoveries. The RE shall forward copies to MMC.

B. Discovery Notification Process

1. In the event of a discovery, the Archaeological Monitor shall direct the contractor to temporarily divert all soil disturbing activities, including but not limited to digging, trenching, excavating or grading activities in the area of discovery and in the area reasonably suspected to overlay adjacent resources and immediately notify the RE or BI, as appropriate.

2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.

3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.

4. No soil shall be exported off-site until a determination can be made regarding the significance of the resource specifically if Native American resources are encountered.

C. Determination of Significance

1. The PI and Native American consultant/monitor, where Native American resources are discovered shall evaluate the significance of the resource. If Human Remains are involved, follow protocol in Section IV below.

a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required.

b. If the resource is significant, the PI shall submit an Archaeological Data Recovery Program which has been reviewed by the Native American consultant/monitor, and obtain written approval from MMC. Impacts to significant resources must be mitigated before ground-disturbing activities in the area of discovery will be allowed to resume. **Note: If a unique archaeological site is also an historical resource as defined in CEQA, then the limits on the amount(s) that a project applicant may be required to pay to cover mitigation costs as indicated in CEQA Section 21083.2 shall not apply.**

c. If the resource is not significant, the PI shall submit a letter to MMC indicating that artifacts will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that that no further work is required.

IV. Discovery of Human Remains

If human remains are discovered, work shall halt in that area and no soil shall be exported off-site until a determination can be made regarding the provenance of the human remains; and the following procedures as set forth in CEQA Section 15064.5(e), the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) shall be undertaken:

A. Notification

1. Archaeological Monitor shall notify the RE or BI as appropriate, MMC, and the PI, if the Monitor is not qualified as a PI. MMC will notify the appropriate Senior Planner in the EAS of the Development Services Department to assist with the discovery notification process.

2. The PI shall notify the Medical Examiner after consultation with the RE, either in person or via telephone.

B. Isolate Discovery Site

1. Work shall be directed away from the location of the discovery and any nearby area reasonably suspected to overlay adjacent human remains until a determination can be made by the Medical Examiner in consultation with the PI concerning the provenance of the remains.

2. The Medical Examiner, in consultation with the PI, will determine the need for a field examination to determine the provenance.

3. If a field examination is not warranted, the Medical Examiner will determine with input from the PI, if the remains are or are most likely to be of Native American origin.

C. If Human Remains **ARE** determined to be Native American

1. The Medical Examiner will notify the Native American Heritage Commission (NAHC) within 24 hours. By law, **ONLY** the Medical Examiner can make this call.

2. NAHC will immediately identify the person or persons determined to be the Most Likely Descendent (MLD) and provide contact information.

3. The MLD will contact the PI within 24 hours or sooner after the Medical Examiner has completed coordination, to begin the consultation process in accordance with CEQA Section 15064.5(e), the California Public Resources and Health & Safety Codes.

4. The MLD will have 48 hours to make recommendations to the property owner or representative, for the treatment or disposition with proper dignity, of the human remains and associated grave goods.

5. Disposition of Native American Human Remains will be determined between the MLD and the PI, and, if:

   a. The NAHC is unable to identify the MLD, OR the MLD failed to make a recommendation within 48 hours after being notified by the Commission; OR;

   b. The landowner or authorized representative rejects the recommendation of the MLD and mediation in accordance with PRC 5097.94 (k) by the NAHC fails to provide measures acceptable to the landowner, THEN,

   c. In order to protect these sites, the Landowner shall do one or more of the following:

      (1) Record the site with the NAHC;

      (2) Record an open space or conservation easement on the site;

(3) Record a document with the County.

d. Upon the discovery of multiple Native American human remains during a ground disturbing land development activity, the landowner may agree that additional conferral with descendants is necessary to consider culturally appropriate treatment of multiple Native American human remains. Culturally appropriate treatment of such a discovery may be ascertained from review of the site utilizing cultural and archaeological standards. Where the parties are unable to agree on the appropriate treatment measures the human remains and buried with Native American human remains shall be reinterred with appropriate dignity, pursuant to Section 5.c., above.

D. If Human Remains are **NOT** Native American

1. The PI shall contact the Medical Examiner and notify them of the historic era context of the burial.

2. The Medical Examiner will determine the appropriate course of action with the PI and City staff (PRC 5097.98).

3. If the remains are of historic origin, they shall be appropriately removed and conveyed to the San Diego Museum of Man for analysis. The decision for internment of the human remains shall be made in consultation with MMC, EAS, the applicant/landowner, any known descendant group, and the San Diego Museum of Man.

V. Night and/or Weekend Work

A. If night and/or weekend work is included in the contract

1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the preconstruction meeting.

2. The following procedures shall be followed.

a. No Discoveries

In the event that no discoveries were encountered during night and/or weekend work, the PI shall record the information on the CSVR and submit to MMC via fax by 8 a.m. of the next business day.

b. Discoveries

All discoveries shall be processed and documented using the existing procedures detailed in Sections III - During Construction, and IV – Discovery of Human Remains. Discovery of human remains shall always be treated as a significant discovery.

c. Potentially Significant Discoveries

If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction and IV-Discovery of Human Remains shall be followed.

d. The PI shall immediately contact MMC, or by 8:00 a.m. of the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.

B. If night and/or weekend work becomes necessary during the course of construction

1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.

2. The RE, or BI, as appropriate, shall notify MMC immediately.

C. All other procedures described above shall apply, as appropriate.

VI. Post Construction

A. Preparation and Submittal of Draft Monitoring Report

1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Historical Resources Guidelines (Appendix B/C) which describes the results, analysis, and conclusions of all phases of the Archaeological Monitoring Program (with appropriate graphics) to MMC for review and approval within 90 days following the completion of monitoring. **It should be noted that if the PI is unable to submit the Draft Monitoring Report within the allotted 90-day timeframe resulting from delays with analysis, special study results or other complex issues, a schedule shall be submitted to MMC establishing agreed due dates and the provision for submittal of monthly status reports until this measure can be met.**

a. For significant archaeological resources encountered during monitoring, the Archaeological Data Recovery Program shall be included in the Draft Monitoring Report.

b. Recording Sites with State of California Department of Parks and Recreation

The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) any significant or potentially significant resources encountered during the Archaeological Monitoring Program in accordance with the City's Historical Resources Guidelines, and submittal of such forms to the South Coastal Information Center with the Final Monitoring Report.

2. MMC shall return the Draft Monitoring Report to the PI for revision or, for preparation of the Final Report.

3. The PI shall submit revised Draft Monitoring Report to MMC for approval.

4. MMC shall provide written verification to the PI of the approved report.

5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.

B. Handling of Artifacts

1. The PI shall be responsible for ensuring that all cultural remains collected are cleaned and catalogued

2. The PI shall be responsible for ensuring that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate.

3. The cost for curation is the responsibility of the property owner.

C. Curation of artifacts: Accession Agreement and Acceptance Verification

1. The PI shall be responsible for ensuring that all artifacts associated with the survey, testing and/or data recovery for this project are permanently curated with an appropriate institution. This shall be completed in consultation with MMC and the Native American representative, as applicable.

2. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.

3. When applicable to the situation, the PI shall include written verification from the Native American consultant/monitor indicating that Native American resources were treated in accordance with state law and/or applicable agreements. If the resources were reinterred, verification shall be provided to show what protective measures were taken to ensure no further disturbance occurs in accordance with Section IV – Discovery of Human Remains, Subsection 5.

D. Final Monitoring Report(s)

1. The PI shall submit one copy of the approved Final Monitoring Report to the RE or BI as appropriate, and one copy to MMC (even if negative), within 90 days after notification from MMC that the draft report has been approved.

2. The RE shall, in no case, issue the Notice of Completion and/or release of the Performance Bond for grading until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

4.2.3.4 Significance of Impacts After Mitigation

Implementation of the mitigation measure **HR-1** outlined above would reduce impacts to a level that is less than significant.

4.2.4 Issue 3: Religious/Sacred Uses

Would the proposal result in any impact to existing religious or sacred uses within the potential impact area?

Pursuant to the City's Significance Determination Thresholds, impacts associated with religious or sacred uses may be significant if:

- A site is associated with a burial or cemetery; religious, social or traditional activities of a discrete ethnic population; an important person or event as defined by a discrete ethnic population; or the belief system of a discrete ethnic population.

4.2.4.1 Impacts

ALL PROJECT COMPONENTS

There are no known Native American religious or sacred uses on-site or within the immediate vicinity of the project site. Therefore, implementation of the project would have no impacts to religious and sacred uses.

4.2.4.2 Significance of Impacts

Since no religious or sacred uses were identified within the project area, impacts would not be significant.

4.2.4.2 Mitigation, Monitoring, and Reporting

No mitigation is required.

4.2.5 Issue 4: Human Remains

Would the proposal result in the disturbance of any human remains, including those interred outside of formal cemeteries?

Pursuant to the City's Significance Determination Thresholds, impacts associated with religious or sacred uses may be significant if:

- A site is associated with a burial or cemetery; religious, social or traditional activities of a discrete ethnic population; an important person or event as defined by a discrete ethnic population; or the belief system of a discrete ethnic population.

4.2.5.1 Impacts

ALL PROJECT COMPONENTS

Implementation of the project would not adversely affect any known human remains, and there are no known burial sites or cemeteries within the vicinity of the project area. Therefore, it is not expected that human remains would be disturbed as a result of the project and impacts would be less than significant. In the unlikely event of the discovery of human remains during project grading, work shall halt in that area and the procedures set forth in the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) shall be undertaken, as required in Section 4.2.3.3, Mitigation Measure above.

4.2.5.2 Significance of Impacts

Since there are no known human remains on the project site and measures are in place in the unlikely event that remains are found, impacts would be less than significant.

4.2.5.3 Mitigation, Monitoring, and Reporting

Impacts would be less than significant; therefore, no mitigation is required.

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4.3 Visual Effects and Neighborhood Character

This section addresses the visual aspects of the project and compatibility in terms of neighborhood character with existing and planned land uses. Appendix C contains a key map and photographs showing the visibility of the Centennial Bridge component of the project from numerous locations in the project area.

4.3.1 Existing Conditions

4.3.1.1 Existing Visual Landscape

a. Topography and Landform

Central Mesa

Balboa Park is characterized by a variety of landforms including natural areas, with steep, vegetated canyons; gardens; open spaces including the golf course and Morley field, and developed areas, such as most of the Central Mesa. Elevations on the project site range from 210 to 265 feet AMSL (refer to Figure 2-6a). Consistent with most of the Central Mesa, much of the project site was previously disturbed during development of the Park for the 1915 Exposition. Cut and fill slopes with heights up to 45 feet are present within the project area. Cut slopes that transition into native hillsides exist to the north and east of the site. El Prado, the Plaza de Panama, Pan American Road East, along with the existing Alcazar and Organ Pavilion parking lots have been previously graded and paved. The Alcazar Garden and the Mall, though remaining as green spaces, are both within the development footprint of the Park's original improvements, and do not constitute "natural landforms". Approximately 8.8 percent of the 15.4 -acre project site (1.35 acres) contains naturally steep slopes.

East Mesa/Arizona Street Landfill

The Arizona Street Landfill comprises an area of about 70 acres on the East Mesa, including the area of the maintenance yard. The landfill was closed in 1974 and capped with a soil cover (3 to 15 feet in depth), which has been graded to sheet drain westerly towards several catchment points and the westerly slope facing Florida Canyon. Trash associated with the landfill is not visible. Existing grading of the landfill surface and side slopes is conspicuously inconsistent with the surrounding natural topography and does not provide for optimal drainage and erosion control. The Arizona Street Landfill is illustrated on Figure 2-6b.

b. Historical/Architectural Character

The project site is located within the 193-acre Central Mesa in the heart of Balboa Park. The mesa was developed in conjunction with 1915 Panama-California Exposition and is characterized by Spanish Colonial architecture; and is now a National Historic Landmark. Located on the mesa are numerous museums, galleries, and theaters (see Figure 4.1-7). The primary historical landscapes and elements that define the visual setting and character of the project site include the Cabrillo Bridge (Figure 4.3-1); California Quadrangle (Figure 4.3-2); Alcazar parking lot (Figure 4.3-3); Palm Canyon (Figure 4.3-4); Plaza de Panama (Figure 4.3-5); The Mall (Figure 4.3-6); and Organ Pavilion parking lot (Figure 4.3-7). A description of the architectural features which make up the visual context of each of these components is presented in Section 4.2.1.1.d. In addition to the Central Mesa features referenced above, one of the primary elements that defines the East Mesa landscape is the Arizona Street Landfill, which is shown in Figure 4.3-8.

4.3.1.2 Applicable Plans, Policies, and Regulations

The State of California Department of Transportation maintains a State Scenic Highway Program "to protect and enhance California's natural beauty and to protect the social and economic values provided by the State's scenic resources" (Streets and Highway Code Section 260). Additionally, the City of San Diego has several adopted plans that establish policies and/or design guidelines pertinent to visual quality and neighborhood character in the project area. The adopted General Plan, the BPMP, and the CMPP contain provisions relating to aesthetics.

a. State Scenic Highway Program

California's Scenic Highway Program was created by the Legislature in 1963. Its purpose is to preserve and protect scenic highway corridors from change, which would diminish the aesthetic value of lands adjacent to highways. A highway may be designated "scenic" depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. When a city or county nominates an eligible scenic highway for official designation, it must identify and define the scenic corridor of the highway. The agency must also adopt ordinances to preserve the scenic quality of the corridor or document such regulations that already exist in various portions of local codes. These ordinances make up the scenic corridor protection program (Caltrans 2011). A portion of SR-163, located within Balboa Park, was designated as a California State Scenic Highway in 1992. In addition to the Scenic Highway designation, SR-163 has been designated as a California Historic District, a City of San Diego Historic Landmark (Listing No. 4441) and the portion beginning from A Street to the Sixth Avenue on-ramp as an Historic Parkway in 2002.

FIGURE 4.3-1

Cabrillo Bridge

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FIGURE 4.3-2

Plaza de California

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FIGURE 4.3-3

Alcazar Parking Lot

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FIGURE 4.3-4
Palm Canyon

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FIGURE 4.3-5

Plaza de Panama

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FIGURE 4.3-6

The Mall

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FIGURE 4.3-7

Organ Pavilion Parking Lot

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Arizona Street Landfill

FIGURE 4.3-8

b. General Plan

In its Urban Design Element, the General Plan includes goals and policies that emphasize the integration of compatible land uses, the provision of high-quality public spaces and civic architecture, as well as the enhancement of the visual quality of all types of development. The Urban Design Element policies relevant to the design of the project, and the project's consistency with these policies are summarized in Section 4.1.3.1.

c. Balboa Park Master Plan

The BPMP does not designate any public view corridors, public viewing areas, or scenic vistas within the Park. However, in conjunction with the plan's development, a visual analysis of the existing condition was conducted (Figure 4.3-9). The visual analysis exhibit in the BPMP identifies five different conditions observed from various viewing locations within and adjacent to the Park: positive panoramic views, areas of positive internal views, negative views, unsightly areas, and positive views along circulation routes. Within the project area, both El Prado and the Palisades corridors are both characterized as having "positive internal views." "Negative views" were identified from the intersection of Presidents Way and Park Boulevard looking west into the Palisades area, near where the existing Organ Pavilion parking lot is located. The BPMP Visual Analysis does not identify any view condition relative to the Arizona Street Landfill.

The BPMP sets forth general goals, design principals, and policies pertaining to aesthetic features (e.g., landscape design, architecture, horticulture, historic preservation) within the entirety of the Park. Table 4.1-2 analyzes the project's consistency with aesthetic provisions of the BPMP.

d. Central Mesa Precise Plan

The CMPP identifies interior and exterior park views, including "major and minor view corridors" and "pedestrian viewpoints." The CMPP states that "pedestrian viewpoints to views outside the Park should be preserved or established" (Figure 4.3-10). Two "major view corridors" are located within the project area: the first is comprised of El Prado from Cabrillo Bridge and California Tower to Plaza de Balboa, and the second is within the Mall from the Museum of Art to the Organ Pavilion. No minor view corridors are identified within the project area. Two pedestrian viewpoints are located in proximity to the project area. The CMPP describes the first pedestrian viewpoint from the future Organ Pavilion parking structure looking south to west, away from the project site, toward the ocean and city skyline. Another pedestrian viewpoint is located near the Plaza de Balboa, at the terminus of El Prado East. Although this viewpoint is located outside the project area, views looking east from this location capture the Arizona Street Landfill, which would serve as the disposal site for excavated soil from the project site.

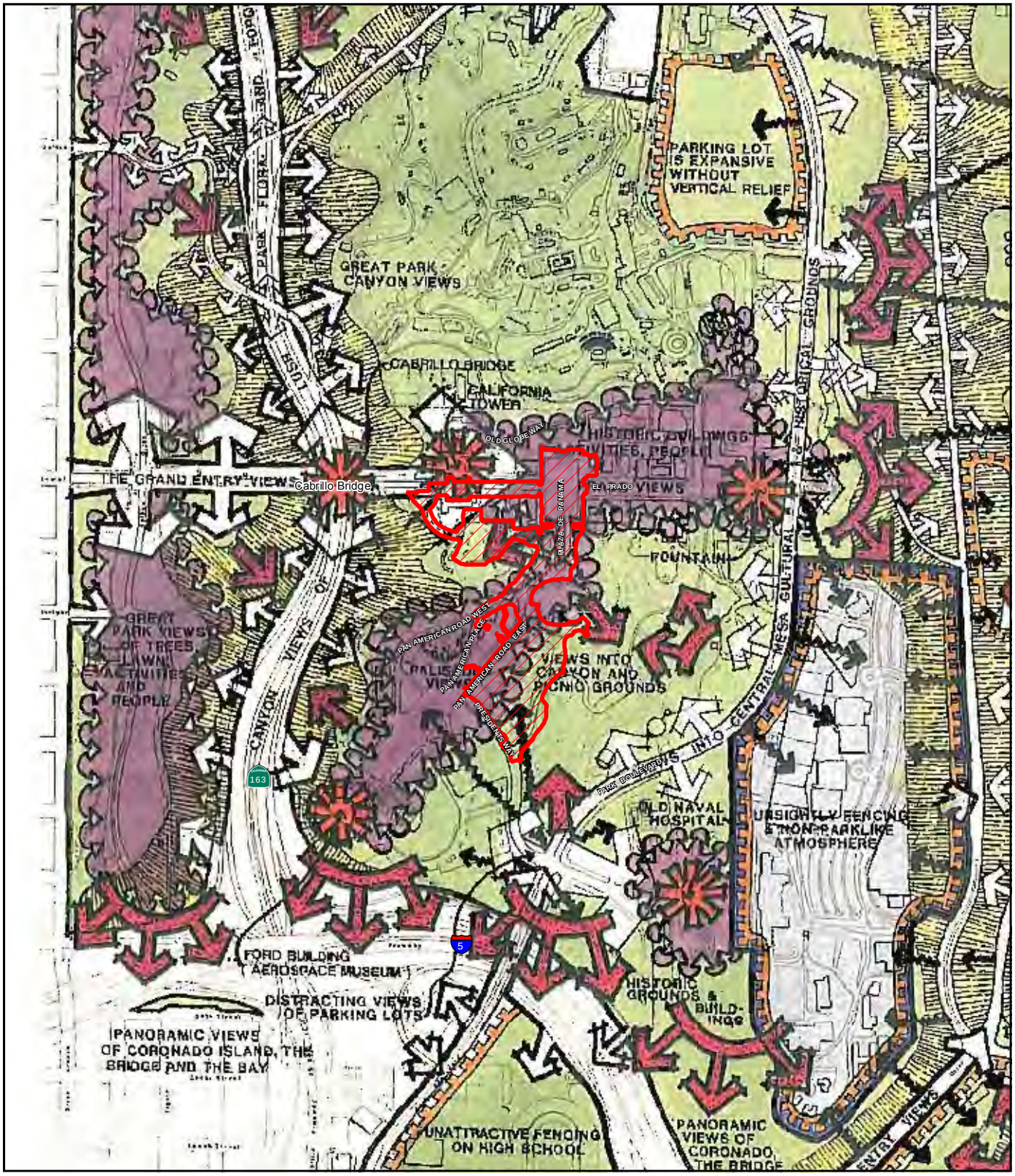

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FIGURE 4.3-9

BPMP Visual Analysis (Central Mesa)

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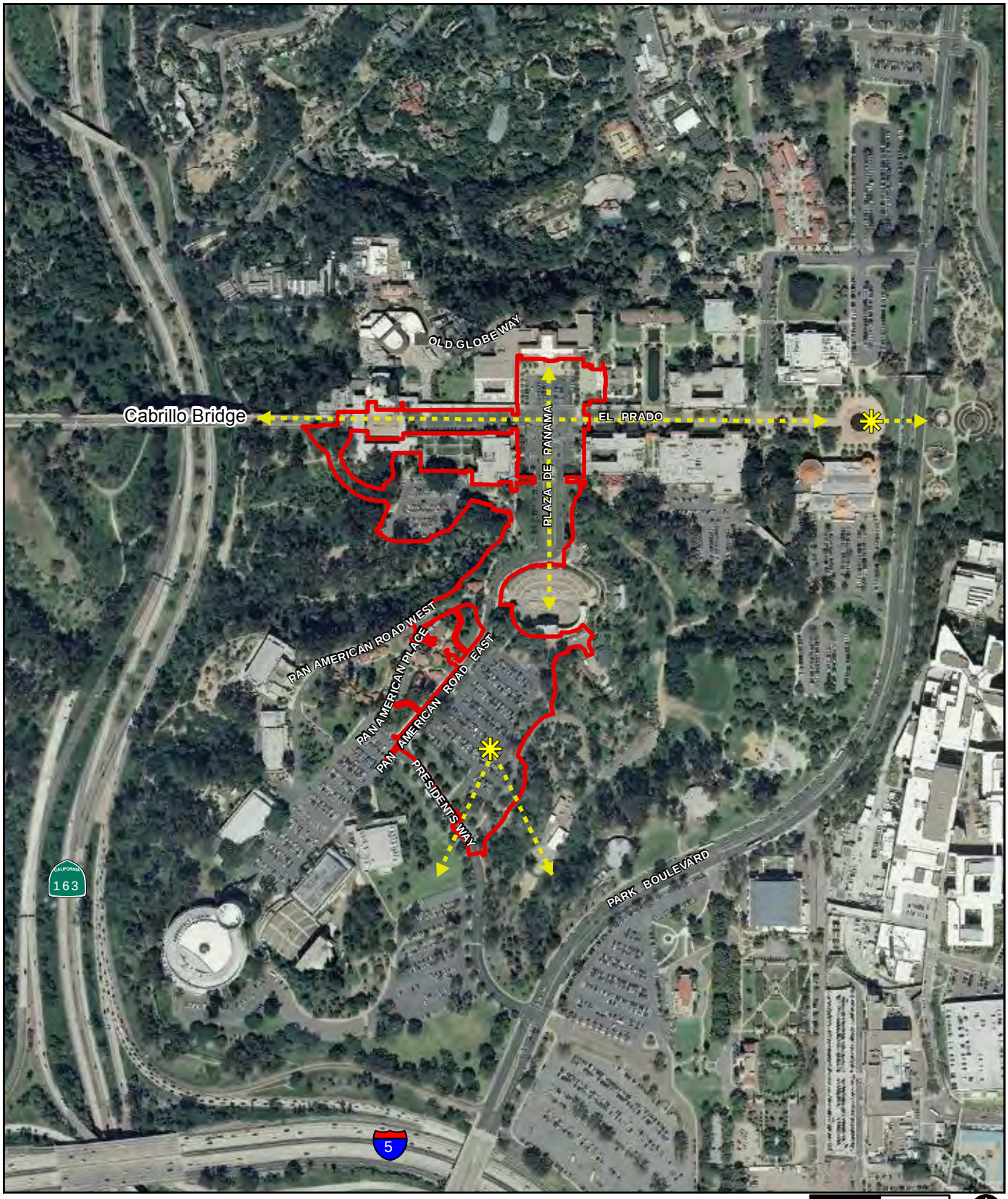

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0 Feet 500

Project Area

View Corridors

View Points

FIGURE 4.3-10

View Points and Corridors

The CMPP provides guidelines for park policy development, park administrative development, and physical development within the Park. Goals and design guidelines pertaining to aesthetics are primarily specified within the "Architecture," "Landscape," and "Specific Recommendation" Elements of the CMPP. One of the foremost objectives of the CMPP is to retain the historical character of the Mesa, which includes the retention of significant plants and trees. The *Landscape Analysis Section* of the CMPP includes an inventory of all plants located within the Central Mesa and identifies "*Significant Plants and Trees*." The 45 individual specimens identified within the CMPP and located within the project area are identified on Figure 4.1-10. Table 4.1-3 analyzes the project's consistency with aesthetic and historic character provisions of the CMPP.

e. East Mesa Precise Plan

The EMPP establishes a key view corridor from the intersection of Upas Street and Pershing Drive looking south/southwest toward the Arizona Street Landfill and beyond to the Naval Hospital (Figure 4.3-11). The EMPP also identifies "visual distractions" within the East Mesa. Regarding the Arizona Street Landfill the plan states, "looking to the east, views from the Central Mesa to the East Mesa are dominated by the scar of the landfill. However, with revegetation and public art, the landfill site represents a significant opportunity to restore the characteristic mesa view, with wide open spaces and uninterrupted vistas to the background city and distant mountains."

4.3.1.3 Key Vantage Points

Visual sensitivity can be described as viewer awareness of visible changes in the environment and is based on a viewer's presence in public areas near a particular site. Sensitivity relates to the overall visual character of the area and visibility of the project site. To define the existing visual quality of the project area, important views that include the project site have been identified as key vantage points (KVPs). KVPs are public viewing areas and can include road viewsheds, public viewpoints, and other key views, as defined within adopted plans. Due to the project's location within the heart of the Central Mesa, intervening topography and vegetation preclude views of the site from locations external to the Park. As illustrated in Appendix C, the project site, and particularly the location of the Centennial Bridge, is not visible from SR-163 or other major public areas outside of the Park. Public viewing areas of the project site are therefore limited to locations within the Park including roads, pedestrian pathways, and plazas and all of the KVPs identified below are from locations within the Park.

Six of the KVPs are comprised of areas examined in adopted policy documents—the BPMP visual analysis map, major view corridors and a pedestrian viewpoint identified in the CMPP, and a view corridor identified in the EMPP. These KVPs include views from:

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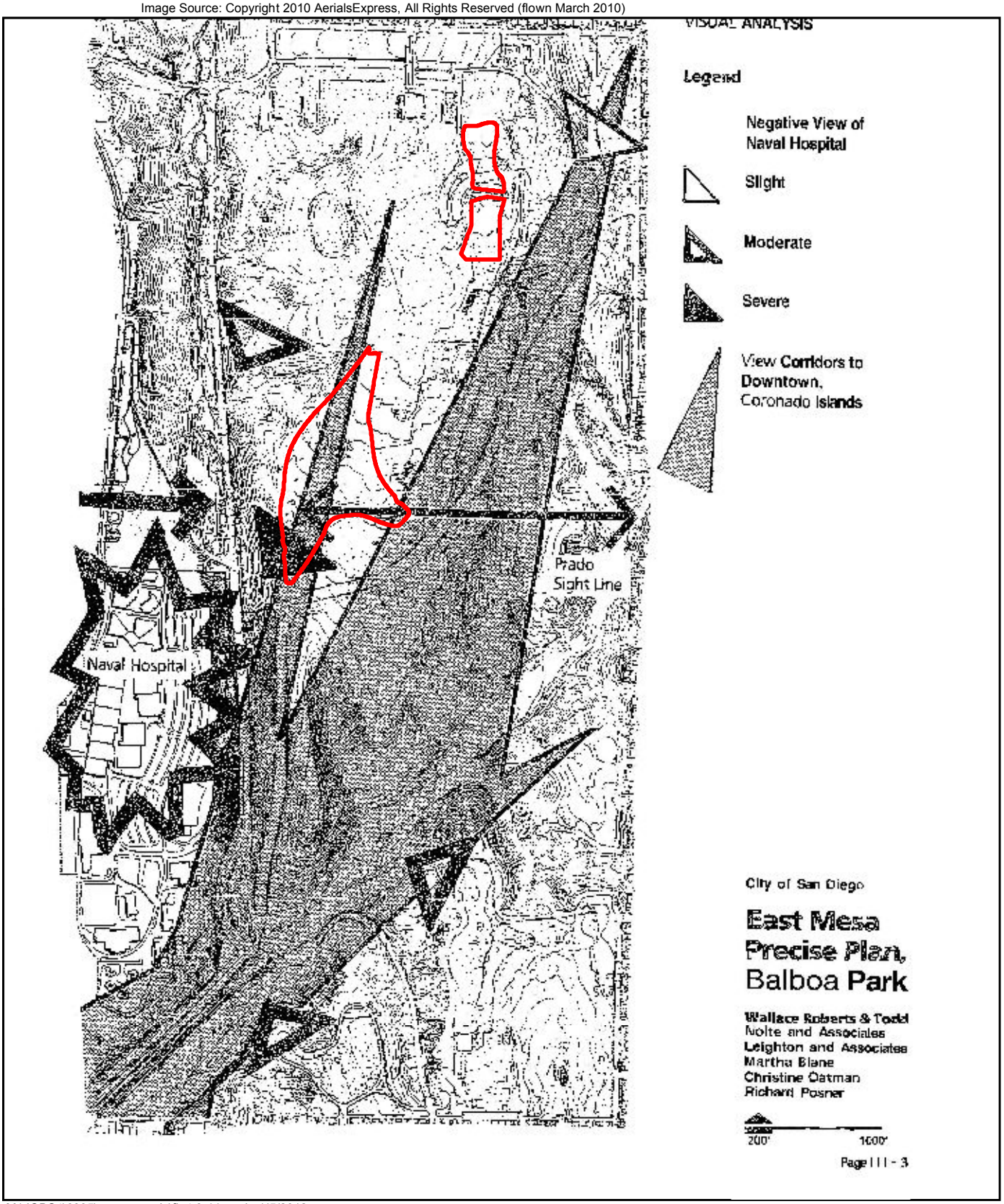

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Off-site Project Components

FIGURE 4.3-11

EMPP Visual Analysis

- The Cabrillo Bridge, looking east along El Prado toward the California Building;
- The corridor extending from the Museum of Art south to the Organ Pavilion;
- The same corridor, as above, looking north from the Organ Pavilion toward Plaza de Panama;
- The intersection of Presidents Way and Park Boulevard, looking northwest toward the Organ Pavilion;
- The view from the Plaza de Balboa looking east toward the East Mesa; and
- The view looking south-southwest across the East Mesa from the intersection of Upas Street and Pershing Drive.

Four additional KVPs reflect public viewing areas from which the Centennial Bridge would be at least partially visible, including the view from near the Palm Canyon Trail looking north, the Archery Range looking northeast, the Bridle Trail looking east, and near Nate's Point Dog Park looking east across Cabrillo Canyon. (A complete analysis from where the Centennial Bridge would be visible is included in Appendix C.) The CMPP also identifies a pedestrian viewpoint from the future Organ Pavilion parking structure looking south to west, away from the project site, toward the ocean and city skyline. Since this viewpoint is oriented away from the project site, it has not been included as a KVP. The eight KVP locations of the Central Mesa are graphically depicted on Figure 4.3-12a, and the additional two KVP locations (KVPs 5 and 6) with views of the East Mesa/Arizona Street Landfill are illustrated on Figure 4.3-12b. Each KVP is discussed below with a narrative description of the view.

KVP 1A: The first KVP, a designated major view corridor by the CMPP, is from the Cabrillo Bridge, looking east along El Prado. This location serves as one of the primary entrances to Balboa Park. This view is characterized by mature vegetation, particularly eucalyptus trees, along the southern side of the Bridge; the California Building and Tower (Museum of Man) in the foreground, and the interior of the Plaza de California and the Prado in the background (Figure 4.3-13, KVP 1A).

KVP 1B: This KVP is from near the Palm Canyon Trail looking north toward the proposed location of the Centennial Bridge. The views from this location are characterized by mature vegetation located within the Canyon (Figure 4.3-14, KVP 1B and 1C).

KVP 1C: This KVP is intended to illustrate the view from the Archery Range looking northeast toward the proposed location of the Centennial Bridge. This view is characterized by the Museum of Man/California Quadrangle resting atop Cabrillo Canyon with mature eucalyptus and the eastern abutment of Cabrillo Bridge in the foreground (see Figure 4.3-14, KVP 1B and 1C).

Image Source: Copyright 2010 AerialsExpress, All Rights Reserved (flown March 2010)

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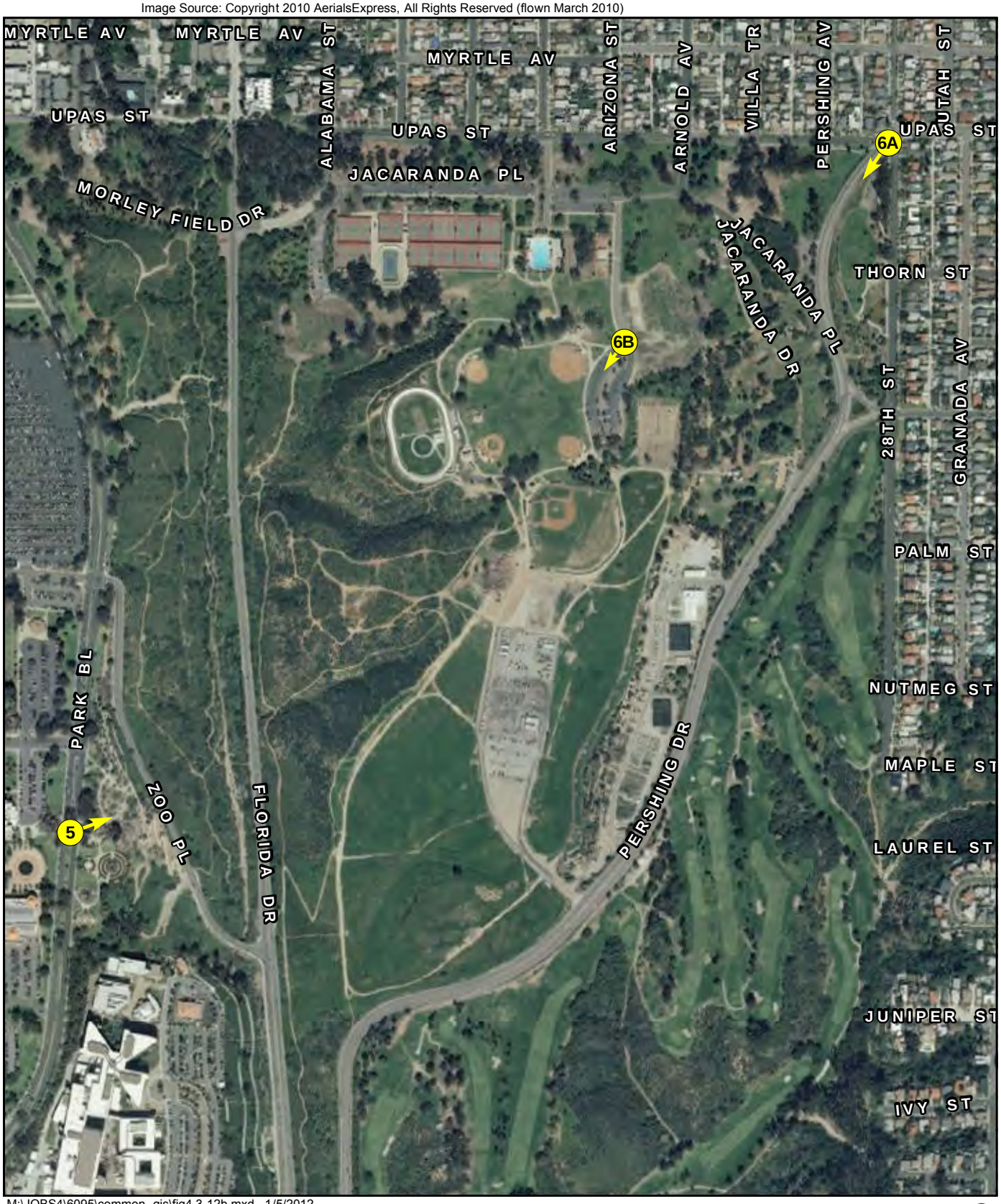
1 Key Vantage Points

FIGURE 4.3-12a

Key Vantage Points (Central Mesa)

Image Source: Copyright 2010 AerialsExpress, All Rights Reserved (flown March 2010)



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1 Key Vantage Points

FIGURE 4.3-12b

Key Vantage Points (East Mesa)

Image Source: Civitas

Key Vantage Point 1A

FIGURE 4.3-13

Image Source: Civitas

Key Vantage Point 1B

Key Vantage Point 1C

FIGURE 4.3-14

KVP 1D: This KVP demonstrates the view from the Bridle Trail, located along SR-163 on the western side of Cabrillo Canyon, looking east toward the proposed location of the Centennial Bridge (Figure 4.3-15, KVP 1D and 1E). The view from the Bridle Trail includes Cabrillo Canyon, the Cabrillo Bridge, and the Museum of Man's tile-covered dome and 208-foot tower.

KVP 1E: This KVP reflects the views from near Nate's Point Dog Park, located on the top of the West Mesa, just south of El Prado, looking east over Cabrillo Canyon toward the proposed location of the Centennial Bridge (see Figure 4.3-15, KVP 1D and 1E). This view is characterized by the Cabrillo Bridge, the Museum of Man's tile-covered dome, and 208-foot tower and numerous sky-line trees (primarily eucalyptus species) located on the eastern slopes of Cabrillo Canyon and the top of the Central Mesa.

KVP 2: This KVP, also a designated major view corridor by the CMPP, is from the Museum of Art looking south through the Plaza de Panama to the Organ Pavilion. This view captures the Plaza de Panama, El Prado, and the Mall. The fountain serves as the primary focal point within this view corridor, which is characterized mostly by asphalt paving and cars (Figure 4.3-16, KVP 2 and 3).

KVP 3: This KVP is within the same corridor as KVP 2, but looking northwest from the Mall in front of the Organ Pavilion toward El Prado and Plaza de Panama. This view captures the landscaped Mall in the fore ground, as well as the House of Charm, Museum of Art, and Plaza de Panama in the backdrop (see Figure 4.3-16, KVP 2 and 3).

KVP 4: The intersection of Presidents Way and Park Boulevard is identified in the BPMP as a negative view location, looking northwest toward the Palisades area. Views from this intersection include landscaped areas to the north and south of Presidents Way, along with natural vegetation further to the north within Gold Gulch Canyon. A large surface lot is visible in the foreground to the south (Figure 4.3-17, KVP 4).

KVP 5: The CMPP identifies a "Pedestrian Viewpoint" at Plaza de Balboa, looking east with a view to the mountains, the East Mesa, and the Rose Garden. According to the EMPP, "looking to the east, views from the Central Mesa to the East Mesa are dominated by the scar of the landfill. However, with revegetation and public art, the landfill site represents a significant opportunity to restore the characteristic mesa view, with wide open spaces and uninterrupted vistas to the background city and distant mountains" (see Figure 4.3-18, KVP 5).

KVP 6: Represents the related views from both the intersection of Upas Street and Pershing Drive looking south/southwest, and from near the baseball fields southwest of the Upas Street/Pershing Drive/28th Street intersection, as identified in the EMPP as a "view corridor" of downtown and the Coronado Islands. This view corridor is characterized by the top of the mesa associated with the Arizona Street Landfill in the foreground; the San Diego Naval Hospital across Florida Canyon, representing a

Image Source: Civitas

Key Vantage Point 1D

Key Vantage Point 1E

FIGURE 4.3-15

Image Source: Civitas

Key Vantage Point 2

Key Vantage Point 3

FIGURE 4.3-16

Image Source: Civitas

Key Vantage Point 4

FIGURE 4.3-17

Image Source: RECON Environmental

Key Vantage Point 5

FIGURE 4.3-18

"severe negative view" in the mid-ground; and the Coronado Bridge and downtown skyline in the background (see Figure 4.3-19, KVP 6).

4.3.2 Issue 1: Public Views

Would the proposal result in a substantial obstruction of any vista or scenic view from a public viewing area as identified in the community plan?

Pursuant to the City's Significance Determination Thresholds, impacts to public views may be significant if the project would block public views from designated open space areas, roads, or parks or to significant visual landmarks or scenic vistas (Pacific Ocean, downtown skyline, mountains, canyons, waterways). To meet this significance threshold, one or more of the following conditions must apply:

- Substantially block a view through a designated public view corridor as shown in an adopted community plan, the General Plan, or the Local Coastal Program
- Cause substantial view blockage from a public viewing area of a public resource (such as the ocean) that is considered significant by the applicable community plan
- Exceed the allowed height or bulk regulations, and this excess results in a substantial view blockage from a public viewing area.

4.3.2.1 Impacts

As described above in Section 4.3.1, the General Plan does not specifically identify scenic resources or significant public viewing areas within the project area, but does consider views of, or from, public open space, open water, or other prominent landforms to be potentially significant. The BPMP does not designate any public view corridors, public viewing areas, or scenic vistas within the Park. However, it does identify a "Negative View" from the intersection of Presidents Way and Park Boulevard looking west into the Palisades area, where the Organ Pavilion parking structure would be located. The CMPP identifies two major view corridors within the project area.

Changes in the visual quality as a result of the project and Arizona Street Landfill disposal have been analyzed from the 10 KVPs identified in Section 4.3.1.3, above, which encompass the important views identified in the BPMP, CMPP, and EMPP, along with a sampling of other public viewing areas for the Centennial Bridge, as described above.

Image Source: RECON Environmental

Intersection of Upas Street/Pershing Drive/28th Street

Baseball Fields near Upas Street/Pershing Drive/28th Street Intersection

FIGURE 4.3-19
Key Vantage Point 6

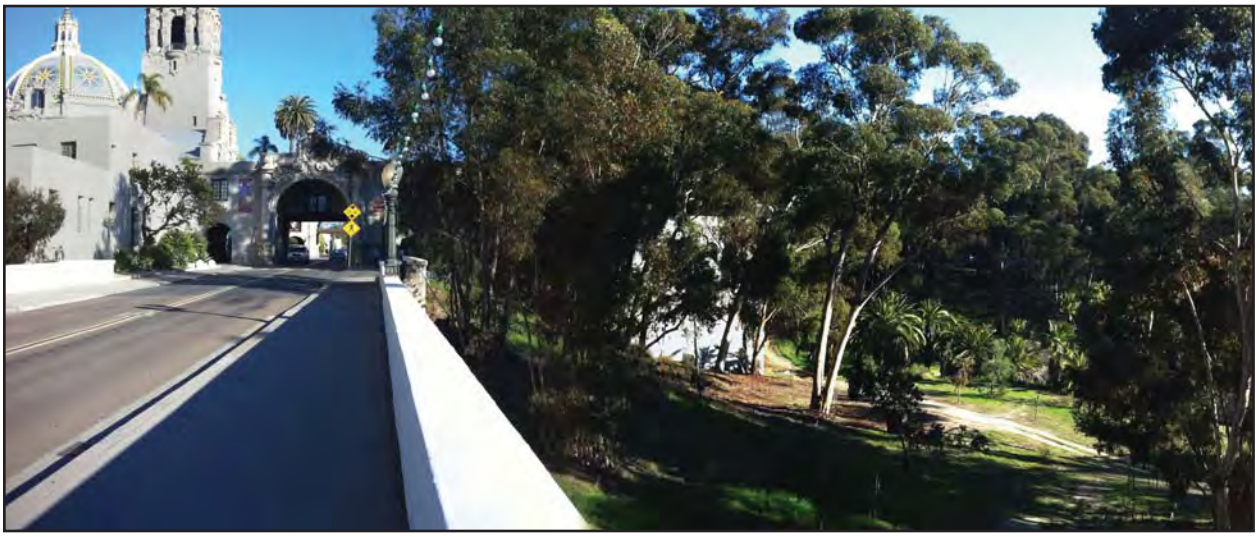
a. Centennial Bridge

Changes to the existing visual quality and public views from construction of the Centennial Bridge are illustrated in Figures 4.3-20 through Figure 4.3-24. From KVP 1A, the Centennial Bridge can be clearly seen in the foreground. The most notable visual impact in this location is the addition of the concrete bridge columns and deck near the top of Cabrillo Canyon, located directly south of the California Building/Museum of Man. The majority of the existing eucalyptus trees that appear in the foreground along the eastbound lane of the Cabrillo Bridge would be retained with construction of the Centennial Bridge. Impacts to the view from KVP 1A, looking east from the Cabrillo Bridge, along El Prado, would not be significant given that the landscape plan calls for the replacement of tress that would be damaged or removed during construction, thereby increasing screening of the Centennial Bridge.

KVPs 1B and 1C represent locations within the Central Mesa from which the Centennial Bridge would be at least partially visible. From KVP 1B, near the Palm Canyon Trail southwest of the Alcazar lot, the deck of the bridge would be barely visible above the rim of the canyon, through the existing, dense vegetation. Visual impacts of the Centennial Bridge from this public viewing location would be less than significant. From KVP 1C, located within the Archery Range, the deck and columns of the Centennial Bridge would be clearly visible. The bridge's features are consistent with the bulk and scale of the large concrete abutment of the Cabrillo Bridge, also very prominent in the foreground of this viewing location. This vantage point is not a significant viewing location, as defined by the CMPP or BPMP, nor is the location fully open to the public. The Archery Range is identified in the CMPP as a "restricted use area." For these reasons, the visual impacts of the Centennial Bridge from this location would be considered less than significant.

KVPs 1D and 1E represent locations from the West Mesa from which the Centennial Bridge would be at least partially visible. From KVP 1D, located along the Bridle Trail which parallels SR-163, the Centennial Bridge would be barely visible. Through the large grove of mature eucalyptus, a small segment of the bridge deck and one column are partially visible. From KVP 1E, located at Nate's Point Dog Park on top of the West Mesa, the Centennial Bridge would be visible in the background. A segment of the bridge deck and several columns would be visible through the grove of sky-line trees, which is one of the dominant visual features from this vantage point. The dog park is not identified in the BPMP or CMPP as a significant viewing location. Impacts to the views from KVP 1E would be not be significant given that the landscape plan calls for the replacement of trees that would be damaged or removed during construction, thereby reducing screening of the Centennial Bridge from this location.

Image Source: Heritage Architecture



Key Vantage Point 1A

Key Vantage Point 1A Photo Simulation

FIGURE 4.3-20

Image Source: Civitas

Key Vantage Point 1B

Key Vantage Point 1B Photo Simulation

FIGURE 4.3-21

Image Source: Civitas

Key Vantage Point 1C

Key Vantage Point 1C Photo Simulation
(Proposed Vegetation not Shown)

FIGURE 4.3-22

Image Source: Civitas

Key Vantage Point 1D

Key Vantage Point 1D Photo Simulation
(Proposed Vegetation not Shown)

FIGURE 4.3-23

Image Source: Civitas

Key Vantage Point 1E

Key Vantage Point 1E Photo Simulation
(Proposed Vegetation not Shown)

FIGURE 4.3-24

b. Alcazar Parking Lot and Centennial Road

The Alcaza r parking lo t and Centennial Road would not be visible from an y KVP identified as a significant public vantage point in the BPMP or CMPP.

c. Plaza de California, El Prado, Plaza de Panama, and the Mall

The project would remove vehicular traffic an d parking fr om Plaza de California, El Prado, Plaza de Panama, the Mall, and Pan American Road East, all of which would be restored for pedestrian use. Landscaping would be enhanced through utilizatio n of shade trees, enhanced pavers that would repla ce asphalt, and constru ction of a water feature would be constructed within the Plaza de Panama.

The photosimulation from KVP 2 illustrates the alterations within the major view corridor extending from the Mus eum of Art south to the Organ Pavi lion, including the Plaza de Panama, and a portion of El Prado (Figure 4.3 -25). The most notable change in the visual environment from this vantage point is the absen ce of cars fr om the foreground and background. In place of parking stalls, se ating would be added along the sid es of the Plaza and reflecting pools h ave been placed where asphalt presently exists. Numerous signs gover ning the f low of vehicular and pedestrian traffic would be removed. Glare from reflective su rfaces would be reduced and sign ificant land scape and archite ctural featur es would be more rea dily apparent. Figure 4.3-26 illust rates views of the same corrid or as described above, but from KVP 3, looking north from near the Mall in front of the Organ Pa vilion toward the Plaza de Panama. Changes in the visual landscape would be similar to those identified above.

Vehicles wo uld no long er be prese nt within th e view corridor, thus re ducing impacts associated with light and glare. In addition, asphalt would be replaced with enhan ced paving/groundcover. Parking within the Plaza de Panama would be remo ved and additional landscaping would be planted along the Mall. I mplementation of the pr oject would not o bstruct view s from a pu blic viewing area and it would resu lt in a positive aesthetic or change to the existing visual character of the Plaza de Panama an d the Mall. Changes to Plaza de California would not be visible from any of the KVPs.

d. Parking Structure/Rooftop Park/Arizona Street Landfill

The project includes the replacement of the exi sting Organ Pavilion surface parkin g lot with a new 265,242-squ are-foot underground parking structu re with a 2.2-acre rooft op park. The rooftop park would be la ndscaped w ith gardens and contain new restro oms and a visito r center. Excavation for the parkin g structure would require the export of approximately 142,000 cy of material to the Ari zona Street La ndfill on the East Mesa for disposal.

Image Source: Civitas

Key Vantage Point 2

Key Vantage Point 2 Photo Simulation

FIGURE 4.3-25

Image Source: Heritage Architecture

Key Vantage Point 3

Key Vantage Point 3 Photo Simulation

FIGURE 4.3-26

KVP 4 represents the view looking northwest from the intersection of Presidents Way and Park Boulevard. This view was identified in the BPMP as a negative view location. Because the project site would not be visible from this KVP, the view from this location would not change with implementation of the project, specifically construction of the Organ Pavilion parking structure. Distance, along with intervening vegetation and topography, would preclude views of the project site from this location.

KVP 5 represents the view of the Arizona Street Landfill from the Central Mesa looking east from the west side of Park Boulevard. Distance, along with intervening vegetation and topography substantially limit views of the Arizona Street Landfill disposal site from this location. Additionally, little change would occur to this view with implementation of the project. Approximately, 2 to 11 feet of fill would be placed over three areas on top of the existing landform, covering approximately 904,000 square feet (20.75 acres). The fill would be contoured to match the existing landform and hydroseeded with a native mix of grasses. The ultimate condition would be very similar to existing.

KVP 6 represents the view corridor from the intersection of Upas Street, 28th Street, and Pershing Drive and from the baseball fields located just to the south, looking south/southwest toward downtown. Distance, along with intervening vegetation and topography would almost entirely preclude views of the Arizona Street Landfill disposal site from this location. The view of the Arizona Street Landfill site would be similar to that described above, with little change from the existing condition.

ALL PROJECT COMPONENTS

A major objective of the project is to remove cars from the interior of the Central Mesa. Reducing vehicular traffic and surface parking areas would, in turn, improve the visual quality of the Central Mesa and reduce associated light and glare. Aesthetics also would be improved through the provision of additional landscaping and parkland. In summary, while the project would alter views of the site from public vantage points, public views would overall be improved through implementation of the project.

4.3.2.2 Significance of Impacts

a. Centennial Bridge

Impacts to the views from KVP 1A, looking east from the Cabrillo Bridge, along El Prado toward the California Building and KVP 1E, looking east across Cabrillo Canyon from the West Mesa, would be less significant given that the landscape plan calls for the replacement of trees that would be damaged or removed during construction, thereby reducing impacts by screening the Centennial Bridge. Other KVP from which the Centennial Bridge would be at least partially visible are not significant viewing locations and, therefore, impacts would be less than significant.

b. Alcazar Parking Lot and Centennial Road

The Alcazar parking lot and Centennial Road would not be visible from any KVP identified as a significant public vantage point in the BPMP or CMPP. Therefore, impacts would be less than significant.

c. Plaza de California, El Prado, Plaza de Panama, and the Mall

The project would not substantially alter or block views from KVP 2 or 3 or negatively impact the existing visual character of the site. Given the existing visual quality of the site and project design features, the project would enhance public views of the Plaza de Panama and the Mall. Impacts, therefore, would be less than significant.

d. Parking Structure/Rooftop Park/Arizona Street Landfill

The Organ Pavilion parking structure would not be visible from any KVP identified as a significant public vantage point in the BPMP or CMPP. Also, the disposal of fill at the Arizona Street Landfill would result in very little alteration to the appearance of the existing landform. Therefore, impacts to public view points related to development of the Organ Pavilion parking structure and disposal of fill at the Arizona Street Landfill would be less than significant.

4.3.2.3 Mitigation, Monitoring, and Reporting

a. Centennial Bridge

Impacts to public views or scenic resources would be less than significant and no mitigation is required.

b. Alcazar Parking Lot and Centennial Road

Impacts to public views or scenic resources would be less than significant, and no mitigation is required.

c. Plaza de California, El Prado, Plaza de Panama, and the Mall

Impacts to public views or scenic resources would be less than significant, and no mitigation is required.

d. Parking Structure/Rooftop Park/Arizona Street Landfill

Impacts to public views or scenic resources would be less than significant, and no mitigation is required.

4.3.3 Issue 2: Neighborhood Character/Architecture

Would the proposal have an architectural style or use of building materials in stark contrast to adjacent development where the adjacent development follows a single or common architectural theme?

Pursuant to the City's Significance Determination Thresholds, projects that severely contrast with the surrounding neighborhood character may be significant if the project would:

- Exceed the allowable height or bulk regulations and the height and bulk of the existing patterns of development in the vicinity of the project by a substantial margin
- Have an architectural style or use building materials in stark contrast to adjacent development where the adjacent development follows a single or common architectural theme
- Result in the physical loss, isolation or degradation of a community identification symbol or landmark
- Be located in a highly visible area (e.g., on a canyon edge, hilltop or adjacent to an interstate highway) and would strongly contrast with the surrounding development or natural topography through excessive height, bulk, signage, or architectural projections.
- Create a negative aesthetic site.
- Have bulk, scale, materials, or style would be incompatible with surrounding development
- Substantially alter the existing or planned character of the area, such as could occur with the construction of a subdivision in a previously undeveloped area
- Result in the loss of any distinctive or landmark tree(s), or stand of mature trees as identified in the community plan

The "common architectural theme" of the project site is generally defined by the historical character of the area and historical resources which are located within. According to the SOI Rehabilitation Standards, the historic character of an NHLD's setting "include roads and streets, furnishings such as lights or benches, vegetation, gardens and yards, adjacent open space such as fields, parks, commons or woodlands, and important views or visual relationships" (Appendix B-1).

The following design guidelines contained in the SOI Rehabilitation Standards state that the design of new structures adjacent to historic structures (i.e., the proposed Centennial Bridge) must be compatible but differentiated according to the following design guidelines:

- New structures must respect historic structures and be compatible additions
- New structures must be designed to be secondary elements, so as not to draw attention away from the historic structures
- New structures should relate to the scale, massing, and datum of the historic structures
- The material and color palette of the new structures should relate to the historic structures
- New structures should be a simple and direct response to their proposed use
- New structures should reflect elements of the historic place without mimicking historic features or details which would create a "false sense of history"
- New structures should "be of their own time" rather than artificial reproductions simply historicist copies.

4.3.3.1 Impacts

a. Centennial Bridge

Architectural Character

The Centennial Bridge component of the project would require the demolition of 70 linear feet of the south balustrade of Cabrillo Bridge and the construction of new abutments and a curvilinear concrete bridge over Cabrillo Canyon, located southwest of the California Quadrangle. The work would also require regrading a portion of this canyon. The new Centennial Bridge would introduce a modern architectural element in a historical setting, thereby, resulting in a significant impact on both Cabrillo Bridge and the California Quadrangle, including a permanent visual impact on an iconic view of the two structures from the West Mesa and from the floor of Cabrillo Canyon. Impacts associated with incompatible architectural style would be significant for this project component.

State Scenic Highways

Centennial Bridge would be constructed at the edge of Cabrillo Canyon, adjacent to a state-designated SR-163. As seen in Appendix C, Photo Locations 8 through 12 represent views of the project site from SR-163. Due to intervening topography and

mature vegetation within the canyon, from no point would the Centennial Bridge be visible from SR-163. Construction of the Centennial Bridge would require access into Cabrillo Canyon. The project would utilize the same construction access road (shown in orange on Figure 3-42b) which would be used for the Cabrillo Bridge Overcrossing Seismic Retrofit/Rehabilitation and Lighting projects being undertaken by Caltrans. No new temporary construction impacts would occur within the State Scenic Highway right-of-way or Cabrillo Canyon. Therefore, impacts to the State Scenic Highway associated with this project component would be less than significant.

Landmark Trees

No significant tree specimens, as identified in the CMPP, are located within the footprint of the Centennial Bridge.

b. Alcazar Parking Lot and Centennial Road

Architectural Character

The project would involve regrading around the perimeter of the Alcazar parking lot in order to reconfigure the parking lot and make it compliant with all ADA requirements. As described in detail in Section 4.2.2.1(b), a small portion of the north rim of Palm Canyon would be regraded and a small portion of the western edge of the parking lot would be physically impacted by the construction of an abutment in this area. Areas that are disturbed would be restored to their original condition by harvesting and relocating existing trees, planting new trees (similar species as existing), and planting new understory plantings to match the existing landscape features. Therefore, impacts to architectural character in conjunction with improvements to the Alcazar parking lot would be less than significant.

The Centennial Road would result in impacts to Palm Canyon through the construction of the new road on the canyon edge, where there has historically been a buffer zone of vegetation and lawn area between vehicular circulation and the canyon itself. Physical and visual impacts on the upper rim of Palm Canyon would be partially offset by the restoration of historic understory plantings on the canyon edges, but until those plantings have matured, it would be apparent that a portion of the canyon has been disturbed. However, once the vegetation recovers within a few years, it would be difficult for a casual visitor to realize that any work had occurred there. Therefore, the improvements associated with the Centennial Road would result in less than significant impacts to the historical character or theme of the area.

State Scenic Highways

None of the improvements associated with these project components would be visible from SR-163.

Landmark Trees

Five significant tree species exist within the footprint of these project components. One Magnolia tree would be removed in conjunction with construction of the Centennial Road, and one Torrey pine, south of the existing restrooms next to Pan American Road, would be removed or relocated. All other individual specimens would be protected in place. Because the majority of significant tree specimens would be retained in place with implementation of these project components, impacts would be less then significant.

c. Plaza de California, El Prado, Plaza de Panama, and the Mall

Architectural Character

The project would remove non-character-defining features and materials within the Plaza de California and El Prado. New compatible paving types would replace the existing asphalt and non-historic pavers in Plaza de California. New trees would be introduced along El Prado in keeping with the original 1915 design. These improvements would enhance the historic appearance of this public plaza and pedestrian circulation route. Therefore, improvements to the Plaza de California and El Prado would not be in conflict with the common architectural theme of the area.

The Mall and Pan American Road East would be converted from vehicular to pedestrian usage, as well as for the use of trams. The existing asphalt-paved roadway along the Mall would be replaced with a compatible paving material matching Plaza de Panama and El Prado. The existing sidewalk would be replaced with sod and shade trees to resemble conditions existing in both 1915 and 1935. The central landscaped area would be expanded to more closely resemble its 1915 width, with sod at the center and flower beds lining the outer edges. The new Pan American Promenade would generally retain the existing alignment of Pan American Road East. The only changes to this feature would be to replace the existing asphalt surface with a new paving system and to add palm trees to line its entire length. These improvements, along with the restoration of historic pedestrian circulation along both the Mall and Pan American Road East would be consistent with historic landscape and theme of the area. Impacts associated with incompatible architectural style would be less than significant for these project components.

State Scenic Highways

None of the improvements associated with these project components would be visible from SR-163.

Landmark Trees

Three significant tree species exist within the footprint of these project components. All individual specimens would be protected in place. Therefore, impacts to landmark trees associated with these project components would be less than significant.

d. Parking Structure/Rooftop Park/Arizona Street Landfill

Architectural Character

The parking structure would be fully underground except for the east side, which would be partially exposed facing Gold Gulch. This elevation would, however, be partially concealed behind a landscaped berm and a green living wall system on the parking structure. Changes to the area would include removing a portion of the existing mature vegetation (primarily eucalyptus trees and shrubs) from behind Spreckels Organ Pavilion to build the parking structure and the Centennial Road. The California Gardens would be re-created atop the parking structure. The Organ Pavilion parking lot is not a historic feature of Balboa Park, and it is not a contributor to the NHLD. What exists presently is incompatible with the NHLD. Therefore, the improvements would be consistent with historic architectural and landscape theme of the area. Impacts associated with architectural style would be less than significant for these project components.

State Scenic Highways

None of the improvements associated with these project components would be visible from SR-163.

Landmark Trees

Two significant tree species exist within the project footprint. One Torrey pine would be relocated or removed if it is determined to be a hazard tree (has the potential to fall onto the Organ Pavilion), but it is not required to be removed as part of this project. Twelve Australian willows are located to the south of the Organ Pavilion parking structure. One would remain and 11 would be relocated to the adjacent canyon. At the time of construction a certified arborist would be consulted to determine the suitability of each plant for transplantation. If survival is not likely, the trees will be replaced with a tree of the same species at an appropriate container size and number to address tree loss. Impacts to landmark trees would be less than significant with implementation of these project components which are conditions of the SDP.

4.3.3.2 Significance of Impacts

a. Centennial Bridge

Impacts associated with neighborhood character/architecture would be significant for this project component because it would introduce elements of modern architecture.

b. Alcazar Parking Lot and Centennial Road

Impacts associated with neighborhood character/architecture would be less than significant for these project components.

c. Plaza de California, El Prado, Plaza de Panama, and the Mall

Impacts associated with neighborhood character/architecture would be less than significant for these project components.

d. Parking Structure/Rooftop Park/Arizona Street Landfill

Impacts associated with neighborhood character/architecture would be less than significant for these project components.

4.3.3.3 Mitigation, Monitoring, and Reporting

Centennial Bridge

No feasible mitigation is available for the significant impact associated with Centennial Bridge on architectural character because, per the SOI Rehabilitation Standards, replication of an historic design is not permissible.

4.3.3.4 Significance of Impacts After Mitigation

Impacts would remain significant and unmitigable.

4.3.4 Issue 3: Landform Alteration

Would the proposal result in a substantial change in the existing landform?

Pursuant to the City's Significance Determination Thresholds, impacts associated with landform alteration may be significant if the project would:

a. Alter more than 2,000 cubic yards of earth per graded acre by either excavation or fill, and one or more of the following conditions apply:

1) Project would disturb steep hillsides in excess of the encroachment allowance of the ESL regulations;

2) The project would create manufactured slopes higher than 10 feet or steeper than 2:1 (50 percent) slope gradient;

3) The project would result in a change in elevation of steep hillsides as determined by the City's LDC Section 113.0103 from existing grade to proposed grade of more than five feet by either excavation or fill, unless the area over which excavation or fill would exceed five feet is only at isolated points on the site; or

4) The project design includes mass terracing of natural slopes with cut or fill slopes to construct flat-pad structures.

b. However, the above conditions may not be considered significant if one or more of the following apply:

1) The grading plans clearly demonstrate, with both spot elevations and contours, that the proposed landforms will very closely imitate the existing on-site landform and/or the undisturbed, pre-existing surrounding neighborhood landforms. This may be achieved through naturalized variable slopes.

2) The grading plans clearly demonstrate, with both spot elevations and contours, that the proposed slopes follow the natural existing landform and at no point vary substantially from the natural landform elevations.

3) The proposed excavation or fill is necessary to permit installation of alternative design features such as step-down or detached buildings, non-typical roadway or parking lot designs, and alternative retaining wall designs which reduce the project's overall grading requirements.

4.3.4.1 Impacts

ALL PROJECT COMPONENTS

a. Would the project alter more than 2,000 cubic yards of earth per graded acre by either excavation or fill?

This analysis of whether more than 2,000 cubic yards of earth per graded acre by either excavation or fill, reflects the complete project (as opposed to the four project components analyzed elsewhere in the section), as the grading plan encompasses the entire project site, and therefore, impacts for various components are not readily quantifiable. The following analysis responds in detail to each of the five threshold questions stated above.

The grading plan is shown in Figures 3-41a-d. Grading would occur on 8.91 acres of the 15.4-acre project site. Overall, the project proposes approximately 163,000 cubic yards of cut and 21,000 cubic yards of fill, with approximately 142,000 cubic yards of export material, resulting in approximately 15,937 cubic yards of grading per graded acre. This amount of earthwork would exceed the 2,000 cubic yards of earth graded per acre threshold. Most of the earthwork required for the project relates to the excavation for the subterranean parking structure. Although a significant amount of earthwork would occur on the project site, almost all of it would be concentrated in this location. No alteration of a natural landform would occur in conjunction with excavation for the parking structure, as the structure would be placed below an existing surface parking lot, and the finished elevation would be five feet higher than the existing grade in that location. The eastern elevation of the parking structure would be partially exposed and some slopes would be visible from the new Centennial Road, which accesses the structure on the east.

The project would generate approximately 142,000 cubic yards of export material, all of which would be disposed of at the Arizona Street Landfill, located one-half mile to the east within the East Mesa portion of Balboa Park. The fill material would be placed over three areas, totaling approximately 904,000 square feet (20.75 acres), resulting in a total increase in surface height of 2 to 11 feet.

Since grading would alter more than 2,000 cubic yards of earth per graded acre by either excavation or fill, the following is an analysis of the additional criteria.

1) Would project grading disturb steep (25 percent gradient or steeper) slopes in excess of the encroachment allowance of the ESL regulations and steep hillside guidelines (LDC, Section 143.0101)?

As described in Land Use Section 4.1.2.1(c), the project is subject to the ESL Regulations of the San Diego LDC, because the project site includes naturally steep hillsides. Approximately 8.8 percent of the 15.4-acre project site (1.35 acres) contains steep hillsides, as defined by the ESL Regulations. Naturally steep hillsides, subject to ESL, are illustrated on Figure 4.1-9. Most steep slopes within the project area are not natural, but are instead the result of previous manmade disturbances that have occurred during the 50-plus-year occupation of the Central Mesa.

The project would deviate from the ESL development regulations for steep hillsides because project grading would encroach into 0.121 acre of ESL steep slopes (0.79 percent of the total project area), wherein no encroachment is permitted. As shown in Table 4.1-1, the project would exceed the permitted encroachment allowance of zero.

Centennial Bridge

The Centennial Bridge component of the project would encroach into a total of 0.11 acre of ESL steep slopes located near the connection to the Cabrillo Bridge (0.04 acre) and near the connection to the Alcazar parking lot (0.07 acre). This project component, would, therefore, require a deviation from the City's ESL regulations, which would result in potential impacts to steep slopes and natural landforms.

Alcazar Parking Lot and Centennial Road

The Centennial Road would encroach into 0.01 acre of ESL steep slopes located near the rim of Palm Canyon. Additionally, grading of the Alcazar parking lot would result in impacts to 0.001 acre of ESL steep slopes located along the western edge of the lot. This project component would, therefore, require a deviation from the City's ESL regulations, which would result in potential impacts to steep slopes and natural landforms.

Plaza de California, El Prado, Plaza de Panama, and the Mall

The improvements associated with these project components would not encroach into ESL steep slopes; therefore, no deviation is required, and no impacts to steep slopes or natural landforms would occur.

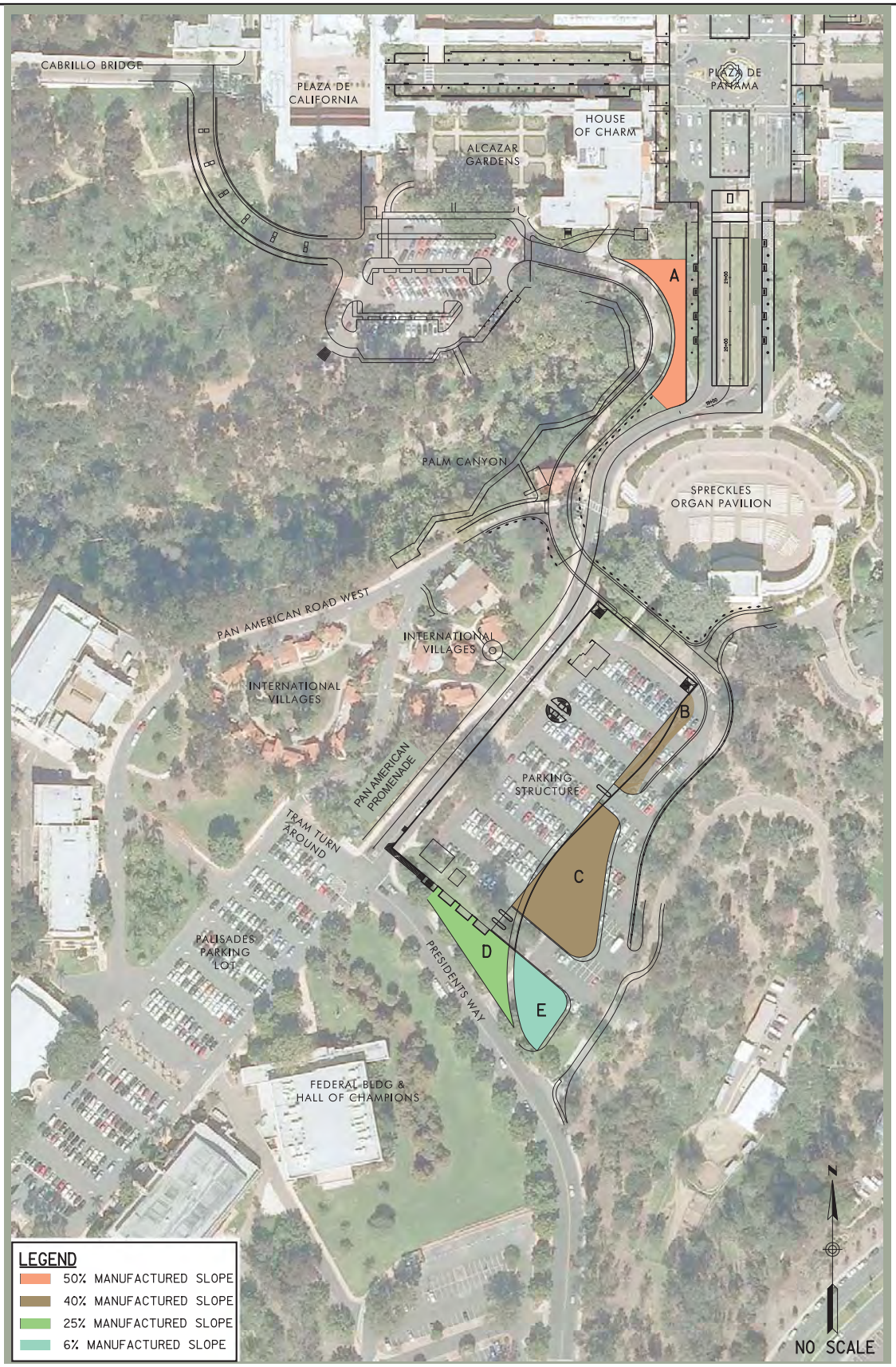
Parking Structure/Rooftop Park/Arizona Street Landfill

The improvements associated with these project components would not encroach into ESL steep slopes; therefore, no deviation is required, and no impacts to steep slopes or natural landforms would occur.

2) Would the project create manufactured slopes higher than 10 feet or steeper than 2:1 (50 percent) slope gradient?

The project would create manufactured slopes over 10 feet in height (up to 22 feet) with a maximum slope gradient of 2:1 (50 percent) as shown in Table 4.3-1. These slopes would be created in conjunction with construction of the Centennial Road, and the Organ Pavilion parking structure. Locations of manufactured slopes are illustrated on Figure 4.3-27. Additional manufactured slopes, up to 11 feet in height, would be constructed within the Arizona Street Landfill, as described below.

Map Source: Rick Engineering, November 2011



No Scale

FIGURE 4.3-27
Manufactured Slopes

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TABLE 4.3-1
MANUFACTURED SLOPES HEIGHTS AND GRADIENTS

Manufactured Slopes	Maximum Height	Maximum Gradient
A	12	50%
B	16	40%
C	22	40%
D	7	25%
E	7	6%

Centennial Bridge

No manufactured slopes would be created in conjunction with construction of the Centennial Bridge.

Alcazar Parking Lot and Centennial Road

Manufactured slopes east of Centennial Road, adjacent to the Mall, would be a maximum of 12 feet in height and would not exceed a 2:1 gradient; and therefore, would exceed threshold (a)(2), above.

Plaza de California, El Prado, Plaza de Panama, and the Mall

No manufactured slopes would be created in conjunction with improvements to these project components.

Parking Structure/Rooftop Park/Arizona Street Landfill

Excavation of the Organ Pavilion parking structure would create manufactured slopes of up to 40 percent gradient and up to 22 feet in height along its entire eastern elevation and up to 25 percent gradient and 7 feet in height near the structure's southern entrance, at the intersection of Presidents Way and the Centennial Road. Manufactured slopes created in conjunction with construction of the Organ Pavilion parking structure would therefore exceed threshold (a)(2), above.

Excess cut material from excavation for the Organ Pavilion parking structure would be disposed of at the Arizona Street Landfill on the East Mesa. Placement of this export material on the existing Arizona Street Landfill site would raise the elevation on average 2 to 11 feet across the site. Soils at the Arizona Street Landfill would be utilized for fill and grade contouring on top of the existing soil cap (previously placed to prevent rainwater infiltration). Fill and grade contouring is anticipated to occur within three areas of the Arizona Street Landfill. Site 1, southwest of the Park and Recreation Operations Yard, is anticipated to take approximately 116,000 cy of export, with fills ranging from

2 feet to 11 feet in height, and 2:1 and 4:1 manufactured slope gradients are anticipated. Site 2, the existing East Mesa archery range, is anticipated to take approximately 11,000 cy of export, with fills ranging from 2 to 4 feet in height, and 2:1 maximum slope gradients are anticipated. Site 3 (the former "casting ponds") is anticipated to take approximately 15,000 cy of export with fills ranging from 2 to 8 feet, and 2:1 maximum slope gradients are anticipated. Fill areas would be landscaped with non–irrigated plantings that are consistent with "passive" park uses and Park and Recreation land use goals for the Arizona Street Landfill.

The Arizona Street Landfill is not a natural landform, and therefore, the addition of up to 11 feet of fill material at a maximum gradient of 4:1 would not exceed the Significance Threshold (a)(2), above. Additionally, the fill placed within the Arizona Street Landfill would be contoured to match the existing landform and hydroseeded with grasses similar to the existing condition.

3) Would the project result in a change in elevation of steep natural slopes from existing grade to proposed grade of more than five feet by either excavation or fill, unless the area over which excavation or fill would exceed five feet is only at isolated points on the site?

ALL PROJECT COMPONENTS

As discussed above under (1), naturally steep slopes are present on 1.35 acres (8.8 percent) of the project site. The project would disturb 0.121 acre or 0.79 percent of these slopes. Specifically, steep natural slopes that would be disturbed are located at the following:

- Centennial Bridge Abutment at the Cabrillo Bridge (0.04 acre). The impact would be approximately 7 feet of excavation (cut) of the existing slopes to provide for construction of the bridge abutment. The abutment would be subsequently back filled with excavated soils.

- Centennial Bridge Abutment at the Alcazar parking lot (0.07 acre). This impact would be approximately 10 to 13 feet of excavation (cut) of the existing slopes to provide for construction of the bridge abutment, which would be backfilled afterwards.

- Alcazar Parking Lot (0.001 acre). This impact would be in conjunction with the retaining wall located along the western edge of the parking lot.

- The steep slope adjacent to the existing Organ Pavilion restroom (0.01 acre). In this area, the ESL impact over 5 feet would be the approximately 6 feet of cut and 1 foot of fill which would be needed in order to construct a stable roadbed for

the Centennial Road, supported by a maximum six-foot-high retaining wall on the western edge (wall #9, described below).

The project's impacts to steep slopes through excavation or fill would occur at these isolated points, as described above and illustrated in Figure 4.1-9. The majority of slopes found within the project area are manufactured slopes that were created in conjunction with grading for the Exposition. No mass grading is occurring in conjunction with the project, and the area over which excavation or fill would occur is only at isolated points on the site.

The 142,000 cy of export would be placed within the existing Arizona Street Landfill. The fill material would cover approximately 20.75 acres and raise the existing elevation by approximately 2 to 11 feet. The Arizona Street Landfill is an artificial landform, and therefore, deposition of fill material at this location would not impact any naturally steep slopes.

4) Would the project design include mass terracing of natural slopes with cut or fill slopes to construct flat-pad structures?

All Project Components

The project would not include any mass terracing of natural slopes. Most of the grading on the site is in the form of excavation for the subterranean parking structure. Other grading occurs in isolated locations for various improvements throughout the site (e.g., trenching for utilities), and where feasible, would be contoured as needed to blend with the natural landform.

In conclusion, the proposed volume of earthwork would exceed the City's threshold of 2,000 cubic yards of earth per graded acre; however, the existing landform condition has already been substantially altered through grading and development of the Central Mesa to accommodate the existing on-site land use and circulation patterns. Only 8.8 percent of the site contains natural landform features in the form of naturally steep slopes. The majority of the existing site is generally flat. There is maximum relief of only 55 feet across the entire project site, which slopes gently southwest toward downtown. The proposed grading would retain the east-west downward slope toward downtown. The project includes substantial landscaping of all manufactured slopes and for screening of retaining walls, where feasible. Export material would be placed within the Arizona Street Landfill, a disturbed site, with no natural features. The fill location would be recontoured and hydroseeded in order to blend with the existing landform. Therefore, although, one or more of the conditions described above would apply, the project would not result in a substantial change in existing landform resulting in negative aesthetics.

4.3.4.2 Significance of Impacts

a. Centennial Bridge

As described in Section 4.1.2.1(c), this project component would require a deviation from the ESL Regulations found within the City's LDC resulting in potentially significant impacts to approximately 0.11 acre of steep slopes and natural forms. The significance of impacts to steep hillsides and natural landforms would be minimized through project design measures that reduce grading, such as incorporating retaining walls that are visually buffered from Park users. Therefore, pursuant to the Significance Threshold (b)(3), above, impacts to steep slopes associated with this project component's deviation from ESL regulations would be less than significant.

b. Alcazar Parking Lot and Centennial Road

As described in Section 4.3.4.1, the project requires a deviation from the City's ESL Regulations for encroachment into naturally steep hillsides. The Centennial Road would encroach into 0.01 acre of ESL steep slopes located near the rim of Palm Canyon and regrading of the Alcazar parking lot would result in impacts to 0.001 acre of ESL steep slopes located along the western edge of the lot. Construction of the Centennial Road would also result in manufactured slopes of up to three feet in height and 50 percent gradient east of Centennial Road and adjacent to the Mall. The grading for these project components would permit the installation of alternative design features such as non-typical roadway or parking lot designs and alternative retaining wall designs, which reduce the project's overall grading requirements. These features include reducing the parkway width, reducing minimum centerline radius, minimizing cut and fill slopes, and incorporating retaining walls that are visually buffered through landscaping, from the park users. Therefore, with implementation of these design features pursuant to the Significance Threshold (b)(3), above, the project's impacts associated with landform alteration would be less than significant.

c. Plaza de California, El Prado, Plaza de Panama, and the Mall

The improvements within these areas would not impact any natural steep slopes, would not result in substantial manufactured slopes, and would not otherwise impact any existing landform. Therefore, no impacts would occur in conjunction with this project component.

d. Parking Structure/Rooftop Park/Arizona Street Landfill

This project component would not impact any natural landform or steep slopes and, therefore, would not require a deviation from the City's ESL Regulations. Excavation of the Organ Pavilion parking structure would create manufactured slopes of up to 40 percent gradient and up to 22 feet in height along its entire eastern elevation and up to

50 percent gradient and 12 feet in height near the structure's southern entrance, at the intersection of Presidents Way and the Centennial Road. The parking structure would be underground and elevation of the new rooftop park would generally match the existing grade of the adjacent areas. Retaining walls have been designed as to minimize the height of walls and to reduce grading requirements along the garage's eastern elevation and access drives. Therefore, pursuant to Significance Threshold (b)(3), above, impacts associated with landform alteration would be less than significant.

4.3.4.3 Mitigation, Monitoring, and Reporting

Impacts associated with landform alteration would be less than significant, and no mitigation measures are required.

4.3.5 Issue 4: Development Features

Pursuant to the City's Significance Determination Thresholds, projects that have a negative visual appearance may be significant if the project would:

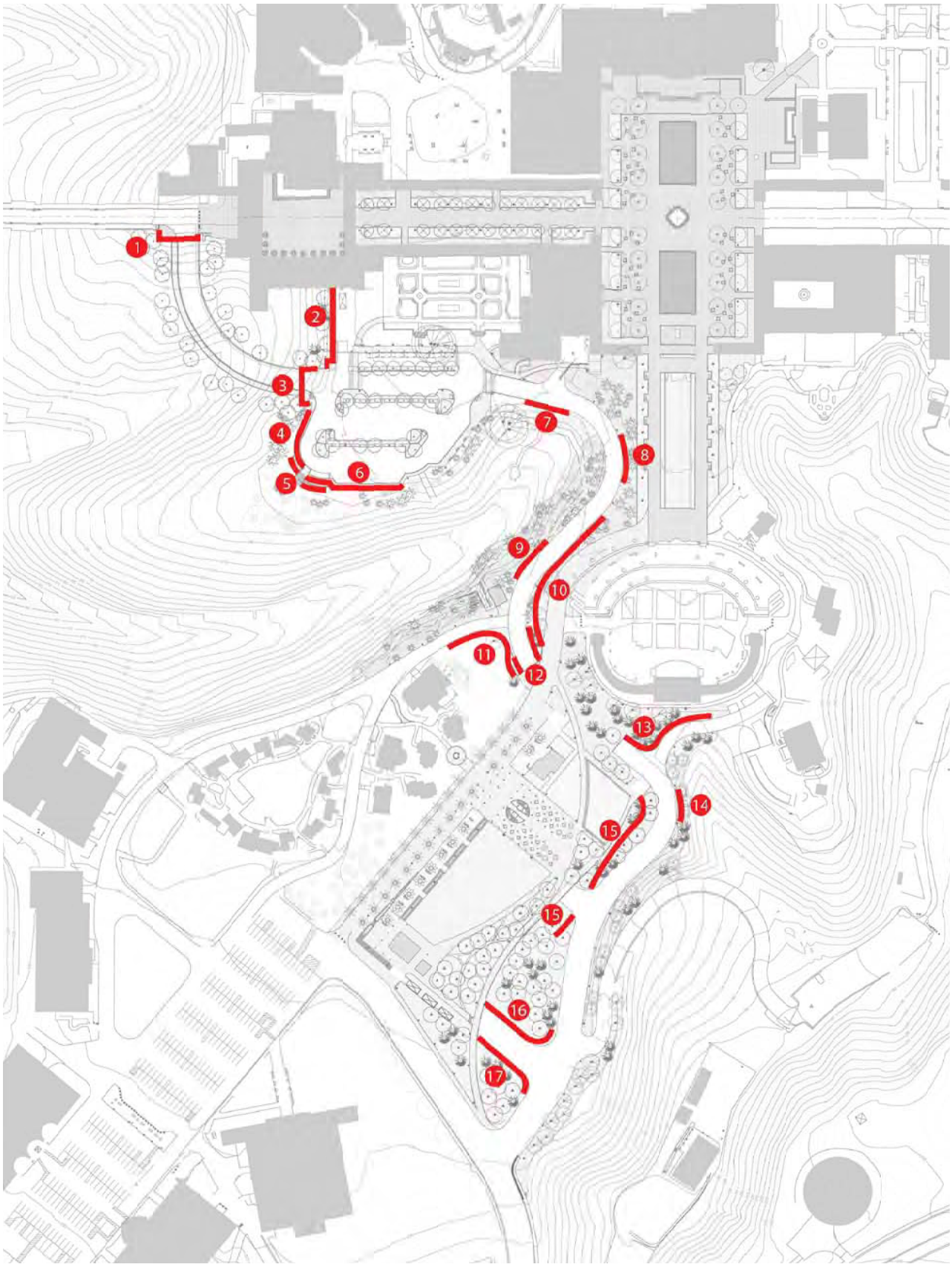
- The project includes crib, retaining or noise walls greater than six feet in height and 50 feet in length with minimal landscape screening or berming, where the walls would be visible to the public.

These conditions may become more significant for projects which are highly visible from designated open spaces, roads, parks, or significant visual landmarks. The significance threshold may be lower for such projects.

4.3.5.1 Impacts

Retaining walls would be required in several locations within the project site as shown on Figures 4.3-28 and 4.3-29. The maximum heights and lengths of all proposed retaining walls are summarized in Table 4.3-2.

Map Source: Civitas, November 2011



Retaining Walls

No Scale

FIGURE 4.3-28
Retaining Wall Locations

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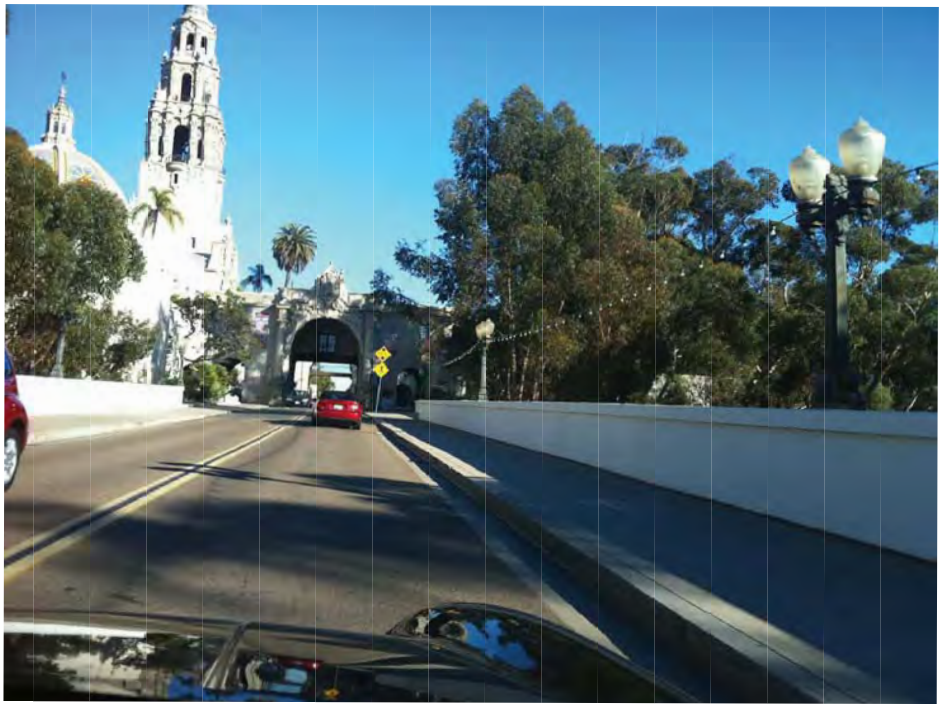
Map Source: Civitas, November 2011

STACKED STONE RETAINING WALL



LIGHT SAND FINISH/STUCCO RETAINING WALL

No Scale

FIGURE 4.3-29
Retaining Walls

TABLE 4.3-2
RETAINING WALLS

Wall	Minimum Height	Maximum Height	Length	Finish	Vegetation	Notes
1	6’	8’	82’	Light Sand/ Stucco	3’–6’ Cabrillo Canyon Shrub Mix	Abutment to Centennial Bridge
2	4’	9’	138’	Light Sand/ Stucco	3’–6’ Cabrillo Canyon Shrub Mix	Added to increase usable area for park and recreation facilities
3	15’	25’	85’	Light Sand/ Stucco	3’–6’ Cabrillo Canyon Shrub Mix	Abutment to Centennial Bridge
4	2’	15’	103’	Light Sand/ Stucco	3’–6’ Cabrillo Canyon Shrub; Mix/2’–4’ Wetland	Ties into Abutment
5	1’	4’	125’	Stacked Stone	3’–6’ Cabrillo Canyon Shrub Mix	
6	1”	4’	162’	Stacked Stone	3’–6’ Cabrillo Canyon Shrub Mix/2’–4’ Wetland	
7	6”	1-6’	70’	Stacked Stone	3’–6’ Cabrillo Canyon Shrub Mix/2’–4’ Wetland	Replaces existing structure
8	6”	3’	80’	Light Sand/Stucco	3’–6’ Palm Canyon Shrub Mix	
9	6”	2’	52’	Light Sand/ Stucco	3’–6’ Palm Canyon Shrub Mix	Minimizes disturbance to Palm Canyon
10	2’	12’	268’	Light Sand/ Stucco	Vines	Required to create grade-separated crossing
11	2’	12’	161’	Light Sand/ Stucco	Vines	Required to create grade-separated crossing
12	1’	3’	91’	Light Sand/ Stucco	Vines	Required to create grade-separated crossing
13	2’	17’	168’	Light Sand/ Stucco	Vines	Required to create grade-separated crossing
14	6”	1’	33’	Light Sand/ Stucco	3’–6’ Australian Garden Shrub Mix	Minimizes disturbance to Australian Canyon
15	1’	8’	270’	Light Sand/ Stucco	3’–6’ Tall Shrub Mix	Only visible from inside the Parking Structure
16	6”	24’	163’	Light Sand/ Stucco	Vines	Required to create entry into underground parking structure
17	6”	24’	174’	Light Sand/ Stucco	Vines	Required to create entry into underground parking structure

‘ = feet
“ = inches.

Centennial Bridge

Construction of Centennial Bridge would require retaining walls in conjunction with the bridge abutments on either end of the bridge span. These walls would have a light sand/stucco finish and be a maximum of 25 feet in height (at the eastern abutment near the Alcazar lot) and 85 feet in length. Though not located in an area generally visible to the public (underneath the Centennial Bridge), the retaining walls would be screened with a shrub mix comprised of species native to Cabrillo Canyon, and by existing and proposed tree plantings.

Alcazar Parking Lot and Centennial Road

Regrading of the existing Alcazar parking lot in order to make it ADA accessible would result in the creation of several retaining walls of up to 15 feet in height and up to 162 feet in length, which would be located along the southern and western perimeters of the lot. The retaining walls, along the northern edge of Palm Canyon would be constructed of stacked stone, consistent with existing walls in this location and would be screened by landscaping, as specified in the table above, in order to reduce their visual appearance.

Construction of Centennial Road would require the use of several retaining walls along both its eastern and western edges. These retaining walls would be up to 12 feet in height and 268 feet in length. The wall 268 feet in length would be required to create the grade-separated crossing. Walls (above-ground level) would be constructed of concrete and have a light sand/stucco finish. Walls adjacent to Palm Canyon would be screened by a native mix of Palm Canyon shrubs and trees. Walls not adjacent to Palm Canyon would be screened with vines. The tunnel walls would be below the pedestrian promenade (presently Pan American Road East) and would be observable only to vehicular traffic on the Centennial Road.

Plaza de California, El Prado, Plaza de Panama, and the Mall

No retaining walls would be constructed in conjunction with these project components.

Parking Structure/Rooftop Park/Arizona Street Landfill

Four walls, up to 24 feet in height and 270 feet in length, would be located adjacent to the southern extension of the Centennial Road and in conjunction with the new Organ Pavilion parking structure. No walls would be located in conjunction with the placement of fill at the Arizona Street Landfill disposal site. Walls would generally be located below the grade of the road, and thus, in areas with limited visibility. The walls would have a light sand/stucco finish and would be screened by landscaping, including vines and shrub mixes.

4.3.5.2 Significance of Impacts

ALL PROJECT COMPONENTS

Although walls greater than six feet in height and/or 50 feet in length are proposed, the majority of walls would be located below, and be least visible from, restored pedestrian areas, including the Mall, Pan American Road East/the Pan American Promenade, and the rooftop park. All walls would be screened by appropriate landscape treatments for the area of the Park in which the walls would be located. Therefore, with incorporation of these design treatments, visual impacts associated with retaining walls would be less than significant.

4.3.5.3 Mitigation, Monitoring, and Reporting

Impacts associated with development features would be less than significant, and no mitigation measures are required.

4.4 Transportation/Circulation and Parking

The following discussion is based on the Traffic Impact Analysis (TIA) prepared by Rick Engineering Company in January 2012 and the Parking and Transportation Analysis prepared by PCI also in January 2012. These complete technical reports are included as Appendix D-1 and Appendix D-2 of this EIR, respectively.

Based on direction from City staff, the following scenarios are analyzed as part of this traffic analysis:

- Existing conditions
- Existing conditions + project
- 2015 without project
- 2015 + project
- 2030 without project
- 2030 + project

Roadway segments were evaluated and mitigation identified for weekday impacts only, as roadway segments are typically based on weekday conditions. However, the intersections were evaluated for weekday and weekend, but mitigated for weekend (worst-case) impacts only. This is due to the fact that Park use normally peaks during the weekends and peak hour intersections are typically a more accurate indicator of actual traffic operations as compared to daily roadway segments. This is consistent with previous traffic analyses within the Balboa Park area. Also, the internal intersections were evaluated during the AM peak periods only, as volumes for these periods are generally higher than the PM peak periods, thus representing a worst-case analysis. The evaluated peak hours were from 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m. during the weekday and 11:00 a.m. to 1:00 p.m. and 3:00 p.m. to 5:00 p.m. during the weekend.

4.4.1 Existing Conditions

4.4.1.1 Level of Service Standards

Level of service (LOS) is a professional industry standard by which to measure the operating conditions of a given roadway segment or intersection. Level of service is defined on a scale of A to F, where LOS A through C represents free-flowing traffic conditions with little or no delay. LOS D represents limited congestion and some delay; however, the duration of periods of delay is acceptable to most people. LOS E and F represent significant delay on local streets, which are generally unacceptable for urban design purposes. These definitions are from Chapter 9 of the Highway Capacity Manual (Transportation Research Board 2000).

a. Street LOS

The City of San Diego has developed LOS threshold tables based on the different functional street classifications and their ability to carry traffic. Actual capacity on some segments may be higher due to intersection widening, restricted access, and lane widening. For the City of San Diego, LOS D is the acceptable LOS standard for roadways and intersections.

b. Intersection LOS

The City of San Diego and Regional Congestion Management Plan (CMP) guidelines, as adopted by the San Diego Association of Governments (SANDAG), determine the procedures to be used for intersection peak hour analysis. To determine an intersection peak hour LOS, the CMP guidelines require use of the most recent procedure from Chapter 9 of the Highway Capacity Manual (Transportation Research Board 2000). The procedure in Chapter 9, which is used to analyze signalized intersections, is the "operational method." This method determines LOS based on total vehicle delay expressed in seconds. A computer program is used to complete the analysis. As discussed above, the City of San Diego and CMP guidelines have established LOS D as the objective for intersections and street segments.

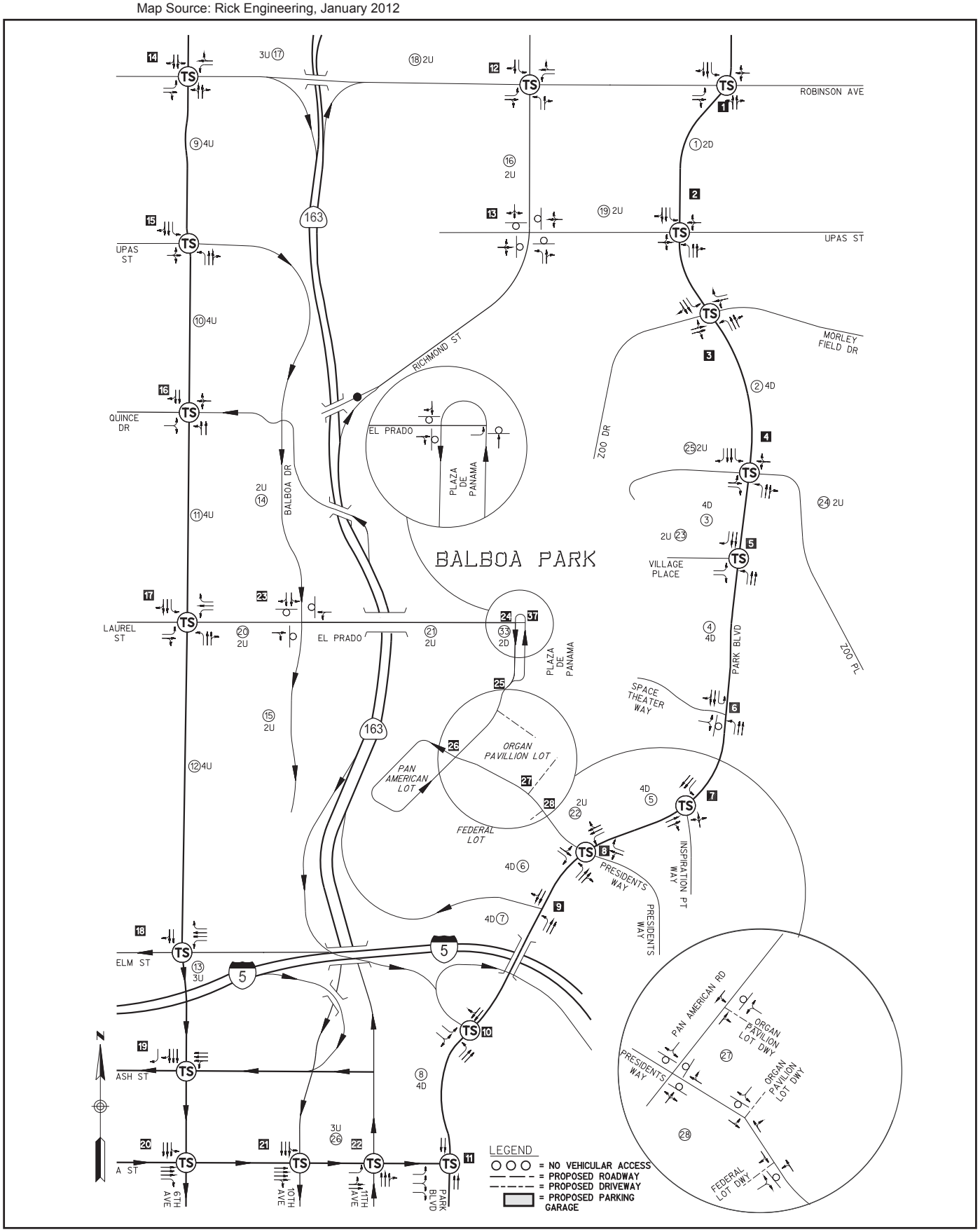
c. Congestion Management Plan

The CMP regional guidelines were developed by SANDAG to provide a set of procedures for completing enhanced CEQA review for certain projects. The guidelines prepared by SANDAG stipulate that any development project generating 2,400 or more average daily trips (ADT) or 200 or more peak-hour trips must be evaluated in accordance with the requirements of the Regional CMP. The CMP analysis must include the traffic LOS impacts on affected freeways and regionally significant arterial systems, which include all designated CMP roadways. In order to conform to the region's CMP, local jurisdiction must adopt and implement a land use analysis program to assess impacts of land use decisions on the regional transportation system. The project does not meet the CMP criteria for further study and, therefore, this is not discussed further herein.

4.4.1.2 Existing Circulation System

Figure 4.4-1 shows the study area street segments and intersections in the project area. Brief descriptions of the area's roadways are listed below.

Map Source: Rick Engineering, January 2012



TS = TRAFFIC SIGNAL
= STOP SIGN
X = INTERSECTION NUMBER
(X) = SEGMENT NUMBER
XU = X LANE UNDIVIDED
XD = X LANE DIVIDED

No Scale

FIGURE 4.4-1
Existing Circulation System

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Park Boulevard is classified as a four-lane major roadway (per the CMPP) that runs north-south and is located east of the project site. Park Boulevard north of Upas Street is ultimately classified as a four-lane major roadway according to the Uptown Community Plan. The posted speed limit within this segment is 40 miles per hour (mph) from A Street to Upas Street and 35 mph from Upas Street to Robinson Avenue. On-street parking is generally provided on both sides of Park Boulevard. Park Boulevard serves as the major roadway providing access points east of the project site. Access points to/from Balboa Park are at the intersections of Park Boulevard/Presidents Way, Park Boulevard/Space Theatre Way, and Park Boulevard/Village Place. Park Boulevard is currently built as a four-lane roadway that functions as a four-lane major roadway.

Upas Street is classified as a two-lane collector (per the Uptown Community Plan) that runs east-west and is located north of the project site. The posted speed limit within the study segment is 25 mph. On-street parking is generally permitted on both sides of the street. An existing bike route (Class III) is provided on this roadway from Vermont Street to Park Boulevard and an existing Class I bikeway connects Upas Street west of SR-163 to Upas Street east of SR-163. Upas Street also provides vehicular access to the project site via Balboa Drive west of the project site. Upas Street is currently built as a two-lane undivided roadway that functions as a two-lane collector.

Morley Field Drive/Zoo Drive is designated as a two-lane park roadway (per the East Mesa Precise Plan) and is located north of the project site. Morley Field Drive runs east of Park Boulevard with posted speed limit of 35 mph and Zoo Drive west of Park Boulevard with the posted speed limit of 25 mph. On-street parking is prohibited on Morley Field Drive but permitted on both sides of the street on Zoo Drive. Morley Field Drive/Zoo Drive is built as a two lane undivided roadway that functions as a two-lane collector.

Zoo Place is classified as a two-lane collector that runs from Park Boulevard to Florida Drive and is located east of the project site. On-street parking is prohibited. Zoo Place west of Park Boulevard serves as the main access to the San Diego Zoo parking lot. Zoo place is built as a two-lane undivided roadway that functions as a two-lane collector.

Presidents Way is a two-lane park roadway that runs east-west and is located south of the project site. The posted speed limit is 15 mph. On-street parking is generally prohibited; however, there is limited on-street parking on the south side of Presidents way, just east of the Palisades parking lot. Presidents Way provides access to the Federal and Aerospace parking lots. The roadway is also one of the major access points to the project site. Presidents Way is built as a two-lane undivided roadway that functions as a two-lane collector.

Robinson Avenue is classified as a three-lane collector (per the Uptown Community Plan) that runs east-west and is located north of the project site. The posted speed limit within the studied segment between Sixth Avenue and Park Boulevard is 30 mph. On-

street parking is generally permitted on both sides of the street. Robinson Avenue provides access to residential and commercial uses. Robinson Avenue between Sixth Avenue and Vermont Street is currently built as a two-lane undivided roadway that functions as a two-lane collector. Robinson Avenue between Vermont Street and Park Boulevard is currently built as a two-lane roadway with a center two-way left-turn lane that functions as a three-lane collector.

Richmond Street is classified as a two-lane collector (per the Uptown Community Plan) that runs north-south and is located northwest of the project site. The roadway is a one-way northbound off-ramp from SR-163. Southbound Richmond Street dead-ends before reaching SR-163 with no on-ramp access to freeway. On-street parking is prohibited on this roadway. Richmond Street is currently built as a two-lane roadway that functions as a two-lane collector.

Sixth Avenue is classified as a four-lane major roadway (per the Uptown Community Plan) that runs north-south from the SR-163 to Elm Street and a three-lane one-way (southbound) street south of Elm Street. Sixth Avenue is located west of the project site with access points to Balboa Park at Upas Street, Laurel Street/El Prado, and Juniper Street. On-street parking is permitted on both sides of the street and the posted speed limit is 30 mph. An existing bike route (Class III) is provided within the study segment from Upas Street to A Street. Sixth Avenue within the project area is currently built as a four-lane roadway that functions as a four-lane collector.

Laurel Street is classified as a two-lane collector (per the Uptown Community Plan) that runs east-west and extends from west of I-5 to Sixth Avenue, with a speed limit of 30 mph. Laurel Street becomes El Prado east of Sixth Avenue. Parking is provided on both sides of the street. An existing Class III bike route is provided on Laurel Street from Fourth Avenue to Sixth Avenue and on El Prado from Sixth Avenue to Village Place. Laurel Street is currently built as a two-lane roadway that functions a two-lane collector.

El Prado is a two-lane park roadway between Balboa Drive and Plaza de Panama, and provides access to Balboa Park. It currently is built as a two-lane undivided roadway that functions as a two-lane collector.

Balboa Drive is a two-lane one-way park roadway west of the project site. The posted speed limit is 25 mph with on-street parking on both sides of the street. An existing bike route (Class III) is provided. It is currently built as a two-lane undivided roadway that functions as a two-lane collector.

Pan American Road is a two-lane park roadway that runs north-south and is located west of the project site. The posted speed limit is 15 mph. On-street parking is prohibited. Pan American Road provides access to the Organ Pavilion and Pan American parking lots. It is currently built as a two-lane undivided roadway that functions as a two-lane collector.

A Street is a three-lane one-way roadway that runs east-west bounded by Kettner Boulevard and Park Boulevard. A Street is located south of the project area. On-street parking is generally permitted on both sides of the street.

Village Place is a two-lane park roadway that runs east-west and is located west of Park Boulevard and north of the project area. Village Place provides access to the Natural History Museum and Carousel parking lots.

4.4.1.3 Existing Traffic Volumes

Existing intersection turning movement volumes and roadway segment volumes within the project area were obtained from traffic counts that were conducted during the third and fourth weeks of March 2011. Both AM (7:00-9:00) and PM (4:00-6:00) peak turning movement counts were conducted on a Tuesday. Midday (11:00 a.m.–1:00 p.m.) and PM (3:00–5:00 p.m.) peak turning movement counts were conducted on a Saturday at the project area intersections, in addition to 24-hour roadway machine counts at the project area roadways. The peak weekday hours utilized in the analysis represent the typical commuter peaks, while the weekend peak hours were selected based on the typical inbound and outbound peaks of the Park and surrounding area, which generally occur within the Park's operating hours. The calculated peak hour volumes within the count period of each studied intersection were utilized in the analysis.

Figures 4.4-2 and 4.4-3 show the existing traffic volumes in the study area for a typical weekday and weekend, respectively. Based on this data, the Central Mesa area of Balboa Park is estimated to generate 20,655 ADT with 569 AM peak hour trips and 1,993 PM peak hour trips on a typical weekday and 31, 713 ADT with 3,428 AM peak hour trips and 2,475 PM peak hour trips on a weekend.

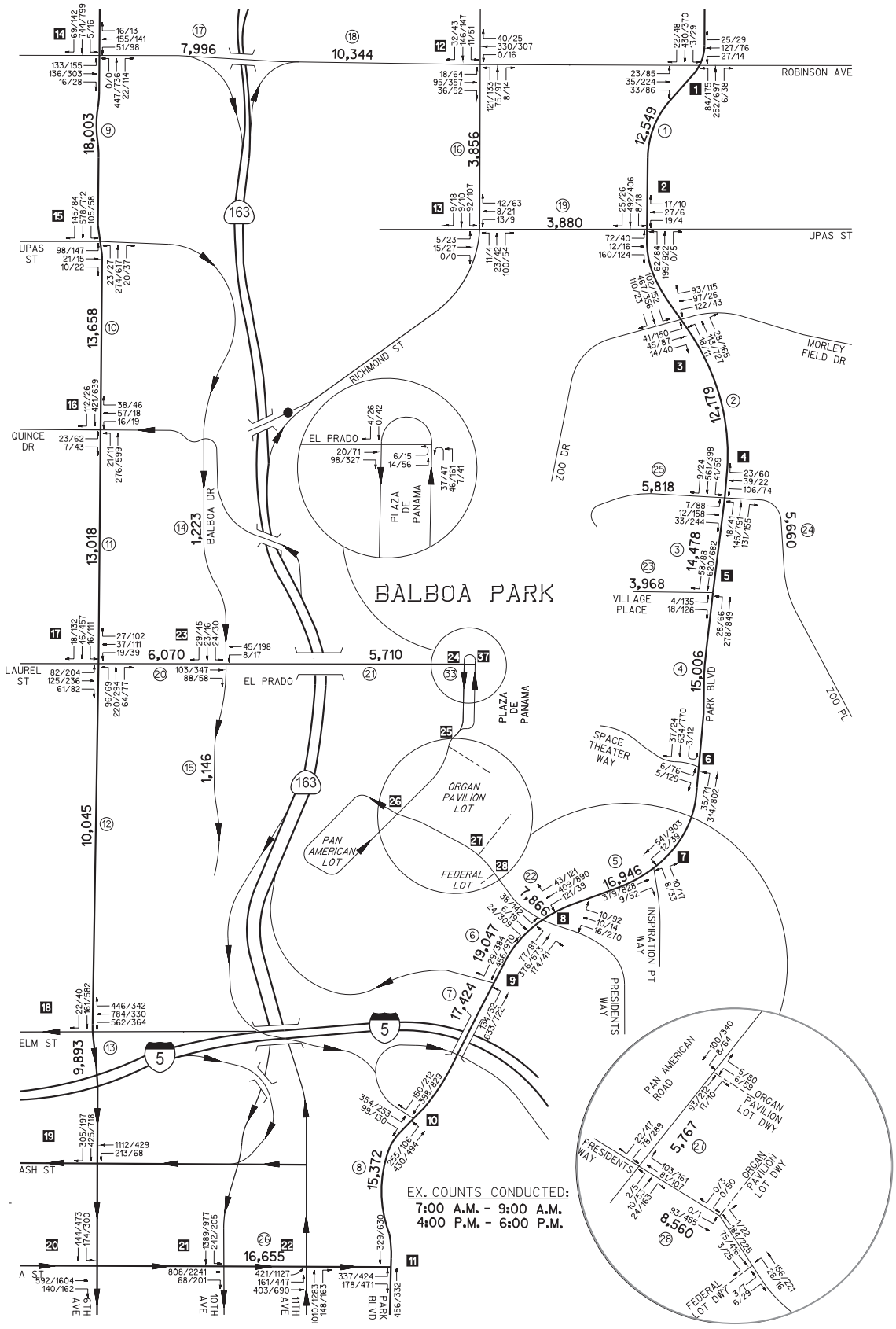
a. Street Segments

The analyzed street segments are identified in Table 4.4-1. As shown in Table 4.4-1, all study area roadways (internal and external) currently operate at LOS D or better on a daily basis.

b. Intersections

The study area's analyzed existing intersections are identified in Tables 4.4-2 and 4.4-3. As shown in Table 4.4-2, all of the project area external intersections currently operate at LOS C or better during the weekday AM and PM peak periods. Table 4.4-3 shows that all Balboa Park key internal intersections currently operate at LOS D or better during the weekend AM and PM peak periods except El Prado/Plaza de Panama northbound, which operates at LOS F. This poor operation is due primarily to the high pedestrian and vehicular conflicts within the area as described below.

Map Source: Rick Engineering, January 2012



LEGEND
- XXXX = ADT
- XXXX/XXXX = AM/PM PEAK HR
- O O O = NO VEHICULAR ACCESS
- ——— = PROPOSED ROADWAY
- – – – = PROPOSED DRIVEWAY
- = PROPOSED PARKING GARAGE
- X = INTERSECTION NUMBER
- (X) = SEGMENT NUMBER

No Scale

FIGURE 4.4-2
Existing Traffic Volumes - Weekday

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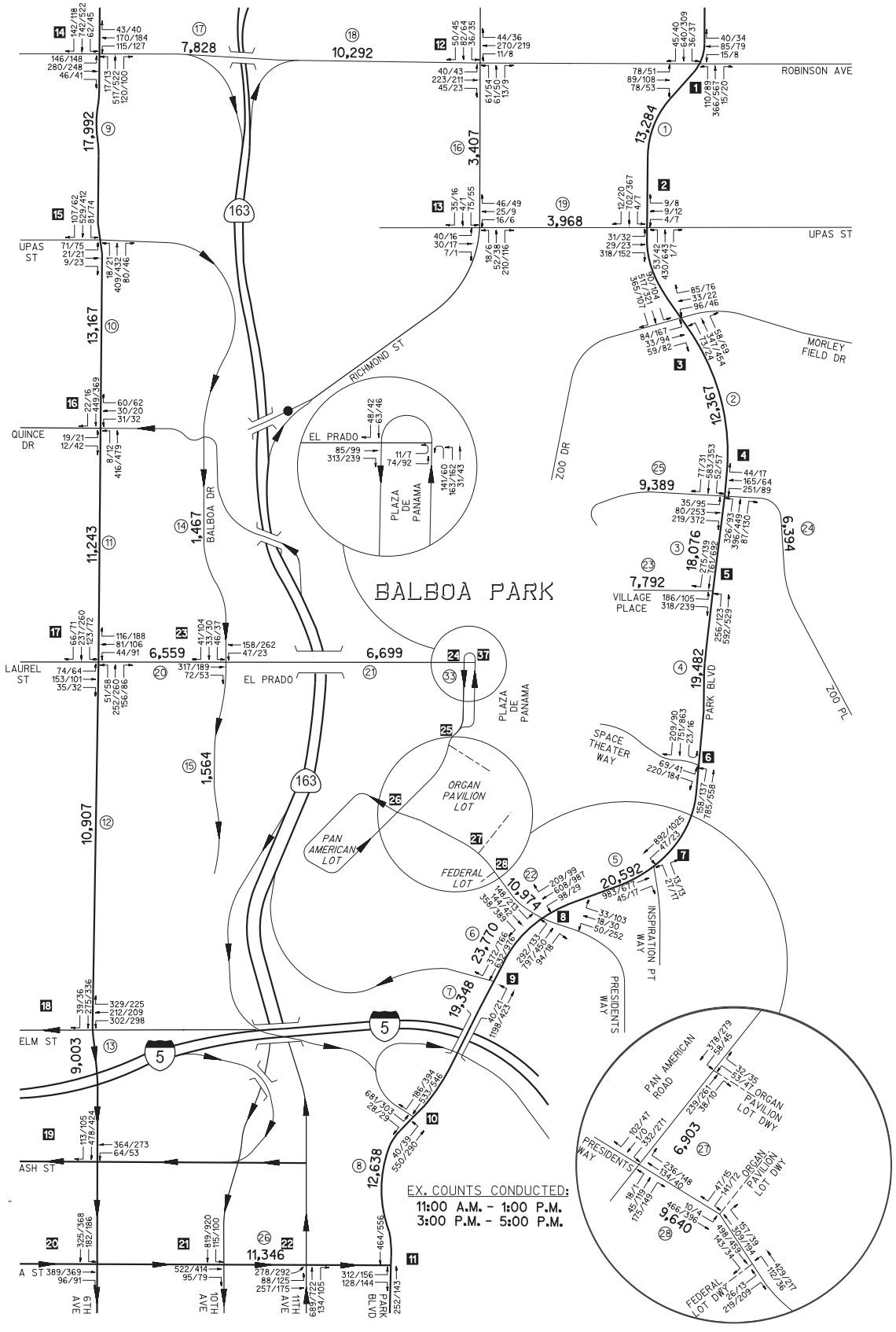
Map Source: Rick Engineering, January 2012



LEGEND
- XXXX = ADT
- XXXX/XXXX = AM/PM PEAK HR
- O O O = NO VEHICULAR ACCESS
- ——— = PROPOSED ROADWAY
- – – – = PROPOSED DRIVEWAY
- = PROPOSED PARKING GARAGE
- X = INTERSECTION NUMBER
- (X) = SEGMENT NUMBER

No Scale

FIGURE 4.4-3
Existing Traffic Volumes - Weekend

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TABLE 4.4-1
EXISTING AND EXISTING + PROJECT ROADWAY SEGMENT ANALYSIS (WEEKDAY)

					Existing			Existing + Project				
	Roadway Segment	Functional Classification/ Lanes	Future Classification/ Lanes	LOS E Capacity	ADT	V/C Ratio	LOS	ADT	V/C Ratio	LOS	Incremental V/C Ratio	Significant Project Impact Yes/No
1	Park Boulevard between Robinson Avenue and Upas Street	2 Lane Collector[1]	4 Lane Major	15,000	12,549	0.837	D	12,549	0.837	D	0.000	NO
2	Park Boulevard between Upas Street and Zoo Place	4 Lane Major	4 Lane Major	40,000	12,179	0.304	A	12,179	0.304	A	0.000	NO
3	Park Boulevard between Zoo Place and Village Place	4 Lane Major	4 Lane Major	40,000	14,478	0.362	A	14,478	0.362	A	0.000	NO
4	Park Boulevard between Village Place and Space Theater Way	4 Lane Major	4 Lane Major	40,000	15,006	0.375	B	15,006	0.375	B	0.000	NO
5	Park Boulevard between Space Theater Way and Presidents Way	4 Lane Major	4 Lane Major	40,000	16,946	0.424	B	16,946	0.424	B	0.000	NO
6	Park Boulevard between Presidents Way and SR 163 NB Ramps	4 Lane Major	4 Lane Major	40,000	19,047	0.476	B	19,047	0.476	B	0.000	NO
7	Park Boulevard between SR 163 NB Ramps and SR 163 SB Ramps	4 Lane Major	4 Lane Major	40,000	17,424	0.436	B	17,424	0.436	B	0.000	NO
8	Park Boulevard between SR 163 SB Ramps and A Street	4 Lane Major	4 Lane Major	40,000	15,372	0.384	B	15,372	0.384	B	0.000	NO
9	Sixth Avenue between Robinson Avenue and Upas Street	4 Lane Collector	4 Lane Major	30,000	18,003	0.600	C	18,003	0.600	C	0.000	NO
10	Sixth Avenue between Upas Street and Quince Drive	4 Lane Collector	4 Lane Major	30,000	13,658	0.455	B	13,658	0.455	B	0.000	NO
11	Sixth Avenue between Quince Drive and El Prado	4 Lane Collector	4 Lane Major	30,000	13,018	0.434	B	13,018	0.434	B	0.000	NO
12	Sixth Avenue between El Prado and Elm Street-I-5 NB Off Sixth Ramp	4 Lane Collector	4 Lane Major	30,000	10,045	0.335	B	10,045	0.335	B	0.000	NO
13	Sixth Avenue between Elm Street-I-5 NB Off Ramp and Ash St	3 Lane One Way[2]	3 Lane One Way[2]	22,500	9,893	0.440	B	9,893	0.440	B	0.000	NO
14	Balboa Drive between Quince Drive and El Prado *	2 Lane Collector*	2 Lane Collector*	10,000	1,223	0.122	A	1,223	0.122	A	0.000	NO
15	Balboa Drive between El Prado and Juniper Road*	2 Lane Collector*	2 Lane Collector*	10,000	1,146	0.115	A	1,146	0.115	A	0.000	NO
16	Richmond Street between Robinson Avenue and Upas Street	2 Lane Collector	2 Lane Collector	10,000	3,856	0.386	A	3,856	0.386	A	0.000	NO
17	Robinson Avenue between Sixth Avenue and Vermont Street	2 Lane Collector	3 Lane Collector	10,000	7,996	0.800	D	7,996	0.800	D	0.000	NO
18	Robinson Avenue between Vermont Street and Park Boulevard	2 Lane Collector[1]	3 Lane Collector	15,000	10,344	0.690	D	10,344	0.690	D	0.000	NO
19	Upas Street between Richmond Street and Park Boulevard	2 Lane Collector	2 Lane Collector	10,000	3,880	0.388	A	3,880	0.388	A	0.000	NO
20	El Prado between Sixth Avenue and Balboa Drive*	2 Lane Park Road*	2 Lane Park Road*	10,000	6,070	0.607	C	6,070	0.607	C	0.000	NO
21	El Prado between Balboa Drive and Plaza De Panama*	2 Lane Park Road*	2 Lane Park Road*	10,000	5,710	0.571	C	5,710	0.571	C	0.000	NO
22	Presidents Way west of Park Boulevard*	2 Lane Park Road*	2 Lane Park Road*	10,000	7,866	0.787	D	7,866	0.787	D	0.000	NO
23	Village Place just west of Park Boulevard*	2 Lane Park Road*	2 Lane Park Road*	10,000	3,968	0.397	A	3,968	0.397	A	0.000	NO
24	Zoo Place east of Park Boulevard	2 Lane Collector	2 Lane Collector	10,000	5,660	0.566	C	5,660	0.566	C	0.000	NO
25	Zoo Place west of Park Boulevard*	2 Lane Park Road*	2 Lane Park Road*	10,000	5,818	0.582	C	5,818	0.582	C	0.000	NO
26	A Street between Sixth Avenue and Park Boulevard	3 Lane One Way[2]	3 Lane One Way[2]	22,500	16,655	0.740	D	16,655	0.740	D	0.000	NO
27	Pan American Road north of Presidents Way*	2 Lane Park Road*	2 Lane Park Road*	10,000	5,767	0.577	C	-[3]	-[3]	-[3]	-[3]	-[3]
28	Presidents Way east of Pan American Road*	2 Lane Park Road*	2 Lane Park Road*	10,000	8,560	0.856	D	-[4]	-[4]	-[4]	-[4]	-[4]
29	Centennial Bridge south of El Prado*	2 Lane Park Road*	2 Lane Park Road*	10,000	DNE	DNE	DNE	5,710	0.571	C	-	NO
30	Centennial Road north of Presidents Way*	2 Lane Park Road*	2 Lane Park Road*	10,000	DNE	DNE	DNE	7,020	0.702	C	-	NO
31	Presidents Way west of Centennial Road*	2 Lane Park Road*	2 Lane Park Road*	10,000	DNE	DNE	DNE	5,470	0.547	B	-0.309[5]	NO[5]
33	The Mall south of El Prado*	2 Lane Park Road*	2 Lane Park Road*	10,000	5,710	0.571	C	-[6]	-[6]	-[6]	-[6]	-[6]

LOS = Level of service; DNE = Does not exist
Segments operating at unacceptable levels (e.g., LOS E or F) shown in **bold**
Significant impact: LOS D or better to LOS E or worse
Incremental V/C ratio ≥ 0.02 for LOS E
Incremental V/C ratio ≥ 0.01 for LOS F

*Park roads (maximum capacity estimated at 10,000 ADT)
[1]With two-way left-turn lane
[2]Estimated capacity (3/4 of 4-lane collector)
[3]As the project would result in less traffic on this internal roadway, the project would inherently not have a significant traffic impact on this roadway and a LOS impact analysis of this roadway was not completed.
[4]Under the proposed project condition, this segment is analyzed as a part of the Presidents Way west of Centennial Road segment.
[5]While Centennial Road does not currently exist, this portion of Presidents Way exists as Presidents Way east of Pan American Road and the associated traffic volumes were utilized for this roadway segment analysis.
[6]Under the proposed project conditions, the Mall would be closed to vehicular traffic.

TABLE 4.4-2
EXISTING AND EXISTING + PROJECT INTERSECTION LOS ANALYSIS - EXTERNAL STREETS

WEEKDAY

			Existing		Existing + Project			
	Intersection	Control	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS	Incremental Delay	Significant Project Impact Yes/No
1	Park Boulevard/Robinson Avenue							
	AM	Signal	16.3	B	16.3	B	0.0	No
	PM		17.1	B	17.1	B	0.0	No
2	Park Boulevard/Upas Street							
	AM	Signal	18.6	B	18.6	B	0.0	No
	PM		14.4	B	14.4	B	0.0	No
3	Park Boulevard/Morley Field Drive							
	AM	Signal	18.6	B	18.6	B	0.0	No
	PM		19.2	B	19.2	B	0.0	No
4	Park Boulevard/Zoo Place							
	AM	Signal	16.1	B	16.1	B	0.0	No
	PM		21.5	C	21.5	C	0.0	No
5	Park Boulevard/Village Place							
	AM	Signal	3.9	A	3.9	A	0.0	No
	PM		11.3	B	11.3	B	0.0	No
6	Park Boulevard/Space Theatre Way							
	Northbound Left							
	AM		9.0	A	9.0	A	0.0	No
	PM	Unsignalized	9.7	A	9.7	A	0.0	No
	Eastbound Left							
	AM		12.1	B	12.1	B	0.0	No
	PM		19.2	C	19.2	C	0.0	No
7	Park Boulevard/Inspiration Way							
	AM	Signal	3.1	A	3.1	A	0.0	No
	PM		4.5	A	4.5	A	0.0	No
8	Park Boulevard/Presidents Way							
	AM	Signal	14.7	B	14.7	B	0.0	No
	PM		21.8	C	21.8	C	0.0	No
9	Park Boulevard/SR-163 NB Ramps							
	Northbound Left	Unsignalized						
	AM		8.8	A	8.8	A	0.0	No
	PM		12.8	B	12.8	B	0.0	No
10	Park Boulevard/I-5 Ramps							
	AM	Signal	26.2	C	26.2	C	0.0	No
	PM		19.9	B	19.9	B	0.0	No
11	Park Boulevard/A Street							
	AM	Signal	11.5	B	11.5	B	0.0	No
	PM		13.3	B	13.3	B	0.0	No
12	Richmond Street/Robinson Avenue							
	AM	Signal	15.0	B	15.0	B	0.0	No
	PM		14.5	B	14.5	B	0.0	No
13	Richmond Street/Upas Street							
	AM	All Way Stop	7.7	A	7.7	A	0.0	No
	PM		8.0	A	8.0	A	0.0	No
14	Sixth Avenue/Robinson Avenue							
	AM	Signal	20.5	C	20.5	C	0.0	No
	PM		22.6	C	22.6	C	0.0	No
15	Sixth Avenue/Upas Street-Balboa Drive							
	AM	Signal	9.6	A	9.6	A	0.0	No
	PM		11.7	B	11.7	B	0.0	No
16	Sixth Avenue/Quince Drive							
	AM	Signal	12.1	B	12.1	B	0.0	No
	PM		12.1	B	12.1	B	0.0	No
17	Sixth Avenue/Laurel Street							
	AM	Signal	13.0	B	13.0	B	0.0	No
	PM		15.0	B	15.0	B	0.0	No
18	Sixth Ave./Elm St.t-I-5 NB Off Ramp							
	AM	Signal	8.6	A	8.6	A	0.0	No
	PM		12.8	B	12.8	B	0.0	No
19	Sixth Avenue/Ash Street							
	AM	Signal	11.5	B	11.5	B	0.0	No
	PM		10.9	B	10.9	B	0.0	No
20	Sixth Avenue/A Street							
	AM	Signal	11.8	B	11.8	B	0.0	No
	PM		11.5	B	11.5	B	0.0	No
21	A Street/10th Avenue							
	AM	Signal	11.9	B	11.9	B	0.0	No
	PM		14.0	B	14.0	B	0.0	No
22	A Street/11th Avenue							
	AM	Signal	11.0	B	11.0	B	0.0	No
	PM		13.9	B	13.9	B	0.0	No
23	Balboa Drive/El Prado							
	AM	All Way Stop	7.8	A	7.8	A	0.0	No
	PM		10.8	B	10.8	B	0.0	No

TABLE 4.4-2
EXISTING AND EXISTING + PROJECT INTERSECTION LOS ANALYSIS - EXTERNAL STREETS (continued)

WEEKEND

			Existing		Existing + Project			
	Intersection	Control	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS	Incremental Delay	Significant Project Impact Yes/No
1	Park Boulevard/Robinson Avenue							
	AM	Signal	14.5	B	14.5	B	0.0	No
	PM		13.8	B	13.8	B	0.0	No
2	Park Boulevard/Upas Street							
	AM	Signal	19.2	B	19.2	B	0.0	No
	PM		15.5	B	15.5	B	0.0	No
3	Park Boulevard/Morley Field Drive							
	AM	Signal	17.0	B	17.0	B	0.0	No
	PM		20.0	C	20.0	C	0.0	No
4	Park Boulevard/Zoo Place							
	AM	Signal	30.0	C	30.0	C	0.0	No
	PM		24.0	C	24.0	C	0.0	No
5	Park Boulevard/Village Place							
	AM	Signal	18.5	B	18.5	B	0.0	No
	PM		15.5	B	15.5	B	0.0	No
6	Park Boulevard/Space Theatre Way							
	Northbound Left							
	AM		11.3	B	11.3	B	0.0	No
	PM	Unsignalized	11.1	B	11.1	B	0.0	No
	Eastbound Left							
	AM		31.2	D	31.2	D	0.0	No
	PM		20.3	C	20.3	C	0.0	No
7	Park Boulevard/Inspiration Way							
	AM	Signal	4.1	A	4.1	A	0.0	No
	PM		4.1	A	4.1	A	0.0	No
8	Park Boulevard/Presidents Way							
	AM	Signal	25.0	C	25.0	C	0.0	No
	PM		26.8	C	26.8	C	0.0	No
9	Park Boulevard/SR 163 NB Ramps							
	Northbound Left	Unsignalized						
	AM		10.5	B	10.5	B	0.0	No
	PM		15.4	C	15.4	C	0.0	No
10	Park Boulevard/I-5 Ramps							
	AM	Signal	21.8	C	21.8	C	0.0	No
	PM		16.2	B	16.2	B	0.0	No
11	Park Boulevard/A Street							
	AM	Signal	12.8	B	12.8	B	0.0	No
	PM		13.8	B	13.8	B	0.0	No
12	Richmond Street/Robinson Avenue							
	AM	Signal	13.0	B	13.0	B	0.0	No
	PM		12.7	B	12.7	B	0.0	No
13	Richmond Street/Upas Street							
	AM	All Way Stop	8.8	A	8.8	A	0.0	No
	PM		7.7	A	7.7	A	0.0	No
14	Sixth Avenue/Robinson Avenue							
	AM	Signal	24.3	C	24.3	C	0.0	No
	PM		24.8	C	24.8	C	0.0	No
15	Sixth Ave./ Upas Street-Balboa Drive							
	AM	Signal	8.3	A	8.3	A	0.0	No
	PM		11.1	B	11.1	B	0.0	No
16	Sixth Avenue/Quince Drive							
	AM	Signal	13.9	B	13.9	B	0.0	No
	PM		13.5	B	13.5	B	0.0	No
17	Sixth Avenue/Laurel Street							
	AM	Signal	14.8	B	14.8	B	0.0	No
	PM		14.7	B	14.7	B	0.0	No
18	Sixth Ave./Elm Street-I-5 NB Off Ramp							
	AM	Signal	10.9	B	10.9	B	0.0	No
	PM		11.5	B	11.5	B	0.0	No
19	Sixth Avenue/Ash Street							
	AM	Signal	11.2	B	11.2	B	0.0	No
	PM		10.7	B	10.7	B	0.0	No
20	Sixth Avenue/A Street							
	AM	Signal	11.4	B	11.4	B	0.0	No
	PM		11.3	B	11.3	B	0.0	No
21	A Street/10th Avenue							
	AM	Signal	11.4	B	11.4	B	0.0	No
	PM		10.4	B	10.4	B	0.0	No
22	A Street/11th Avenue							
	AM	Signal	9.8	A	9.8	A	0.0	No
	PM		9.2	A	9.2	A	0.0	No
23	Balboa Drive/El Prado							
	AM	All Way Stop	10.5	B	10.5	B	0.0	No
	PM		10.3	B	10.3	B	0.0	No

LOS = Level of service
Minor approach delay reported for unsignalized intersections
Intersections operating at unacceptable levels (e.g., LOS E or F) shown in **bold**

Significant impact: 1) LOS D or better to LOS E or worse
2) Incremental delay ≥ 2 seconds for LOS E
3) Incremental delay ≥ 1 second for LOS F

TABLE 4.4-3
EXISTING INTERNAL INTERSECTION LOS ANALYSIS

			Existing			
			Weekday		Weekend	
	Intersection	Control	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS
24/37	El Prado/Plaza de Panama					
	AM					
	Eastbound	Stop	7.2	A	13.4	B
	Southbound		7.3	A	15.1	C
	Northbound		10.3	B	>50.0	**F**
25	Pan American Road/Organ Pavilion Lot					
	AM	Stop				
	Southbound Left		0.6	A	1.5	A
	Westbound Shared Left-Right		9.4	A	16.0	C
26	Pan American Road/Presidents Way	All Way				
	AM	Stop	8.0	A	17.9	C
27	Presidents Way/Organ Pavilion Lot					
	AM	Stop				
	Southbound Shared Left-Right		9.8	A	16.1	C
	Eastbound Left		0.1	A	0.3	A
28	Presidents Way/Federal-Aerospace Lot					
	AM	Stop				
	Northbound Shared Left-Right		9.3	A	22.4	C
	Westbound Left		1.3	A	3.4	A

LOS = Level of service
Minor approach delay reported for unsignalized intersections
Intersections operating at unacceptable levels (e.g., LOS E or F) shown in **bold**
Significant impact: 1) LOS D or better to LOS E or worse
2) Incremental delay ≥ 2 seconds for LOS E
3) Incremental delay ≥ 1 second for LOS F

4.4.1.4 Existing Parking

There are 15 existing surface parking lots within Balboa Park, including self-parking and valet lots (Table 4.4-4). This includes Plaza de Panama, Alcazar, Organ Pavilion, Pan American Plaza/Palisades, Federal Building/Aerospace, Inspiration Point, Gold Gulch, Pepper Grove, Fleet Space Theatre, Casa de Balboa, Natural History Museum, South Carousel, North Carousel, Botanical Building, and the Zoo parking lots.

The valet area is located in the Plaza de Panama lot and is typically congested with pedestrian and vehicles. The 12 valet stalls are often filled, and the valet service often uses more remote lots that results in additional customer waiting time. The valet service currently handles up to 240 vehicles per day. Valet customers include restaurant, Old Globe, special event, and other patrons.

Table 4.4-4 indicates the existing parking spaces within the study area and the estimated existing usage during the weekday and weekend. As shown in the table, several individual lots may approach or reach capacity but parking spaces remain available in other Balboa Park lots. Self-parking motorists tend to park in the lots closest to the central area of Balboa Park first, and move to the outer lots if the central lots are full.

TABLE 4.4-4
EXISTING PARKING CONDITIONS

Parking Lot	Existing Spaces	Utilization			
		Weekday		Weekend	
		Occupied	%	Occupied	%
Plaza de Panama	65	50	77	49	75
Alcazar	143	136	95	98	69
Organ Pavilion	365	348	95	298	82
Pan American Plaza/Palisades	276	266	96	167	61
Federal Building/Aerospace	509	269	53	143	28
Inspiration Point	1,264	652	52	171	14
Gold Gulch	43	3	7	7	16
Pepper Grove	120	117	98	37	31
Fleet Space Theatre	166	163	98	122	73
Casa de Balboa	86	81	94	79	92
Natural History Museum	98	94	96	90	92
South Carousel	202	174	86	202	100
North Carousel	90	81	90	90	100
Botanical Building	27	23	85	27	100
Zoo	2,924	2,719	93	2,918	100
TOTAL	6,378	5,176	81	4,498	71

According to the parking analysis, spaces are used by employees, docents, and volunteers in addition to Park visitors. Employees use the spaces nearest to their destination and typically arrive earlier than visitors, causing visitors to have to walk

further to their destination than the employees. ADA spaces are heavily used by employees, leaving just over half of the spaces (73 of the 133 spaces) available for visitors. On average, employees tend to stay the longest in their parking space (eight hours), while volunteers tend to stay five hours and visitors stay about three hours. Visitors often carpool and employees do not, resulting in an average of three visitors per car and one employee per car. Thus, an employee taking the prime close in parking space has a compounded effect on the overall parking supply. A single employee vehicle displaces about three visitor vehicles and eight visitors total. Considering the total amount of employees parking at the Central Mesa is about 500, employees displace up to 4,000 visitors per day from prime parking spaces.

4.4.1.5 Existing Balboa Park Tram Service

Free tram service is currently available from Inspiration Point parking lot to the central area of Balboa Park to Sefton Plaza (Balboa Drive at El Prado) and north to the Marston House, with interim designated stops at Plaza de Panama, the International Cottages, and Aerospace Museum. Trams have a capacity of 30 people and include a wheelchair lift. Loading and unloading on the existing trams is slow and creates delays during peak times. The tram circulates every 8 to 10 minutes, with delays up to 20 to 40 minutes during peak hours.

4.4.1.6 Existing Pedestrian, Bicycle, and Public Transit Circulation

Existing pedestrian circulation in the project area is confined to sidewalks along the existing roadways, several roadway crossings (Figure 4.4-4), and the arcades and sidewalks within the Plaza de Panama and Prado. Also, Palm Canyon Walkway provides pedestrian access via a raised wood pedestrian path between the Alcazar parking lot and the Mall. Figure 4.4-4 shows the existing pedestrian traffic volumes. As shown in the figure, the area is heavily traveled by pedestrians.

A designated Class I bikeway is provided north of the project site on Upas Street from Balboa Drive west of SR-163 to Vermont Street east of SR-163. There is also a designated bike route (Class III) along Sixth Avenue between Upas Street and A Street; Balboa Drive; Laurel Street/El Prado between Fourth Avenue and Village Place; Juniper Street between Fifth Avenue and 8th Avenue; Upas Street between Vermont Street and Park Boulevard. The City of San Diego Bicycle Master Plan proposes a Class I bike path from south end of Zoo Drive to Village Place, a Class II bike lane on Park Boulevard from A Street to Upas Street, and a Class III bike route along Pan American Road, Presidents Way, Zoo Drive and Zoo Place. Currently, bicycles typically travel along the existing vehicular roadway and along pedestrian paths.

Map Source: Rick Engineering, January 2012

LEGEND

= PEDESTRIANS PER HOUR

= VEHICLES PER HOUR

Ⓐ = CONFLICT AREA LETTER DESIGNATION CORRESPONDS TO TABLE 4.4-13

No Scale

FIGURE 4.4-4

Existing Pedestrian Crossing Volumes

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The San Diego Metropolitan Transit System (MTS) provides bus service in the vicinity of the project site. Route 7 provides bus service to the project area, running seven days a week along Park Boulevard. Route 7 includes stops at the intersections of Park Boulevard/Presidents Way, Park Boulevard/Morley Field Drive-Zoo Drive, and numerous stops between A Street and Robinson Avenue. Other transit routes in the area include Route 3 and Route 120 along Fourth and Fifth Avenues, and Route 1, Route 10 and Route 11 along University Avenue.

4.4.1.7 Existing Pedestrian and Vehicle Conflicts

Currently, the Plaza de Panama experiences significant pedestrian/vehicular conflicts. According to the TIA, conflicts are defined as locations where vehicles and pedestrian paths cross. The more conflict points the more potential for incidents. The conflicts of concern are primarily located where pedestrian walkways cross the roadway areas (see Figure 4.4-4). This situation can slow traffic flow and result in a potential safety hazard. Since this condition is most prevalent on weekend peak periods, the analysis focuses on that time period. Saturday pedestrian and vehicular traffic volumes in the internal project area are shown on Figure 4.4-5.

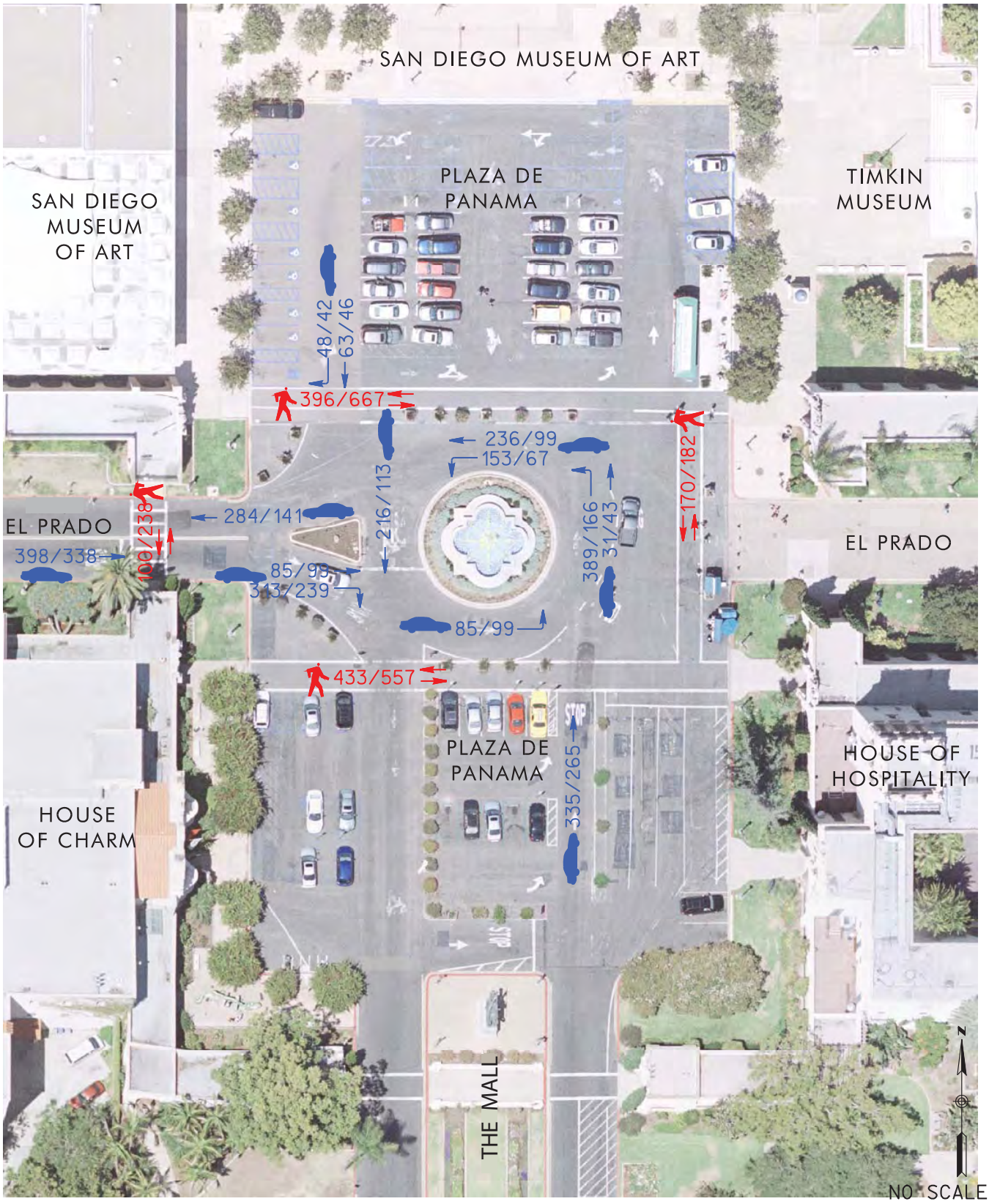
4.4.2 Issue 1: Traffic Capacity

Would the proposal result in an increase in projected traffic which is substantial in relation to the existing traffic load and capacity of the street system?

Based on the City's 2011 Significance Determination Thresholds, impacts related to street system traffic load and capacity would be significant:

- If any intersection, roadway segment, or freeway segment affected by a project would operate at LOS E or F under either direct or cumulative conditions, where the project traffic impact would exceed the thresholds shown in Table 4.4-5.
- If at any ramp meter location with delays above 15 minutes, the project exceeds the thresholds shown in Table 4.4-5.

Map Source: Rick Engineering, January 2012



XX/XX = AM/PM PEDESTRIANS PER HOUR

XX/XX = AM/PM VEHICLES PER HOUR

No Scale

FIGURE 4.4-5

Existing Plaza de Panama Traffic Volumes Saturday

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TABLE 4.4-5
SIGNIFICANCE THRESHOLDS

	Allowable Change Due to Project Impact*					
	Freeways		Roadway Segments		Intersections	Ramp Metering
Level of Service with Project†	V/C	Speed (mph)	V/C	Speed (mph)	Delay (seconds)	Delay (minutes)
E (or ramp meter delays above 15 minutes)	0.010	1.0	0.02	1.0	2.0	2.0
F (or ramp meter delays above 15 minutes)	0.005	0.5	0.01	0.5	1.0	1.0

*The allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS F is 1 minute.

†The allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS E is 2 minutes.

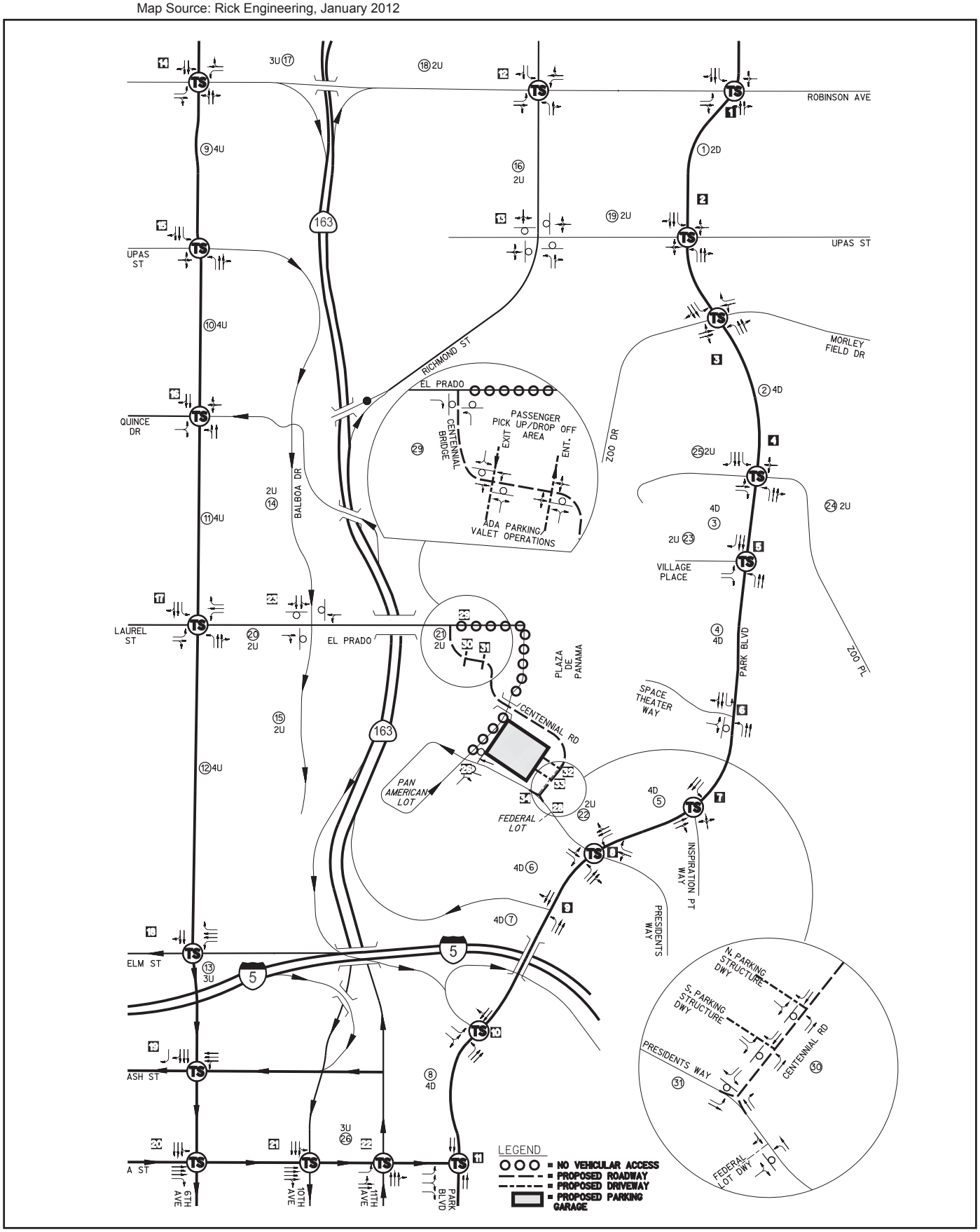
4.4.2.1 Impacts

ALL PROJECT COMPONENTS

As assessed in the TIA, the project would alter internal vehicular traffic and parking, but would not include any new traffic generators (e.g., museums, restaurants, etc.) that would attract visitors and the proposed additional parking spaces would only accommodate existing parking demand in the core of the Central Mesa. As a result, there would be no increase in traffic generation or alteration in the general external trip distribution patterns. The project would alter internal traffic distribution through the proposed bridge, roadway, and parking changes (Figure 4.4-6). The distance between the Centennial Bridge and the proposed Organ Pavilion parking structure would be approximately the same as the distance from the west side of the Plaza de Panama to the existing Organ Pavilion parking lots. By not adding new trips or significantly altering internal travel distance, the project would not affect external traffic conditions in the existing, 2015, or 2030 conditions. Project impacts focus on roadway intersections and segments within Balboa Park as analyzed below.

Balboa Park is estimated to generate 20,655 ADT on a typical weekday under the existing conditions. Based on the SANDAG Series 11 forecasts, Balboa Park is estimated to generate 21,900 ADT on a typical weekday and 33,000 ADT on a weekend day in 2015. In 2030, Balboa Park is estimated to generate 28,800 ADT on a typical weekday and 43,400 ADT on a weekend day. These volumes assume a 5 percent increase to reflect the summer conditions. Refer to the TIA (see Appendix D-1) for more information regarding Balboa Park traffic generation. Balboa Park traffic generation is not attributed to the project, but is utilized in this analysis to develop the existing and future traffic conditions.

Map Source: Rick Engineering, January 2012



TS = TRAFFIC SIGNAL
= STOP SIGN
X = INTERSECTION NUMBER
(X) = SEGMENT NUMBER
XU = X LANE UNDIVIDED
XD = X LANE DIVIDED

No Scale

FIGURE 4.4-6

Proposed Project Transportation Conditions

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a. Construction Activities Impacts

As discussed in Section 3.8, the project construction would be completed in four phases over a period of 24 months. Construction hours within the Park would typically be from 7 a.m. to 7 p.m. on weekdays, with exceptions for work that would be disruptive to Park uses. Construction activities that may be relegated to the late shift may include excavation and export, concrete formwork, reinforcing steel placement, and concrete placement and finishing. All soil hauling would be completed outside of peak hours. Construction activities would be shutdown during major events. Street closures and detours would be necessary during construction, but access through the Park would be maintained and proper signage and traffic control measures would be implemented (refer to Section 3.8.2). Also, construction trucks would take direct access from SR-163 for Phase II bridge construction. Construction would be coordinated with Caltrans to avoid potential conflicts between the project construction and their Cabrillo Bridge seismic retrofit project. Refer to the TIA (see Appendix D-1) for the detailed construction schedule and coordination information.

Project construction traffic would temporarily affect the external distribution of traffic and traffic volumes. The construction traffic generated by the project would primarily occur during the weekday during non-peak hours and would consist of personnel commute and equipment/material transportation. Construction activities would occur starting at 7 a.m. but personnel would have to be on-site before then and hauling would only be completed outside of peak hours.

Phase I construction would involve a maximum of 30 construction personnel who would park at the Inspiration Point lot. During Phase II, in addition to the trips associated with up to 135 employees, this Phase would include the export of soil to the Arizona Street Landfill located within Balboa Park during non-peak hours (see Figure 3-42). This would involve a fleet of 20 to 25 on-road haul trucks cycling every 45 to 60 minutes. While Phase II would also involve truck trips (126 ADT) related to concrete pouring, concrete pouring would not overlap with the hauling. Phase III would require a maximum of 100 construction employees, during the first 1-1.5 months while the rooftop park is completed then drop to approximately 30 to 40 for remaining Alcazar parking lot improvements. Up to 50 construction staff would be required for Phase IV.

Phase II would generate the most traffic, as that phase includes the most employees and the soil export. Thus, the worst-case traffic ADT generation during construction would be during Phase II. Phase II would generate about 500 ADT (approximately 400 ADT related to truck trips associated with soil export operations). As mentioned above, hauling would be completed during off-peak hours and employee trips would also be anticipated to be during off-peak hours. As shown in the TIA (Appendix M of the TIA), all intersections and segments studied would operate at acceptable levels with the addition of the worst-case construction traffic.

b. Existing Plus Project Impacts

The existing plus project condition analyzes the existing traffic volumes with the project. This analysis identifies direct impacts of the project in the existing condition. Figure 4.4-7 illustrates the existing plus project weekday traffic volumes while Figure 4.4-8 illustrates the corresponding volumes on the weekend.

Street Segments

Existing plus project street segment traffic conditions are indicated in Table 4.4-1. As indicated in Table 4.4-1, all study area street segments would operate at LOS D or better under the existing plus project conditions.

Intersections

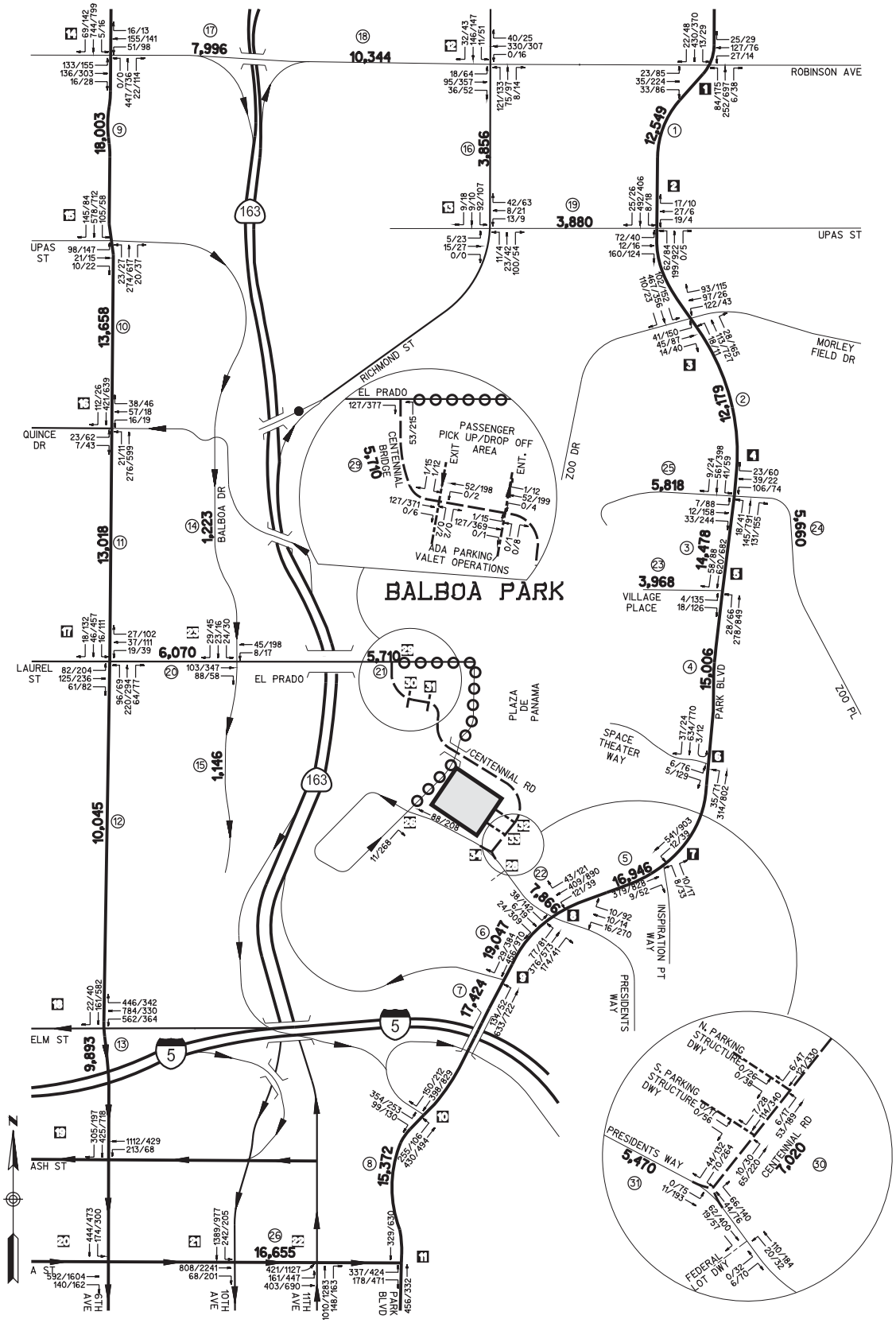
The existing plus project external intersection weekday and weekend analysis is shown in Table 4.4-2 while the internal intersection analysis is shown in Table 4.4-6. As shown in those tables, all intersections would operate at LOS D or better under the existing plus project conditions.

c. Near-term (Year 2015) Impacts

A near-term (year 2015) analysis was conducted to determine impacts that would occur when the project becomes operational. As such, the analysis takes into account traffic from any projects anticipated to be in effect in the same timeframe as the project. To determine near-term (year 2015) traffic volumes, staff from the City of San Diego was consulted regarding other proposed or approved projects that have impacts within the project study area. From this information, it was determined that the following four projects with projected ADTs would affect the project study area in the near-term (year 2015).

- Upas Street Jack-in-the-box project: redevelopment of the existing 1,944 sf restaurant into a 2,491 sf restaurant at the Upas Street and Dale Street intersection. This project would generate a net 380 ADT per driveway trip rates or 230 net ADT using cumulative trip rates.
- St. Paul's Cathedral project: redevelopment of an existing 4,973 sf church, and the development of mixed-used residential, office, and retail buildings. This project site contains a total of 1.76 acres with 110 multi-family residential units, 20,027 sf of church office, and 6,109 sf of retail/restaurant. This project would generate a net 1,193 ADT.

Map Source: Rick Engineering, January 2012



LEGEND

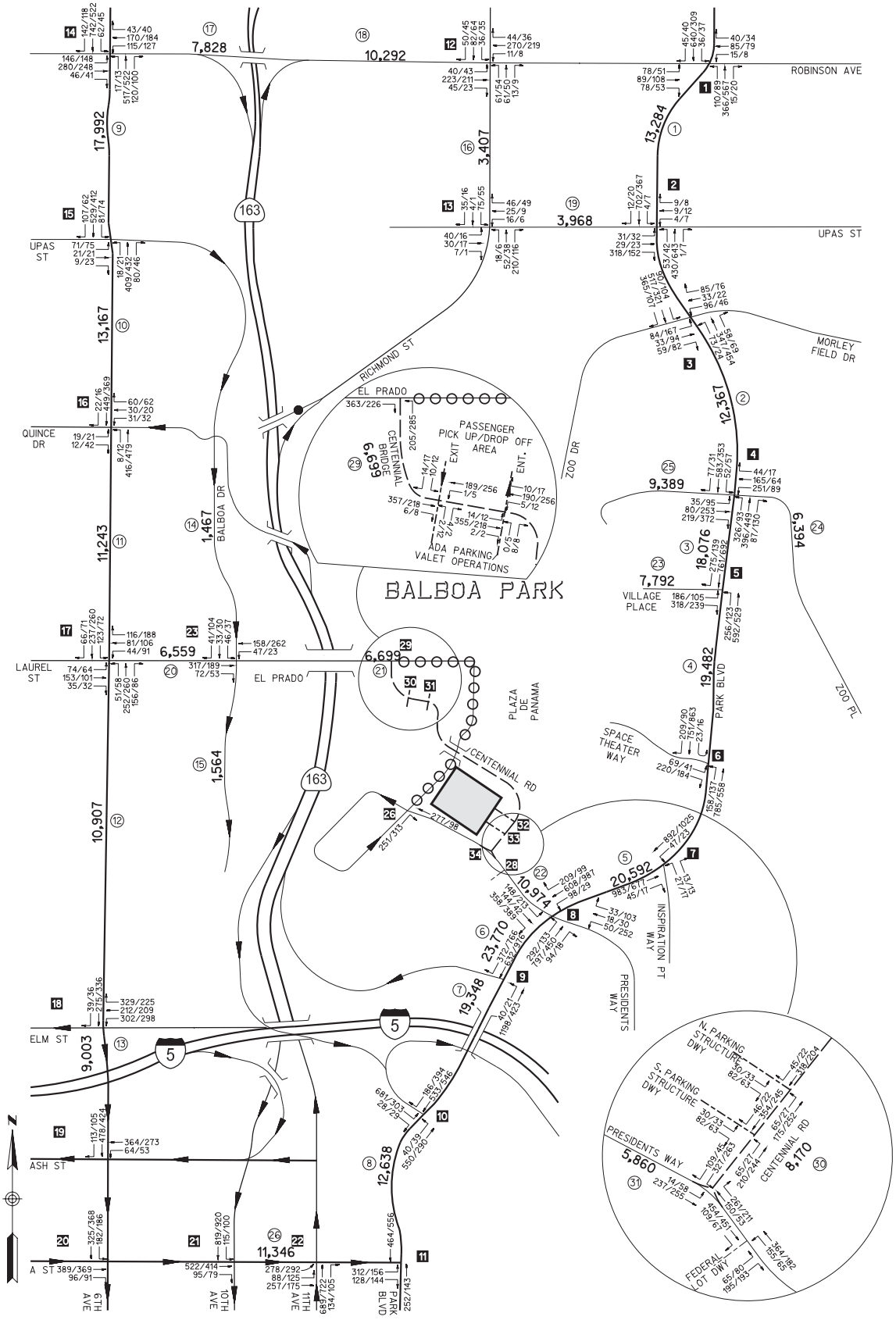
XXXX = ADT
XXXX/XXXX = AM/PM PEAK HR
= NO VEHICULAR ACCESS
= PROPOSED ROADWAY
= PROPOSED DRIVEWAY
= PROPOSED PARKING GARAGE
X = INTERSECTION NUMBER
(X) = SEGMENT NUMBER

No Scale

FIGURE 4.4-7

Existing Plus Project Traffic Volumes - Weekday

Map Source: Rick Engineering, January 2012



LEGEND

XXXX = ADT
XXXX/XXXX = AM/PM PEAK HR
= NO VEHICULAR ACCESS
= PROPOSED ROADWAY
= PROPOSED DRIVEWAY
= PROPOSED PARKING GARAGE
X = INTERSECTION NUMBER
(X) = SEGMENT NUMBER

No Scale

FIGURE 4.4-8

Existing Plus Project Traffic Volumes - Weekend

TABLE 4.4-6
EXISTING + PROJECT INTERNAL INTERSECTION LOS ANALYSIS

	Intersection	Control	Existing + Project			
			Weekday		Weekend	
			Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS
28	Presidents Way/Federal-Aerospace Lot					
	AM	Stop				
	Northbound Shared Left-Right		9.4	A	18.2	C
	Westbound Left		0.0	A	9.5	A
29	El Prado/Centennial Bridge	All Way Stop				
	AM		7.2	A	10.1	B
30	Centennial Road/ADA Parking & Valet Operations					
	AM					
	Northbound Shared Left-Right	Stop	9.4	A	11.8	B
	Southbound Shared Left-Right		9.2	A	11.6	B
	Westbound Left		0.1	A	0.1	A
31	Centennial Road/ADA Parking & Valet Operations					
	AM					
	Northbound Shared Left-Right	Stop	9.4	A	11.3	B
	Westbound Left		0.1	A	0.2	A
	Eastbound Left		0.1	A	0.4	A
32	Centennial Road/Parking Garage North Entrance/Exit					
	AM	Stop				
	Northbound Left		7.5	A	8.3	A
	Eastbound Left		9.1	A	11.7	B
33	Centennial Road/Parking Garage South Entrance/Exit					
	AM					
	Northbound Left	Stop	7.5	A	8.4	A
	Eastbound Left		9.3	A	11.6	B
	Eastbound Right		8.9	A	11.3	B
34	Presidents Way/Centennial Road					
	AM					
	Eastbound Left	Stop	7.5	A	8.3	A
	Southbound Left		9.1	A	23.2	C
	Southbound Right		8.7	A	9.9	A

LOS = Level of service
Minor approach delay reported for unsignalized intersections
Intersections operating at unacceptable levels (e.g., LOS E or F) shown in **bold**
Significant impact: 1) LOS D or better to LOS E or worse
2) Incremental delay ≥ 2 seconds for LOS E
3) Incremental delay ≥ 1 second for LOS F

- Park Boulevard Promenade project: includes San Diego zoological gardens expansion, San Diego Zoo employee parking lot, and Park Boulevard Promenade. This project would generate 4,755 ADT during the weekday and 5,475 ADT during the weekend.
- Cabrillo Bridge Seismic Retrofit and Uplighting Retrofit projects: would not generate operational traffic.

Volumes from these projects were added to existing traffic volumes to get near-term (year 2015) volumes.

Near-term (Year 2015) without Project

The near-term (year 2015) without project weekday volumes are illustrated on Figure 4.4-9 and the corresponding weekend volumes are shown in Figure 4.4-10.

Street Segments

Table 4.4-7 shows the daily street segment traffic analysis in the near-term (year 2015) without the project. As shown, all study area street segments are projected to operate at acceptable LOS in the near-term (year 2015) condition without the project except the following four:

- Park Boulevard from Robinson Avenue to Upas Street (LOS E)
- Robinson Avenue from Sixth Avenue to Vermont Street (LOS F)
- A Street from Sixth Avenue to Park Boulevard (LOS E)
- Presidents Way east of Pan American Road (LOS E)

Intersections

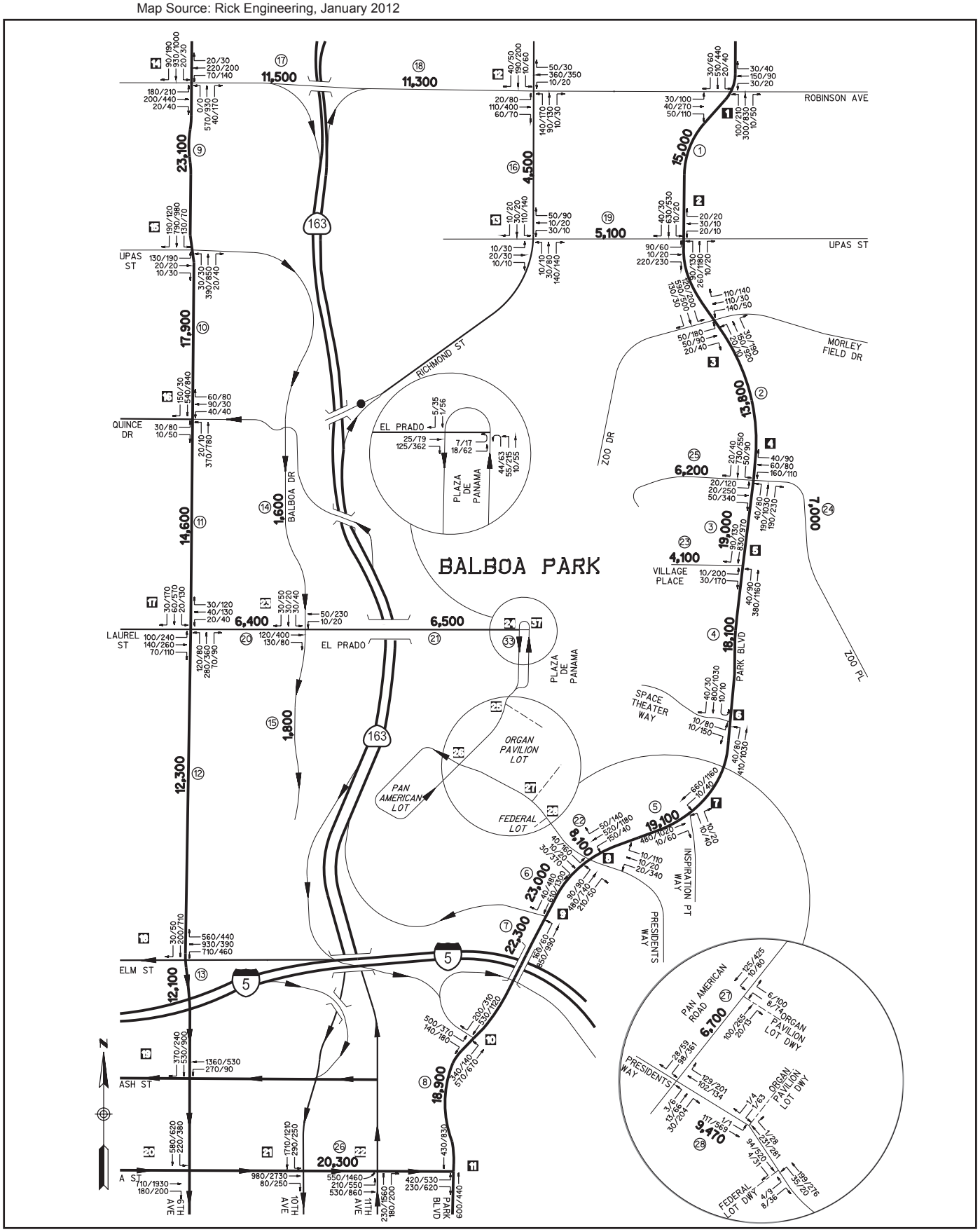
Tables 4.4-8 and 4.4-9 show the near-term (2015) without project traffic analysis on external and internal intersections, respectively. Under the near-term (year 2015) without project conditions, all external intersections would operate at acceptable LOS D or better on typical weekdays and weekends except the following one (see Table 4.4-8):

- Park Boulevard at Space Theatre Way (eastbound left turn, LOS F in the AM and LOS E in the PM peak hour, weekend).

As shown in Table 4.4-9, the internal project site intersection analysis shows all internal project intersections to operate at acceptable LOS D or better under the near-term (year 2015) without project conditions except the following two:

- El Prado/Plaza de Panama during the AM peak hour (northbound, LOS F, weekend)
- Presidents Way/Federal Building-Aerospace lot (northbound shared left-right, LOS E, AM peak hour, weekend).

Map Source: Rick Engineering, January 2012



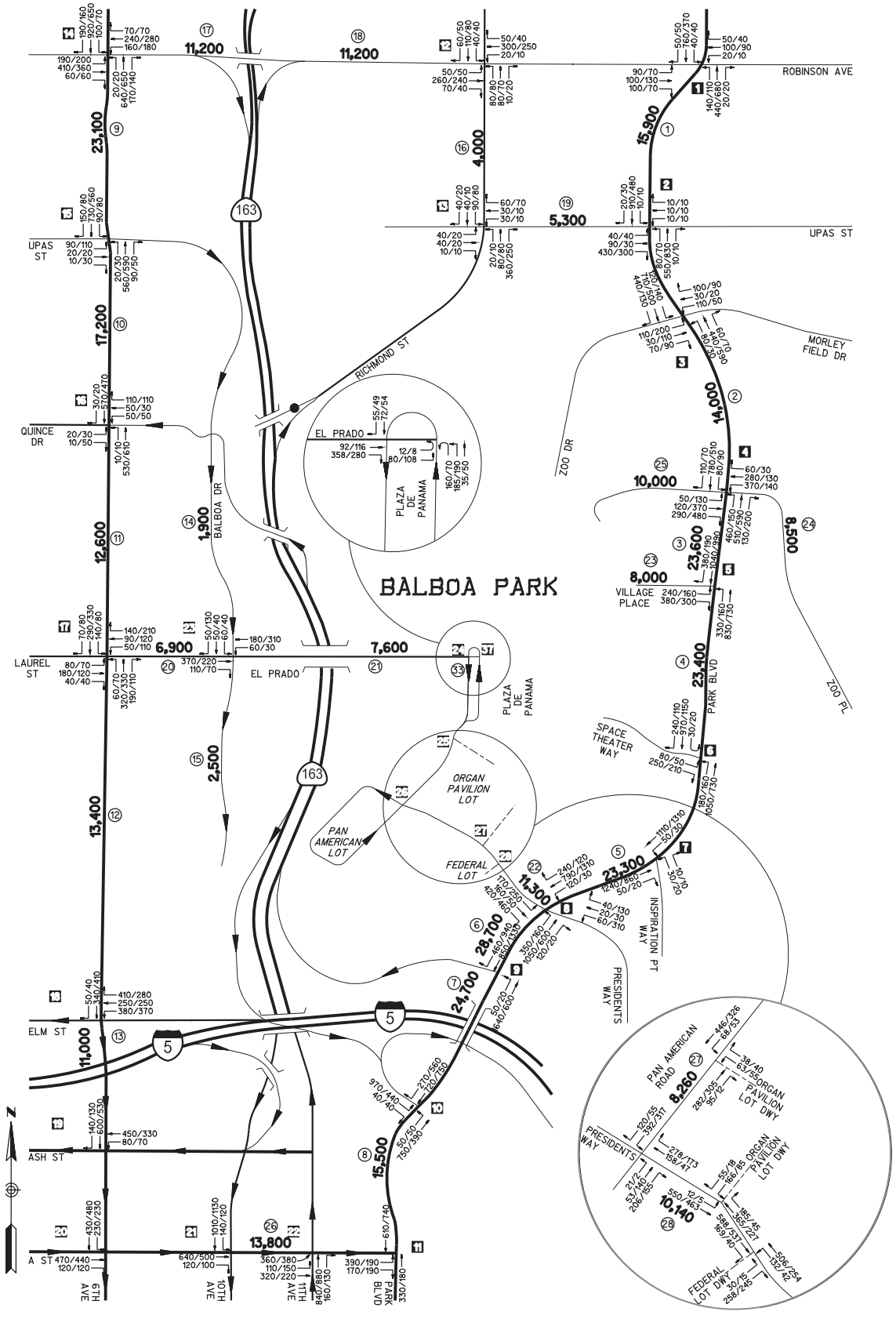
LEGEND
XXXX = ADT
XXXX/XXXX = AM/PM PEAK HR
= NO VEHICULAR ACCESS
= PROPOSED ROADWAY
= PROPOSED DRIVEWAY
= PROPOSED PARKING GARAGE
X = INTERSECTION NUMBER
(X) = SEGMENT NUMBER

No Scale

FIGURE 4.4-9

Near-term (2015) Traffic Volumes - Weekday

Map Source: Rick Engineering, January 2012



LEGEND
XXXX = ADT
XXXX/XXXX = AM/PM PEAK HR
= NO VEHICULAR ACCESS
= PROPOSED ROADWAY
= PROPOSED DRIVEWAY
= PROPOSED PARKING GARAGE
X = INTERSECTION NUMBER
(X) = SEGMENT NUMBER

No Scale

FIGURE 4.4-10

Near-term (2015) Traffic Volumes - Weekend

TABLE 4.4-7
2015 AND 2015 + PROJECT ROADWAY SEGMENT ANALYSIS (WEEKDAY)

	Roadway Segment	Functional Classification/Lanes	Future Classification/Lanes	LOS E Capacity	2015 No Project			2015 + Project				
					ADT	V/C Ratio	LOS	ADT	V/C Ratio	LOS	Incremental V/C Ratio	Significant Project Impact Yes/No
1	Park Boulevard between Robinson Avenue and Upas Street	2 Lane Collector[1]	4 Lane Major	15,000	15,000	1.000	E	15,000	1.000	E	0.000	NO
2	Park Boulevard between Upas Street and Zoo Place	4 Lane Major	4 Lane Major	40,000	13,800	0.345	A	13,800	0.345	A	0.000	NO
3	Park Boulevard between Zoo Place and Village Place	4 Lane Major	4 Lane Major	40,000	19,000	0.475	B	19,000	0.475	B	0.000	NO
4	Park Boulevard between Village Place and Space Theater Way	4 Lane Major	4 Lane Major	40,000	18,100	0.453	B	18,100	0.453	B	0.000	NO
5	Park Boulevard between Space Theater Way and Presidents Way	4 Lane Major	4 Lane Major	40,000	19,100	0.478	B	19,100	0.478	B	0.000	NO
6	Park Boulevard between Presidents Way and SR-163 NB Ramps	4 Lane Major	4 Lane Major	40,000	23,000	0.575	C	23,000	0.575	C	0.000	NO
7	Park Boulevard between SR-163 NB Ramps and SR-163 SB Ramps	4 Lane Major	4 Lane Major	40,000	22,300	0.558	C	22,300	0.558	C	0.000	NO
8	Park Boulevard between SR-163 SB Ramps and A Street	4 Lane Major	4 Lane Major	40,000	18,900	0.473	B	18,900	0.473	B	0.000	NO
9	Sixth Avenue between Robinson Avenue and Upas Street	4 Lane Collector	4 Lane Major	30,000	23,100	0.770	D	23,100	0.770	D	0.000	NO
10	Sixth Avenue between Upas Street and Quince Drive	4 Lane Collector	4 Lane Major	30,000	17,900	0.597	C	17,900	0.597	C	0.000	NO
11	Sixth Avenue between Quince Drive and El Prado	4 Lane Collector	4 Lane Major	30,000	14,600	0.487	C	14,600	0.487	C	0.000	NO
12	Sixth Avenue between El Prado and Elm Street-I-5 NB Off Ramp	4 Lane Collector	4 Lane Major	30,000	12,300	0.410	B	12,300	0.410	B	0.000	NO
13	Sixth Avenue between Elm Street-I-5 NB Off Ramp and Ash Street	3 Lane One Way[2]	3 Lane One Way[2]	22,500	12,100	0.538	C	12,100	0.538	C	0.000	NO
14	Balboa Drive between Quince Drive and El Prado*	2 Lane Park Road*	2 Lane Park Road*	10,000	1,600	0.160	A	1,600	0.160	A	0.000	NO
15	Balboa Drive between El Prado and Juniper Road*	2 Lane Park Road*	2 Lane Park Road*	10,000	1,800	0.180	A	1,800	0.180	A	0.000	NO
16	Richmond Street between Robinson Avenue and Upas Street	2 Lane Collector	2 Lane Collector	10,000	4,500	0.450	B	4,500	0.450	B	0.000	NO
17	Robinson Avenue between Sixth Avenue and Vermont Street	2 Lane Collector	3 Lane Collector	10,000	11,500	1.150	F	11,500	1.150	F	0.000	NO
18	Robinson Avenue between Vermont Street and Park Boulevard	2 Lane Collector1	3 Lane Collector	15,000	11,300	0.753	D	11,300	0.753	D	0.000	NO
19	Upas Street between Richmond Street and Park Boulevard	2 Lane Collector	2 Lane Collector	10,000	5,100	0.510	B	5,100	0.510	B	0.000	NO
20	El Prado between Sixth Avenue and Balboa Drive*	2 Lane Park Road*	2 Lane Park Road*	10,000	6,400	0.640	C	6,400	0.640	C	0.000	NO
21	El Prado between Balboa Drive and Plaza De Panama*	2 Lane Park Road*	2 Lane Park Road*	10,000	6,500	0.650	C	6,500	0.650	C	0.000	NO
22	Presidents Way west of Park Boulevard*	2 Lane Park Road*	2 Lane Park Road*	10,000	8,100	0.810	D	8,100	0.810	D	0.000	NO
23	Village Place just west of Park Boulevard*	2 Lane Park Road*	2 Lane Park Road*	10,000	4,100	0.410	B	4,100	0.410	B	0.000	NO
24	Zoo Place east of Park Boulevard	2 Lane Collector	2 Lane Collector	10,000	7,000	0.700	C	7,000	0.700	C	0.000	NO
25	Zoo Place west of Park Boulevard*	2 Lane Park Road*	2 Lane Park Road*	10,000	6,200	0.620	C	6,200	0.620	C	0.000	NO
26	A Street between Sixth Avenue and Park Boulevard	3 Lane One Way[2]	3 Lane One Way[2]	22,500	20,300	0.902	E	20,300	0.902	E	0.000	NO
27	Pan American Road north of Presidents Way*	2 Lane Park	2 Lane Park	10,000	6,700	0.670	C	-[3]	-[3]	-3	-[3]	-[3]
28	Presidents Way east of Pan American Road*	2 Lane Park	2 Lane Park	10,000	9,470	0.947	E	-[4]	-[4]	-[4]	-[4]	-[4]
29	Centennial Bridge south of El Prado*	2 Lane Park Road*	2 Lane Park Road*	10,000	DNE	DNE	DNE	6,500	0.650	C	-	NO
30	Centennial Road north of Presidents Way*	2 Lane Park Road*	2 Lane Park Road*	10,000	DNE	DNE	DNE	7,300	0.730	C	-	NO
31	Presidents Way west of Centennial Road*	2 Lane Park Road*	2 Lane Park Road*	10,000	DNE	DNE	DNE	5,710	0.571	C	-0.3765	NO
33	The Mall south of El Prado	2 Lane Park Road*	2 Lane Park Road*	10,000	6,500	0.650	C	-[6]	-[6]	-[6]	-[6]	-[6]

LOS = Level of service; DNE = Does not exist
Segments operating at unacceptable levels (e.g., LOS E or F) shown in **bold**
Significant impact: LOS D or better to LOS E or worse
Incremental V/C ratio ≥ 0.02 for LOS E
Incremental V/C ratio ≥ 0.01 for LOS F

*Park roads (maximum capacity estimated at 10,000 ADT)
[1]With two-way left-turn lane
[2]Estimated capacity (3/4 of 4-lane collector)
[3]As the project would result in less traffic on this internal roadway, the project would inherently not have a significant traffic impact on this roadway and a LOS impact analysis of this roadway was not completed.
[4]Under the proposed project condition, this segment is analyzed as a part of the Presidents Way west of Centennial Road segment.
[5]While Centennial Road does not currently exist, this portion of Presidents Way exists as Presidents Way east of Pan American Road and the associated traffic volumes were utilized for this roadway segment analysis.
[6]Under the proposed project conditions, the Mall would be closed to vehicular traffic.

TABLE 4.4-8
2015 AND 2015 + PROJECT EXTERNAL INTERSECTION LOS ANALYSIS

WEEKDAY

			2015 No Project		2015 + Project			
	Intersection	Control	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS	Incremental Delay	Significant Project Impact Yes/No
1	Park Boulevard/Robinson Avenue							
	AM	Signal	16.3	B	16.3	B	0.0	No
	PM		19.5	B	19.5	B	0.0	No
2	Park Boulevard/Upas Street							
	AM	Signal	20.3	C	20.3	C	0.0	No
	PM		18.6	B	18.6	B	0.0	No
3	Park Boulevard/Morley Field Drive							
	AM	Signal	18.8	B	18.8	B	0.0	No
	PM		20.4	C	20.4	C	0.0	No
4	Park Boulevard/Zoo Place							
	AM	Signal	16.2	B	16.2	B	0.0	No
	PM		22.5	C	22.5	C	0.0	No
5	Park Boulevard/Village Place							
	AM	Signal	4.1	A	4.1	A	0.0	No
	PM		11.7	B	11.7	B	0.0	No
6	Park Boulevard/Space Theatre Way							
	Northbound Left							
	AM		9.7	A	9.7	A	0.0	No
	PM	Unsignalized	11.2	B	11.2	B	0.0	No
	Eastbound Left							
	AM		14.3	B	14.3	B	0.0	No
	PM		33.1	D	33.1	D	0.0	No
7	Park Boulevard/Inspiration Way							
	AM	Signal	2.9	A	2.9	A	0.0	No
	PM		4.7	A	4.7	A	0.0	No
8	Park Boulevard/Presidents Way							
	AM	Signal	14.7	B	14.7	B	0.0	No
	PM		28.4	C	28.4	C	0.0	No
9	Park Boulevard/SR-163 NB Ramps							
	Northbound Left	Unsignalized						
	AM		9.5	A	9.5	A	0.0	No
	PM		17.4	C	17.4	C	0.0	No
10	Park Boulevard/I-5 Ramps							
	AM	Signal	28.9	C	28.9	C	0.0	No
	PM		23.9	C	23.9	C	0.0	No
11	Park Boulevard/A Street							
	AM	Signal	11.8	B	11.8	B	0.0	No
	PM		14.7	B	14.7	B	0.0	No
12	Richmond Street/Robinson Avenue							
	AM	Signal	15.6	B	15.6	B	0.0	No
	PM		15.6	B	15.6	B	0.0	No
13	Richmond Street/Upas Street							
	AM	All Way Stop	8.3	A	8.3	A	0.0	No
	PM		8.9	A	8.9	A	0.0	No
14	Sixth Avenue/Robinson Avenue							
	AM	Signal	23.4	C	23.4	C	0.0	No
	PM		31.1	C	31.1	C	0.0	No
15	Sixth Avenue/ Upas Street-Balboa Drive							
	AM	Signal	9.6	A	9.6	A	0.0	No
	PM		12.6	B	12.6	B	0.0	No
16	Sixth Avenue/Quince Drive							
	AM	Signal	15.3	B	15.3	B	0.0	No
	PM		13.9	B	13.9	B	0.0	No
17	Sixth Avenue/Laurel Street							
	AM	Signal	13.2	B	13.2	B	0.0	No
	PM		15.7	B	15.7	B	0.0	No
18	Sixth Avenue/Elm Street-I-5 NB Off Ramp							
	AM	Signal	10.3	B	10.3	B	0.0	No
	PM		13.4	B	13.4	B	0.0	No
19	Sixth Avenue/Ash Street							
	AM	Signal	12.1	B	12.1	B	0.0	No
	PM		11.3	B	11.3	B	0.0	No
20	Sixth Avenue/A Street							
	AM	Signal	12.3	B	12.3	B	0.0	No
	PM		13.2	B	13.2	B	0.0	No
21	A Street/10th Avenue							
	AM	Signal	12.8	B	12.8	B	0.0	No
	PM		16.6	B	16.6	B	0.0	No
22	A Street/11th Avenue							
	AM	Signal	11.6	B	11.6	B	0.0	No
	PM		15.6	B	15.6	B	0.0	No
23	Balboa Drive/El Prado							
	AM	All Way Stop	8.1	A	8.1	A	0.0	No
	PM		12.0	B	12.0	B	0.0	No

TABLE 4.4-8
2015 AND 2015 + PROJECT EXTERNAL INTERSECTION LOS ANALYSIS (continued)

WEEKEND

			2015 No Project		2015 + Project			
	Intersection	Control	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS	Incremental Delay	Significant Project Impact Yes/No
1	Park Boulevard/Robinson Avenue							
	AM	Signal	15.0	B	15.0	B	0.0	No
	PM		14.5	B	14.5	B	0.0	No
2	Park Boulevard/Upas Street							
	AM	Signal	24.3	C	24.3	C	0.0	No
	PM		19.6	B	19.6	B	0.0	No
3	Park Boulevard/Morley Field Drive							
	AM	Signal	17.5	B	17.5	B	0.0	No
	PM		20.2	C	20.2	C	0.0	No
4	Park Boulevard/Zoo Place							
	AM	Signal	27.2	C	27.2	C	0.0	No
	PM		24.0	C	24.0	C	0.0	No
5	Park Boulevard/Village Place							
	AM	Signal	21.3	C	21.3	C	0.0	No
	PM		16.6	B	16.6	B	0.0	No
6	Park Boulevard/Space Theatre Way							
	Northbound Left							
	AM		13.9	B	13.9	B	0.0	No
	PM	Unsignalized	13.9	B	13.9	B	0.0	No
	Eastbound Left							
	AM		112.7	**F**	112.7	**F**	0.0	No
	PM		44.6	**E**	44.6	**E**	0.0	No
7	Park Boulevard/Inspiration Way							
	AM	Signal	3.9	A	3.9	A	0.0	No
	PM		3.8	A	3.8	A	0.0	No
8	Park Boulevard/Presidents Way							
	AM	Signal	31.3	C	31.3	C	0.0	No
	PM		52.4	D	52.4	D	0.0	No
9	Park Boulevard/SR-163 NB Ramps							
	Northbound Left	Unsignalized						
	AM		12.4	B	12.4	B	0.0	No
	PM		22.4	C	22.4	C	0.0	No
10	Park Boulevard/I-5 Ramps							
	AM	Signal	25.1	C	25.1	C	0.0	No
	PM		18.5	B	18.5	B	0.0	No
11	Park Boulevard/A Street							
	AM	Signal	13.3	B	13.3	B	0.0	No
	PM		14.6	B	14.6	B	0.0	No
12	Richmond Street/Robinson Avenue							
	AM	Signal	13.7	B	13.7	B	0.0	No
	PM		13.6	B	13.6	B	0.0	No
13	Richmond Street/Upas Street							
	AM	All Way Stop	11.5	B	11.5	B	0.0	No
	PM		9.3	A	9.3	A	0.0	No
14	Sixth Avenue/Robinson Avenue							
	AM	Signal	37.2	D	37.2	D	0.0	No
	PM		30.5	C	30.5	C	0.0	No
15	Sixth Avenue/Upas Street-Balboa Drive							
	AM	Signal	8.3	A	8.3	A	0.0	No
	PM		11.6	B	11.6	B	0.0	No
16	Sixth Avenue/Quince Drive							
	AM	Signal	17.6	B	17.6	B	0.0	No
	PM		16.5	B	16.5	B	0.0	No
17	Sixth Avenue/Laurel Street							
	AM	Signal	15.1	B	15.1	B	0.0	No
	PM		15.0	B	15.0	B	0.0	No
18	Sixth Avenue/Elm Street-I-5 NB Off Ramp							
	AM	Signal	11.6	B	11.6	B	0.0	No
	PM		12.0	B	12.0	B	0.0	No
19	Sixth Avenue/Ash Street							
	AM	Signal	11.4	B	11.4	B	0.0	No
	PM		10.9	B	10.9	B	0.0	No
20	Sixth Avenue/A Street							
	AM	Signal	11.7	B	11.7	B	0.0	No
	PM		11.5	B	11.5	B	0.0	No
21	A Street/10th Avenue							
	AM	Signal	11.8	B	11.8	B	0.0	No
	PM		10.7	B	10.7	B	0.0	No
22	A Street/11th Avenue							
	AM	Signal	10.2	B	10.2	B	0.0	No
	PM		9.5	A	9.5	A	0.0	No
23	Balboa Drive/El Prado							
	AM	All Way Stop	12.2	B	12.2	B	0.0	No
	PM		10.7	B	10.7	B	0.0	No

LOS = Level of service; Minor approach delay reported for unsignalized intersections
Intersections operating at unacceptable levels (e.g., LOS E or F) shown in **bold**

Significant impact: 1) LOS D or better to LOS E or worse
2) Incremental delay ≥ 2 seconds for LOS E
3) Incremental delay ≥ 1 second for LOS F

TABLE 4.4-9
2015 AND 2015 + PROJECT INTERNAL INTERSECTION LOS ANALYSIS

2015 WITHOUT PROJECT

	Intersection	Control	2015 Weekday Control Delay (sec/veh)	2015 Weekday LOS	2015 Weekend Control Delay (sec/veh)	2015 Weekend LOS
24/ 37	El Prado/Plaza de Panama	Stop				
	AM					
	Eastbound		7.4	A	15.2	C
	Southbound		7.5	A	17.7	C
	Northbound		10.8	B	>50	**F**
25	Pan American Road/Organ Pavilion Lot	Stop				
	AM					
	Southbound Left		0.6	A	1.7	A
	Westbound Shared Left-Right		9.7	A	20.1	C
26	Pan American Road/Presidents Way	All Way Stop				
	AM		8.5	A	34.3	D
27	Presidents Way/Organ Pavilion Lot	Stop				
	AM					
	Southbound Shared Left-Right		10.2	B	20.6	C
	Eastbound Left		0.1	A	0.4	A
28	Presidents Way/Federal-Aerospace Lot	Stop				
	AM					
	Northbound Shared Left-Right		9.6	A	39.5	**E**
	Westbound Left		1.3	A	4.3	A

2015 WITH PROJECT

Intersection		Control	2015 + Project Weekday Control Delay (sec/veh)	2015 + Project Weekday LOS	2015 + Project Weekend Control Delay (sec/veh)	2015 + Project Weekend LOS
28	Presidents Way/Federal-Aerospace Lot	Stop				
	AM					
	Northbound Shared Left-Right		9.6	A	23.4	C
	Westbound Left		7.5	A	10.2	B
29	El Prado/Centennial Bridge	All Way Stop				
	AM		7.3	A	11.4	B
30	Centennial Road/ADA Parking & Valet Operations	Stop				
	AM					
	Northbound Shared Left-Right		9.5	A	12.5	B
	Southbound Shared Left-Right		9.3	A	0.1	A
	Westbound Left		0.1	A	13.1	B
31	Centennial Road/ADA Parking & Valet Operations	Stop				
	AM					
	Westbound Left		0.1	A	12.0	B
	Northbound Shared Left-Right		9.6	A	0.4	A
	Eastbound Left		0.1	A	0.3	A
32	Centennial Road/Parking Garage North Entrance/Exit	Stop				
	AM					
	Northbound Left		7.6	A	8.6	A
	Eastbound Left		9.2	A	12.6	B
33	Centennial Road/Parking Garage South Entrance/Exit	Stop				
	AM					
	Northbound Left		7.5	A	8.8	A
	Eastbound Left		9.5	A	14.2	B
	Eastbound Right		9.6	A	12.4	B
34	Presidents Way/Centennial Road	Stop				
	AM					
	Eastbound Left		7.5	A	8.5	A
	Southbound Left		9.3	A	32.8	D
	Southbound Right		8.8	A	9.8	A

LOS = Level of service; Minor approach delay reported for unsignalized intersections
Intersections operating at unacceptable levels (e.g., LOS E or F) shown in **bold**
Significant impact: 1) LOS D or better to LOS E or worse
2) Incremental delay ≥ 2 seconds for LOS E
3) Incremental delay ≥ 1 second for LOS F

Near-term (Year 2015) with Project

This condition analyzes the near-term (year 2015) traffic volumes with project. This analysis identifies direct impacts of the project in the near-term (year 2015) condition.

As discussed above, the project would have no impact to external roadways and intersections. The near-term (year 2015) with project weekday volumes are illustrated on Figure 4.4-11 and the corresponding weekend volumes are shown in Figure 4.4-12.

Street Segments

Table 4.4-7 shows the daily street segment traffic analysis in the near-term (year 2015) with the project. As shown, all study area street segments are projected to operate at acceptable LOS in the near-term (year 2015) condition with the project except the following three:

- Park Boulevard from Robinson Avenue to Upas Street (LOS E)
- Robinson Avenue from Sixth Avenue to Vermont Street (LOS F)
- A Street from Sixth Avenue to Park Boulevard (LOS E)

As the project would not increase traffic volumes or alter the capacity of these roadways, the project would have no impact to traffic on the above segments.

Intersections

Tables 4.4-8 and 4.4-9 show the near-term (2015) with project traffic analysis on external and internal intersections, respectively. Under the near-term (year 2015) with project conditions, all external intersections would operate at acceptable LOS D or better on weekdays and weekends except the following one (see Table 4.4-8):

- Park Boulevard at Space Theatre Way (eastbound left turn, LOS F in the AM and LOS E in the PM peak hour, weekend).

As the project would not result in volume or delay changes or delays at this intersection, the project would have no impact to traffic at this intersection.

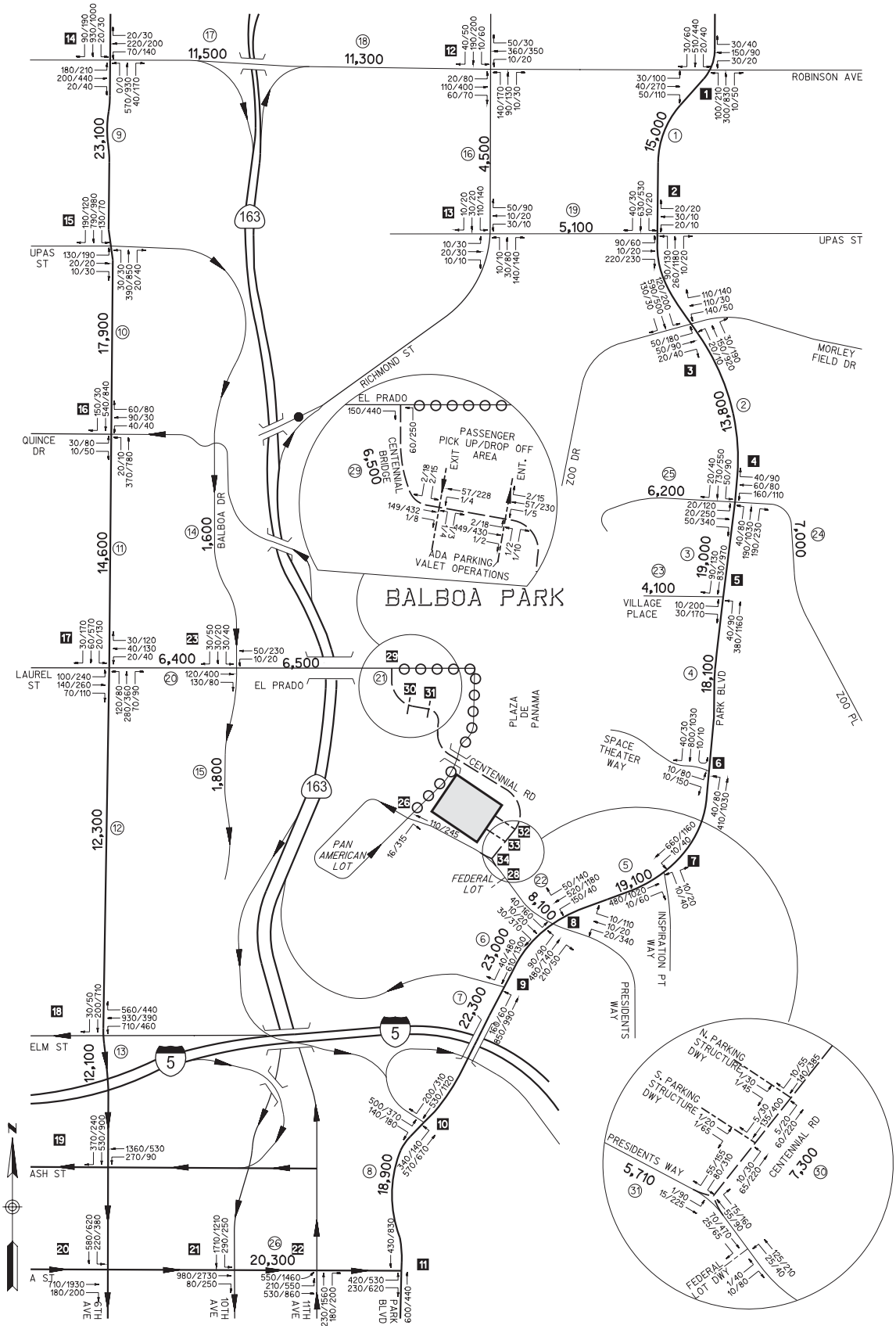
As shown in Table 4.4-9, the internal project site intersection analysis shows all internal project intersections to operate at acceptable LOS D or better under the near-term (year 2015) with project conditions.

d. Year 2030 (Cumulative) Condition Impacts

Year 2030 without Project

The year 2030 without project weekday volumes are illustrated on Figure 4.4-13 and the corresponding weekend volumes are shown in Figure 4.4-14.

Map Source: Rick Engineering, January 2012



LEGEND

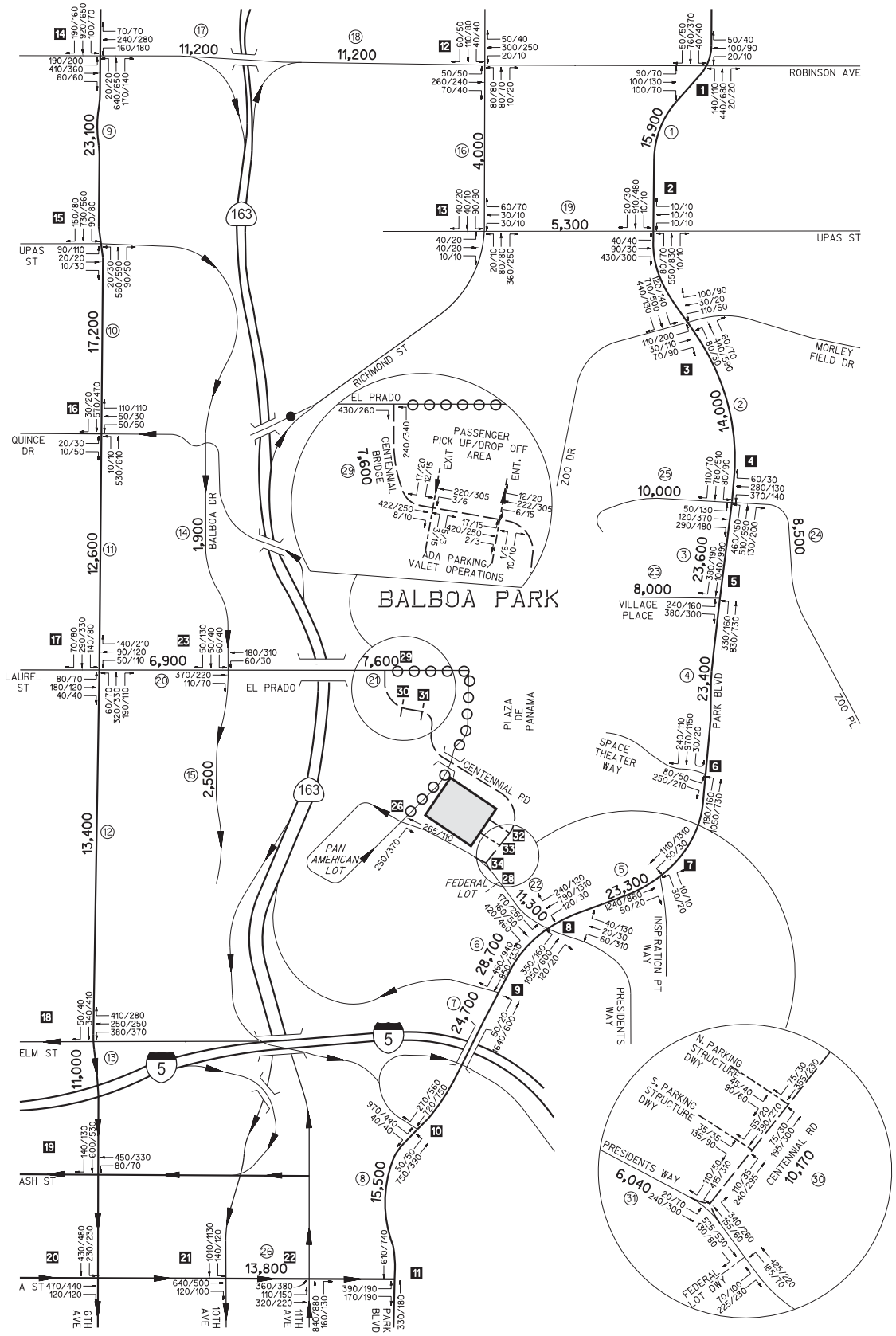
XXXX = ADT
XXXX/XXXX = AM/PM PEAK HR
○○○ = NO VEHICULAR ACCESS
——— = PROPOSED ROADWAY
– – – = PROPOSED DRIVEWAY
▭ = PROPOSED PARKING GARAGE
X = INTERSECTION NUMBER
(X) = SEGMENT NUMBER

No Scale

FIGURE 4.4-11

Near-term (2015) Plus Project Traffic Volumes - Weekday

Map Source: Rick Engineering, January 2012



Note: Project does not add or redistribute traffic on external roadways. Thus, the with and without scenarios have identical traffic volume on the external roadways. This graphic illustrates the proposed internal roadway configuration and volumes.

LEGEND
- XXXX = ADT
- XXXX/XXXX = AM/PM PEAK HR
- O O O = NO VEHICULAR ACCESS
- —— = PROPOSED ROADWAY
- – – – = PROPOSED DRIVEWAY
- = PROPOSED PARKING GARAGE
- X = INTERSECTION NUMBER
- (X) = SEGMENT NUMBER

No Scale

FIGURE 4.4-12

Near-term (2015) Plus Project Traffic Volumes - Weekend

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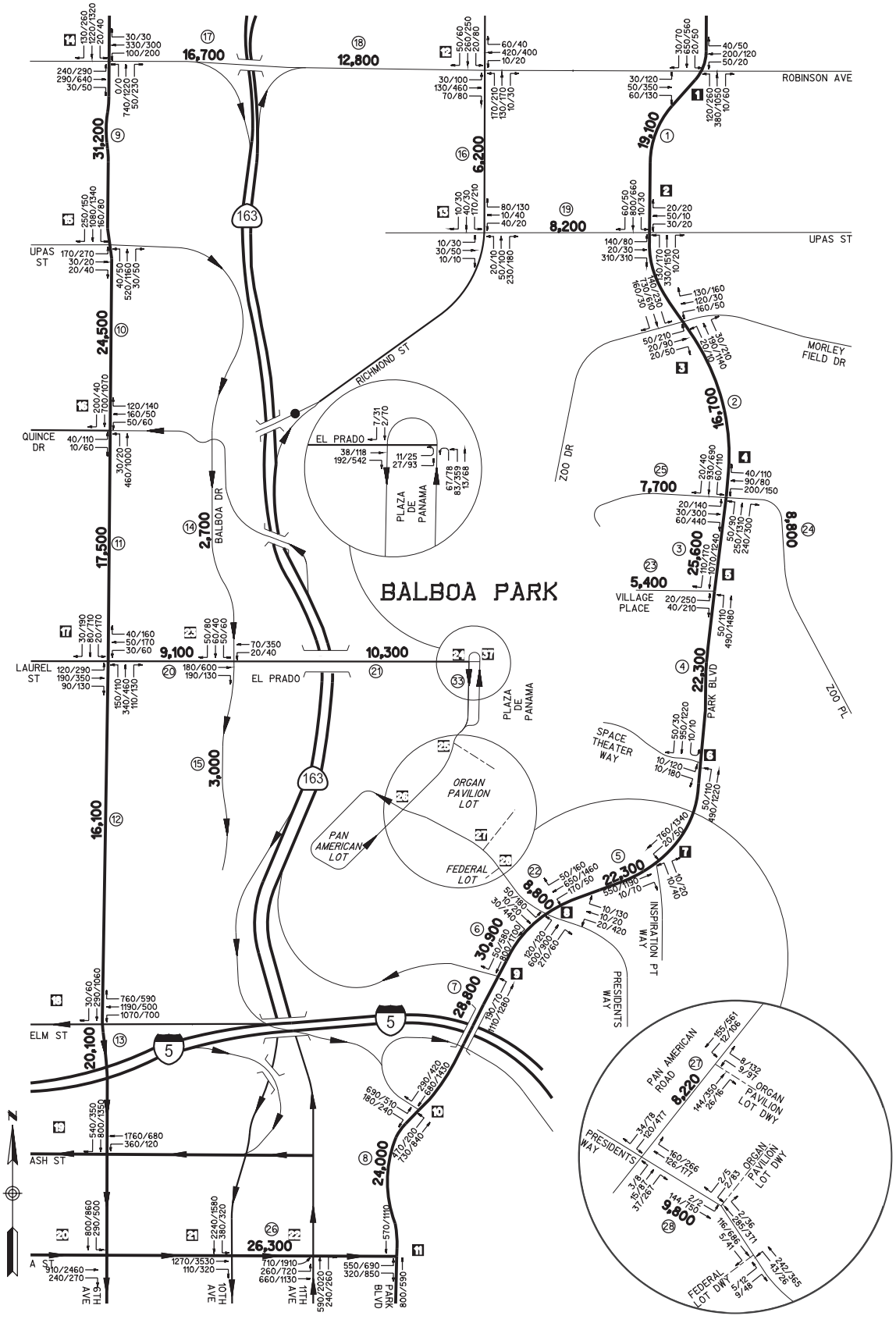
Map Source: Rick Engineering, January 2012



Note: Project does not add or redistribute traffic on external roadways. Thus, the with and without scenarios have identical traffic volume on the external roadways. This graphic illustrates the proposed internal roadway configuration and volumes.

LEGEND

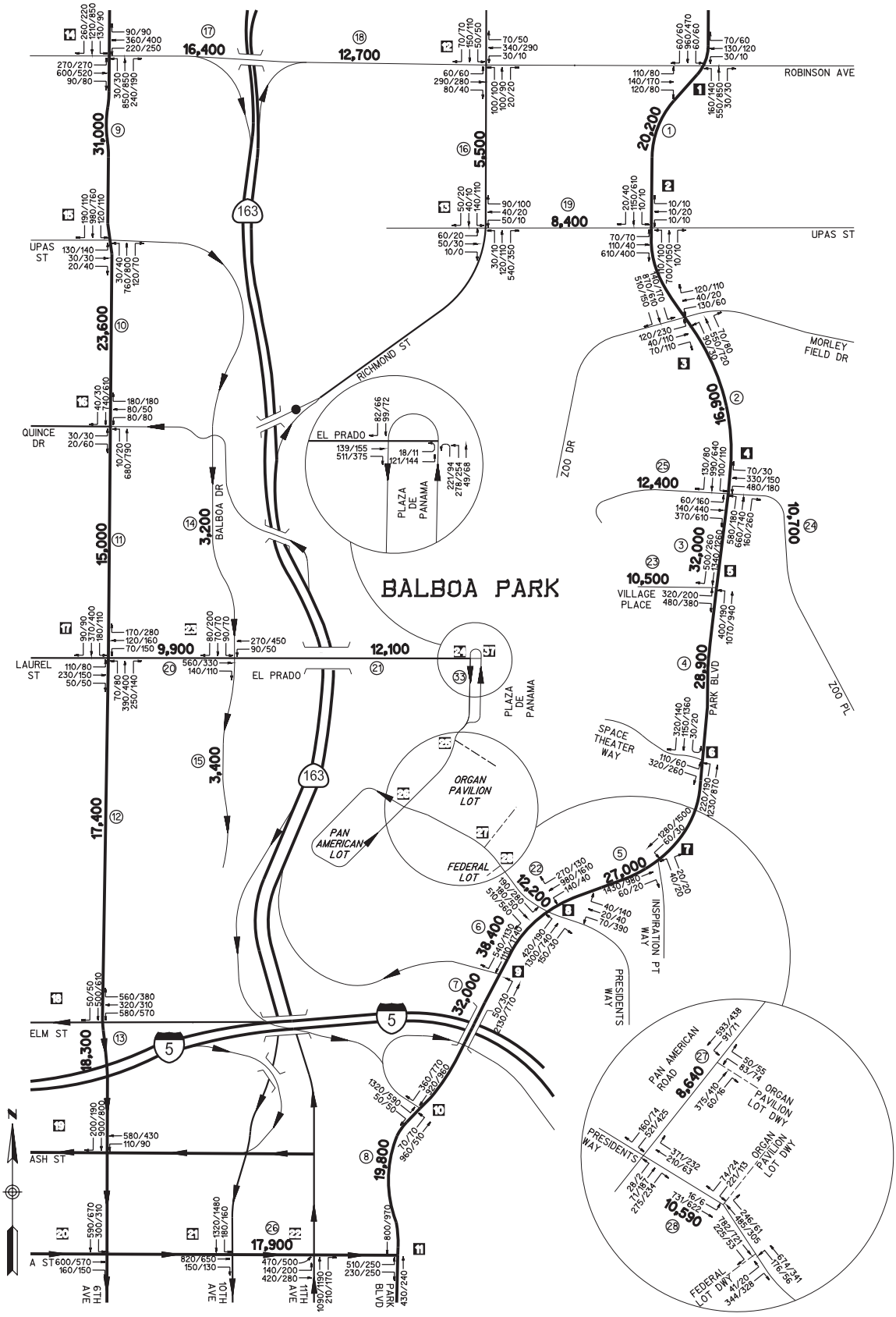
XXXX = ADT
XXXX/XXXX = AM/PM PEAK HR
O O O = NO VEHICULAR ACCESS
— — — = PROPOSED ROADWAY
– – – = PROPOSED DRIVEWAY
= PROPOSED PARKING GARAGE
X = INTERSECTION NUMBER
(X) = SEGMENT NUMBER

No Scale

FIGURE 4.4-13

Year 2030 Traffic Volumes - Weekday

Map Source: Rick Engineering, January 2012



Note: Project does not add or redistribute traffic on external roadways. Thus, the with and without scenarios have identical traffic volume on the external roadways. This graphic illustrates the proposed internal roadway configuration and volumes.

LEGEND

- XXXX = ADT
- XXXX/XXXX = AM/PM PEAK HR
- = NO VEHICULAR ACCESS
- = PROPOSED ROADWAY
- = PROPOSED DRIVEWAY
- = PROPOSED PARKING GARAGE
- X = INTERSECTION NUMBER
- (X) = SEGMENT NUMBER

No Scale

FIGURE 4.4-14

Year 2030 Traffic Volumes - Weekend

Street Segments

Table 4.4-10 shows the year 2030 without project traffic street segment analysis. As shown, all street segments are projected to operate at acceptable level of service in the year 2030 condition without the project except the following nine:

- Park Boulevard between Robinson Avenue and Upas Street (LOS F)
- Sixth Avenue between Robinson Avenue and Upas Street (LOS F)
- Sixth Avenue between Elm Street–I-5 northbound off ramp and Ash Street (LOS E)
- Robinson Avenue between Sixth Avenue and Vermont Street (LOS F)
- El Prado between Sixth Avenue and Balboa Drive (LOS E)
- El Prado between Balboa Drive and Plaza de Panama (LOS F)
- A Street between Sixth Avenue and Park Boulevard (LOS F)
- Presidents Way east of Pan American Road (LOS E)
- The Mall south of El Prado (LOS F)

Intersections

Tables 4.4-11 and 4.4-12 show the traffic analysis for external and internal intersections for the year 2030 without project conditions, respectively. Under the year 2030 without project conditions, all external intersections would operate at acceptable LOS D or better except the following four (see Table 4.4-11):

- Park Boulevard/Space Theatre Way (eastbound left turn, LOS F, PM peak on weekdays and LOS F, AM and PM peaks on the weekend)
- Park Boulevard/Presidents Way (LOS E, PM peak on weekday and LOS E, AM peak, LOS F, PM peak on the weekend)
- Park Boulevard/SR-163 northbound on ramp (LOS E, PM peak on the weekend)
- Sixth Avenue/Robinson Avenue (LOS F, PM peak, weekday and LOS F, AM peak, and LOS E, PM peak on the weekend).

Table 4.4-12 shows that all internal intersections would operate at acceptable LOS D or better under the year 2030 without the project conditions, except the following five:

- El Prado/Plaza de Panama (northbound, eastbound and southbound, LOS F on the weekend)

TABLE 4.4-10
2030 AND 2030+ PROJECT ROADWAY SEGMENT ANALYSIS (WEEKDAY)

	Roadway Segment	Functional Classification/Lanes	Future Classification/Lanes	LOS E Capacity	2030 No Project			2030 + Project				
					ADT	V/C Ratio	LOS	ADT	V/C Ratio	LOS	Incremental V/C Ratio	Significant Project Impact Yes/No
1	Park Boulevard between Robinson Avenue and Upas Street	2 Lane Collector[1]	4 Lane Major	15,000	19,100	1.273	**F**	19,100	1.273	**F**	0.000	NO
2	Park Boulevard between Upas Street and Zoo Place	4 Lane Major	4 Lane Major	40,000	16,700	0.418	B	16,700	0.418	B	0.000	NO
3	Park Boulevard between Zoo Place and Village Place	4 Lane Major	4 Lane Major	40,000	25,600	0.640	C	25,600	0.640	C	0.000	NO
4	Park Boulevard between Village Place and Space Theater Way	4 Lane Major	4 Lane Major	40,000	22,300	0.558	C	22,300	0.558	C	0.000	NO
5	Park Boulevard between Space Theater Way and Presidents Way	4 Lane Major	4 Lane Major	40,000	22,300	0.558	C	22,300	0.558	C	0.000	NO
6	Park Boulevard between Presidents Way and SR-163 NB Ramps	4 Lane Major	4 Lane Major	40,000	30,900	0.773	D	30,900	0.773	D	0.000	NO
7	Park Boulevard between SR-163 NB Ramps and SR-163 SB Ramps	4 Lane Major	4 Lane Major	40,000	28,800	0.720	C	28,800	0.720	C	0.000	NO
8	Park Boulevard between SR-163 SB Ramps and A Street	4 Lane Major	4 Lane Major	40,000	24,000	0.600	C	24,000	0.600	C	0.000	NO
9	Sixth Avenue between Robinson Avenue and Upas Street	4 Lane Collector	4 Lane Major	30,000	31,200	1.040	**F**	31,200	1.040	**F**	0.000	NO
10	Sixth Avenue between Upas Street and Quince Drive	4 Lane Collector	4 Lane Major	30,000	24,500	0.817	D	24,500	0.817	D	0.000	NO
11	Sixth Avenue between Quince Drive and El Prado	4 Lane Collector	4 Lane Major	30,000	17,500	0.583	C	17,500	0.583	C	0.000	NO
12	Sixth Avenue between El Prado and Elm Street-I-5 NB Off Ramp	4 Lane Collector	4 Lane Major	30,000	16,100	0.537	C	16,100	0.537	C	0.000	NO
13	Sixth Avenue between Elm Street-I-5 NB Off Ramp and Ash Street	3 Lane One Way[2]	3 Lane One Way[2]	22,500	20,100	0.893	**E**	20,100	0.893	**E**	0.000	NO
14	Balboa Drive between Quince Drive and El Prado*	2 Lane Park Road*	2 Lane Park Road*	10,000	2,700	0.270	A	2,700	0.270	A	0.000	NO
15	Balboa Drive between El Prado and Juniper Road*	2 Lane Park Road*	2 Lane Park Road*	10,000	3,000	0.300	A	3,000	0.300	A	0.000	NO
16	Richmond Street between Robinson Avenue and Upas Street	2 Lane Collector	2 Lane Collector	10,000	6,200	0.620	C	6,200	0.620	C	0.000	NO
17	Robinson Avenue between Sixth Avenue and Vermont Street	2 Lane Collector	3 Lane Collector	10,000	16,700	1.670	**F**	16,700	1.670	**F**	0.000	NO
18	Robinson Avenue between Vermont Street and Park Boulevard	2 Lane Collector[1]	3 Lane Collector	15,000	12,800	0.853	D	12,800	0.853	D	0.000	NO
19	Upas Street between Richmond Street and Park Boulevard	2 Lane Collector	2 Lane Collector	10,000	8,200	0.820	D	8,200	0.820	D	0.000	NO
20	El Prado between Sixth Avenue and Balboa Drive*	2 Lane Park Road*	2 Lane Park Road*	10,000	9,100	0.910	**E**	9,100	0.910	**E**	0.000	NO
21	El Prado between Balboa Drive and Plaza De Panama*	2 Lane Park Road*	2 Lane Park Road*	10,000	10,300	1.030	**F**	10,300	1.030	**F**	0.000	NO
22	Presidents Way west of Park Boulevard*	2 Lane Park Road*	2 Lane Park Road*	10,000	8,800	0.880	D	8,800	0.880	D	0.000	NO
23	Village Place just west of Park Boulevard*	2 Lane Park Road*	2 Lane Park Road*	10,000	5,400	0.540	B	5,400	0.540	B	0.000	NO
24	Zoo Place east of Park Boulevard	2 Lane Collector	2 Lane Collector	10,000	8,800	0.880	D	8,800	0.880	D	0.000	NO
25	Zoo Place west of Park Boulevard*	2 Lane Park Road*	2 Lane Park Road*	10,000	7,700	0.770	D	7,700	0.770	D	0.000	NO
26	A Street between Sixth Avenue and Park Boulevard	3 Lane One Way[2]	3 Lane One Way[2]	22,500	26,300	1.169	**F**	26,300	1.169	**F**	0.000	NO
27	Pan American Road north of Presidents Way*	2 Lane Park Road*	2 Lane Park Road*	10,000	8,220	0.822	D	-[3]	-[3]	-[3]	-[3]	-[3]
28	Presidents Way east of Pan American Road*	2 Lane Park Road*	2 Lane Park Road*	10,000	9,800	0.980	**E**	-[4]	-[4]	-[4]	-[4]	-[4]
29	Centennial Bridge south of El Prado*	2 Lane Park Road*	2 Lane Park Road*	10,000	DNE	DNE	DNE	10,300	1.030	**F**	-	NO[5]
30	Centennial Road north of Presidents Way*	2 Lane Park Road*	2 Lane Park Road*	10,000	DNE	DNE	DNE	0.832	0.832	D	-	NO
31	Presidents Way west of Centennial Road*	2 Lane Park Road*	2 Lane Park Road*	10,000	DNE	DNE	DNE	6,500	0.650	C	-0.330[6]	NO[6]
33	The Mall south of El Prado	2 Lane Park Road*	2 Lane Park Road*	10,000	10,300	1.030	**F**	-[7]	-[7]	-[7]	-[7]	-[7]

LOS = Level of service; DNE = Does not exist
Segments operating at unacceptable levels (e.g., LOS E or F) shown in **bold**
Significant impact: LOS D or better to LOS E or worse
Incremental V/C ratio ≥ 0.02 for LOS E
Incremental V/C ratio ≥ 0.01 for LOS F

*Park roads (maximum capacity estimated at 10,000 ADT)
[1]With two-way left-turn lane
[2]Estimated capacity (3/4 of 4-lane collector)
[3]As the project would result in less traffic on this internal roadway, the project would inherently not have a significant traffic impact on this roadway and a LOS impact analysis of this roadway was not completed.
[4]Under the proposed project condition, this segment is analyzed as a part of the Presidents Way west of Centennial Road segment.
[5]While Centennial Road does not currently exist, this portion of Presidents Way exists as Presidents Way east of Pan American Road and the associated traffic volumes were utilized for this roadway segment analysis.
[6]Under the proposed project conditions, the Mall would be closed to vehicular traffic.

TABLE 4.4-11
2030 AND 2030 + PROJECT EXTERNAL INTERSECTION LOS ANALYSIS

WEEKDAY

			2030 No Project		2030 + Project			
	Intersection	Control	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS	Incremental Delay	Significant Project Impact Yes/No
1	Park Boulevard/Robinson Avenue							
	AM	Signal	17.5	B	17.5	B	0.0	No
	PM		31.0	C	31.0	C	0.0	No
2	Park Boulevard/Upas Street							
	AM	Signal	24.8	C	24.8	C	0.0	No
	PM		24.1	C	24.1	C	0.0	No
3	Park Boulevard/Morley Field Drive							
	AM	Signal	19.2	B	19.2	B	0.0	No
	PM		22.6	C	22.6	C	0.0	No
4	Park Boulevard/Zoo Place							
	AM	Signal	16.7	B	16.7	B	0.0	No
	PM		29.3	C	29.3	C	0.0	No
5	Park Boulevard/Village Place							
	AM	Signal	4.6	A	4.6	A	0.0	No
	PM		13.1	B	13.1	B	0.0	No
6	Park Boulevard/Space Theatre Way							
	Northbound Left							
	AM		10.6	B	10.6	B	0.0	No
	PM	NA	12.9	B	12.9	B	0.0	No
	Eastbound Left							
	AM		15.1	C	15.1	C	0.0	No
	PM		112.1	F	112.1	F	0.0	No
7	Park Boulevard/Inspiration Way							
	AM	Signal	3.0	A	3.0	A	0.0	No
	PM		4.7	A	4.7	A	0.0	No
8	Park Boulevard/Presidents Way							
	AM	Signal	14.7	B	14.7	B	0.0	No
	PM		62.0	E	62.0	E	0.0	No
9	Park Boulevard/SR-163 NB Ramps							
	Northbound Left	NA						
	AM		10.9	B	10.9	B	0.0	No
	PM		28.4	D	28.4	D	0.0	No
10	Park Boulevard/I-5 Ramps							
	AM	Signal	38.4	D	38.4	D	0.0	No
	PM		43.6	D	43.6	D	0.0	No
11	Park Boulevard/A Street							
	AM	Signal	12.5	B	12.5	B	0.0	No
	PM		20.1	C	20.1	C	0.0	No
12	Richmond Street/Robinson Avenue							
	AM	Signal	16.7	B	16.7	B	0.0	No
	PM		17.3	B	17.3	B	0.0	No
13	Richmond Street/Upas Street							
	AM	All Way Stop	9.6	A	9.6	A	0.0	No
	PM		10.6	B	10.6	B	0.0	No
14	Sixth Avenue/Robinson Avenue							
	AM	Signal	30.6	C	30.6	C	0.0	No
	PM		103.0	F	103.0	F	0.0	No
15	Sixth Avenue/Upas Street-Balboa Dr.							
	AM	Signal	11.1	B	11.1	B	0.0	No
	PM		15.3	B	15.3	B	0.0	No
16	Sixth Avenue/Quince Drive							
	AM	Signal	18.7	B	18.7	B	0.0	No
	PM		16.9	B	16.9	B	0.0	No
17	Sixth Avenue/Laurel Street							
	AM	Signal	13.7	B	13.7	B	0.0	No
	PM		17.8	B	17.8	B	0.0	No
18	Sixth Avenue/Elm Street-I-5 NB Off Ramp							
	AM	Signal	31.1	C	31.1	C	0.0	No
	PM		17.6	B	17.6	B	0.0	No
19	Sixth Avenue/Ash Street							
	AM	Signal	14.7	B	14.7	B	0.0	No
	PM		11.7	B	11.7	B	0.0	No
20	Sixth Avenue/A Street							
	AM	Signal	13.1	B	13.1	B	0.0	No
	PM		17.6	B	17.6	B	0.0	No
21	A Street/10th Avenue							
	AM	Signal	15.7	B	15.7	B	0.0	No
	PM		42.1	D	42.1	D	0.0	No
22	A Street/11th Avenue							
	AM	Signal	13.0	B	13.0	B	0.0	No
	PM		21.6	C	21.6	C	0.0	No
23	Balboa Drive/El Prado							
	AM	All Way Stop	8.9	A	8.9	A	0.0	No
	PM		27.5	D	27.5	D	0.0	No

TABLE 4.4-11
2030 AND 2030 + PROJECT EXTERNAL INTERSECTION LOS ANALYSIS (continued)

WEEKEND

			2030 No Project		2030 + Project			
	Intersection	Control	Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS	Incremental Delay	Significant Project Impact Yes/No
1	Park Boulevard/Robinson Avenue							
	AM	Signal	16.5	B	16.5	B	0.0	No
	PM		15.5	B	15.5	B	0.0	No
2	Park Boulevard/Upas Street							
	AM	Signal	51.3	D	51.3	D	0.0	No
	PM		23.3	C	23.3	C	0.0	No
3	Park Boulevard/Morley Field Drive							
	AM	Signal	19.3	B	19.3	B	0.0	No
	PM		20.7	C	20.7	C	0.0	No
4	Park Boulevard/Zoo Place							
	AM	Signal	36.1	D	36.1	D	0.0	No
	PM		27.4	C	27.4	C	0.0	No
5	Park Boulevard/Village Place							
	AM	Signal	37.7	D	37.7	D	0.0	No
	PM		19.3	B	19.3	B	0.0	No
6	Park Boulevard/Space Theatre Way							
	Northbound Left							
	AM		19.4	C	19.4	C	0.0	No
	PM	NA	18.5	C	18.5	C	0.0	No
	Eastbound Left							
	AM		460.8	**F**	460.8	**F**	0.0	No
	PM		168.8	**F**	168.8	**F**	0.0	No
7	Park Boulevard/Inspiration Way							
	AM	Signal	4.9	A	4.9	A	0.0	No
	PM		4.0	A	4.0	A	0.0	No
8	Park Boulevard/Presidents Way							
	AM	Signal	54.6	D	54.6	D	0.0	No
	PM		126.4	**F**	126.4	**F**	0.0	No
9	Park Boulevard/SR-163 NB Ramps							
	Northbound Left	NA						
	AM		15.5	C	15.5	C	0.0	No
	PM		40.7	**E**	40.7	**E**	0.0	No
10	Park Boulevard/I-5 Ramps							
	AM	Signal	32.6	C	32.6	C	0.0	No
	PM		23.8	C	23.8	C	0.0	No
11	Park Boulevard/A Street							
	AM	Signal	14.2	B	14.2	B	0.0	No
	PM		16.4	B	16.4	B	0.0	No
12	Richmond Street/Robinson Avenue							
	AM	Signal	14.6	B	14.6	B	0.0	No
	PM		14.4	B	14.4	B	0.0	No
13	Richmond Street/Upas Street							
	AM	All Way Stop	29.2	D	29.2	D	0.0	No
	PM		11.7	B	11.7	B	0.0	No
14	Sixth Avenue/Robinson Avenue							
	AM	Signal	151.7	**F**	151.7	**F**	0.0	No
	PM		75.5	**E**	75.5	**E**	0.0	No
15	Sixth Avenue/Upas Street-Balboa Dr.							
	AM	Signal	9.5	A	9.5	A	0.0	No
	PM		12.4	B	12.4	B	0.0	No
16	Sixth Avenue/Quince Drive							
	AM	Signal	21.6	C	21.6	C	0.0	No
	PM		20.0	B	20.0	B	0.0	No
17	Sixth Avenue/Laurel Street							
	AM	Signal	15.7	B	15.7	B	0.0	No
	PM		15.4	B	15.4	B	0.0	No
18	Sixth Avenue/Elm Street-I-5 NB Off Ramp							
	AM	Signal	11.3	B	11.3	B	0.0	No
	PM		12.5	B	12.5	B	0.0	No
19	Sixth Avenue/Ash Street							
	AM	Signal	11.8	B	11.8	B	0.0	No
	PM		10.9	B	10.9	B	0.0	No
20	Sixth Avenue/A Street							
	AM	Signal	12.1	B	12.1	B	0.0	No
	PM		11.9	B	11.9	B	0.0	No
21	A Street/10th Avenue							
	AM	Signal	12.5	B	12.5	B	0.0	No
	PM		11.4	B	11.4	B	0.0	No
22	A Street/11th Avenue							
	AM	Signal	10.8	B	10.8	B	0.0	No
	PM		10.0	B	10.0	B	0.0	No
23	Balboa Drive/El Prado							
	AM	All Way Stop	24.7	C	24.7	C	0.0	No
	PM		21.9	C	21.9	C	0.0	No

LOS = Level of service; Minor approach delay reported for unsignalized intersections
Intersections operating at unacceptable levels (e.g., LOS E or F) shown in **bold**
Significant impact: 1) LOS D or better to LOS E or worse
2) Incremental delay ≥ 2 seconds for LOS E
3) Incremental delay ≥ 1 second for LOS F

TABLE 4.4-12
2030 AND 2030 + PROJECT INTERNAL INTERSECTION LOS ANALYSIS

2030 WITHOUT PROJECT

	Intersection	Control	2030 No Project			
			Weekday		Weekend	
			Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS
24/37	El Prado/Plaza de Panama	Stop				
	AM					
	Eastbound		8.2	A	>50	**F**
	Southbound		8.1	A	>50	**F**
	Northbound		12.4	B	>50	**F**
25	Pan American Road/Organ Pavilion Lot	Stop				
	AM					
	Southbound Left		0.6	A	2.2	A
	Westbound Shared Left-Right		10.1	B	44.5	**E**
26	Pan American Road/Presidents Way	All Way Stop				
	AM		9.2	A	>50	**F**
27	Presidents Way/Organ Pavilion Lot	Stop				
	AM					
	Southbound Shared Left-Right		10.8	B	>50	**F**
	Eastbound Left		0.1	A	0.6	A
28	Presidents Way/Federal-Aerospace Lot	Stop				
	AM					
	Northbound Shared Left-Right		10.1	B	>50	**F**
	Westbound Left		1.4	A	8.2	A

2030 WITH PROJECT

	Intersection	Control	2030 + Project			
			Weekday		Weekend	
			Control Delay (sec/veh)	LOS	Control Delay (sec/veh)	LOS
28	Presidents Way/Federal-Aerospace Lot	Stop				
	AM					
	Northbound Shared Left-Right		9.9	A	34.5	D
	Westbound Left		7.5	A	10.9	B
29	El Prado/Centennial Road	All Way Stop				
	AM		7.9	A	26.1	D
30	Centennial Road/ADA Parking & Valet Operations	Stop				
	AM					
	Southbound Shared Left-Right		9.9	A	18.6	C
	Westbound Left		0.2	A	0.2	A
	Northbound Left-Right		10.3	B	19.7	C
31	Centennial Road/ADA Parking & Valet Operations	Stop				
	AM					
	Northbound Shared Left-Right		10.2	B	19.9	C
	Eastbound Left		0.1	A	0.6	A
	Westbound Left		0.2	A	0.4	A
32	Centennial Road/Parking Garage North Entrance/Exit	Stop				
	AM					
	Northbound Left		7.8	A	9.4	A
	Eastbound Left		9.7	A	17.0	C
33	Centennial Road/Parking Garage South Entrance/Exit	Stop				
	AM					
	Northbound Left		7.7	A	9.7	A
	Eastbound Left		10.1	B	18.3	C
	Eastbound Right		9.1	A	16.1	C
34	Presidents Way/Centennial Road	Stop				
	AM					
	Eastbound Left		7.6	A	9.1	A
	Southbound Left		9.6	A	>50	**F**
	Southbound Right		9.1	A	10.4	B

LOS = Level of service; Minor approach delay reported for unsignalized intersections
Intersections operating at unacceptable levels (e.g., LOS E or F) shown in **bold**

Significant impact: 1) LOS D or better to LOS E or worse
2) Incremental delay ≥ 2 seconds for LOS E
3) Incremental delay ≥ 1 second for LOS F

- Pan American Road/Organ Pavilion lot (westbound shared left-right, LOS E on the weekend)
- Pan American Road/Presidents Way (LOS F on the weekend)
- Presidents Way/Organ Pavilion lot (southbound shared left-right, LOS F on the weekend)
- Presidents Way/Federal Building-Aerospace lot (northbound shared left-right, LOS F on the weekend)

Year 2030 with Project

This condition analyzes the year 2030 traffic volumes with the project. As discussed previously, the project would have no impact to external roadways and intersections. The year 2030 with project weekday volumes are illustrated on Figure 4.4-15 and the corresponding weekend volumes are shown in Figure 4.4-16.

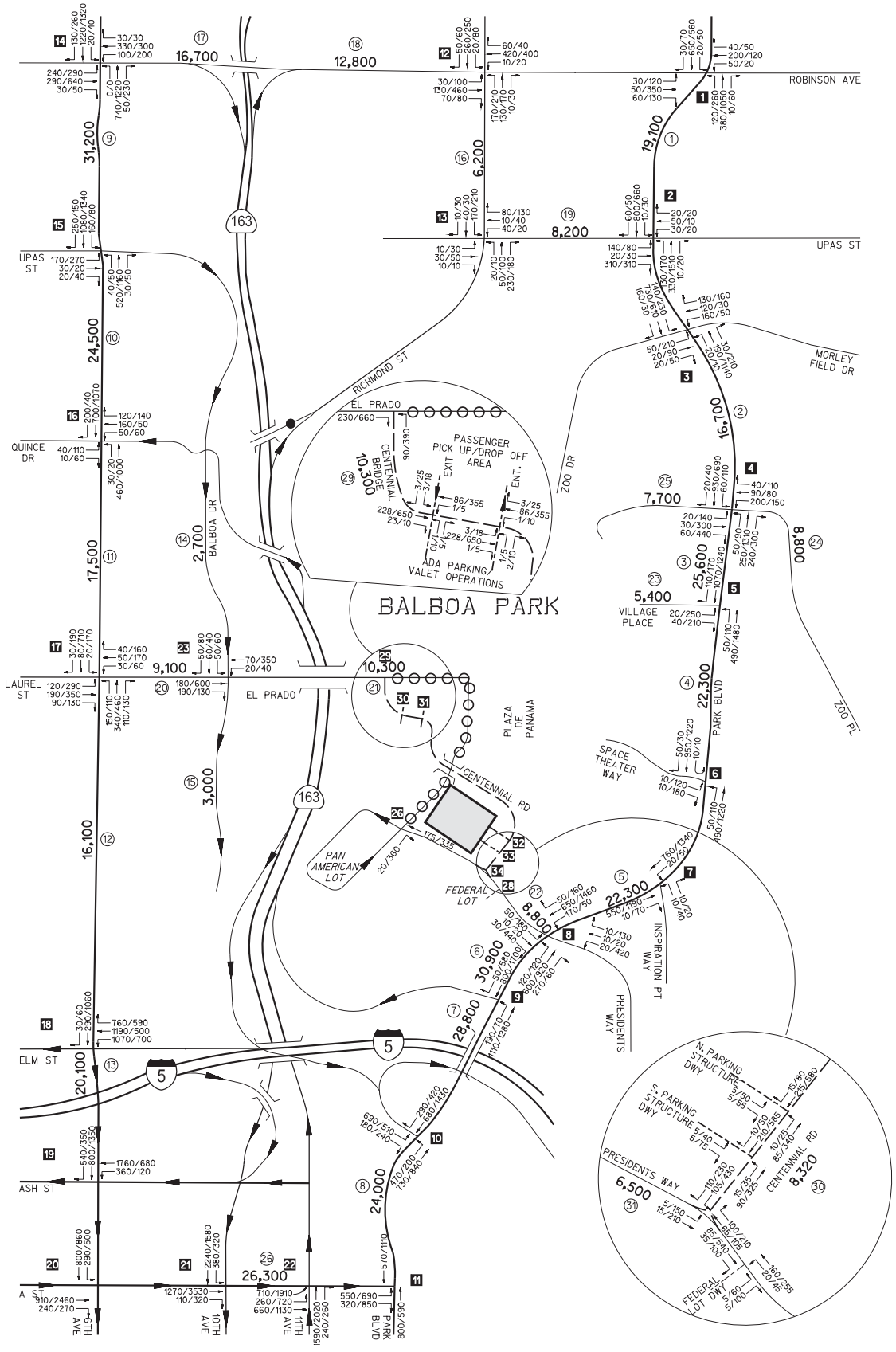
Street Segments

As shown in Table 4.4-10, all street segments would operate at acceptable levels under the year 2030 plus project conditions, except the following eight:

- Park Boulevard between Robinson Avenue and Upas Street (LOS F)
- Sixth Avenue between Robinson Avenue and Upas Street (LOS F)
- Sixth Avenue between Elm Street–I-5 northbound off ramp and Ash Street (LOS E)
- Robinson Avenue between 6th Avenue and Vermont Street (LOS F)
- El Prado between Sixth Avenue and Balboa Drive (LOS E)
- El Prado between Balboa Drive and Plaza de Panama (LOS F)
- A Street between Sixth Avenue and Park Boulevard (LOS F)
- Centennial Bridge south of El Prado (LOS F)

The project would have no impact to these roadway segments, as the project would not result in traffic volumes changes on these roadways nor would the project alter the roadway capacities.

Map Source: Rick Engineering, January 2012



Note: Project does not add or redistribute traffic on external roadways. Thus, the with and without scenarios have identical traffic volume on the external roadways. This graphic illustrates the proposed internal roadway configuration and volumes.

LEGEND

- XXXX = ADT
- XXXX/XXXX = AM/PM PEAK HR
- = NO VEHICULAR ACCESS
- = PROPOSED ROADWAY
- = PROPOSED DRIVEWAY
- = PROPOSED PARKING GARAGE
- X = INTERSECTION NUMBER
- (X) = SEGMENT NUMBER

No Scale

FIGURE 4.4-15

Year 2030 Plus Project Traffic Volumes - Weekday

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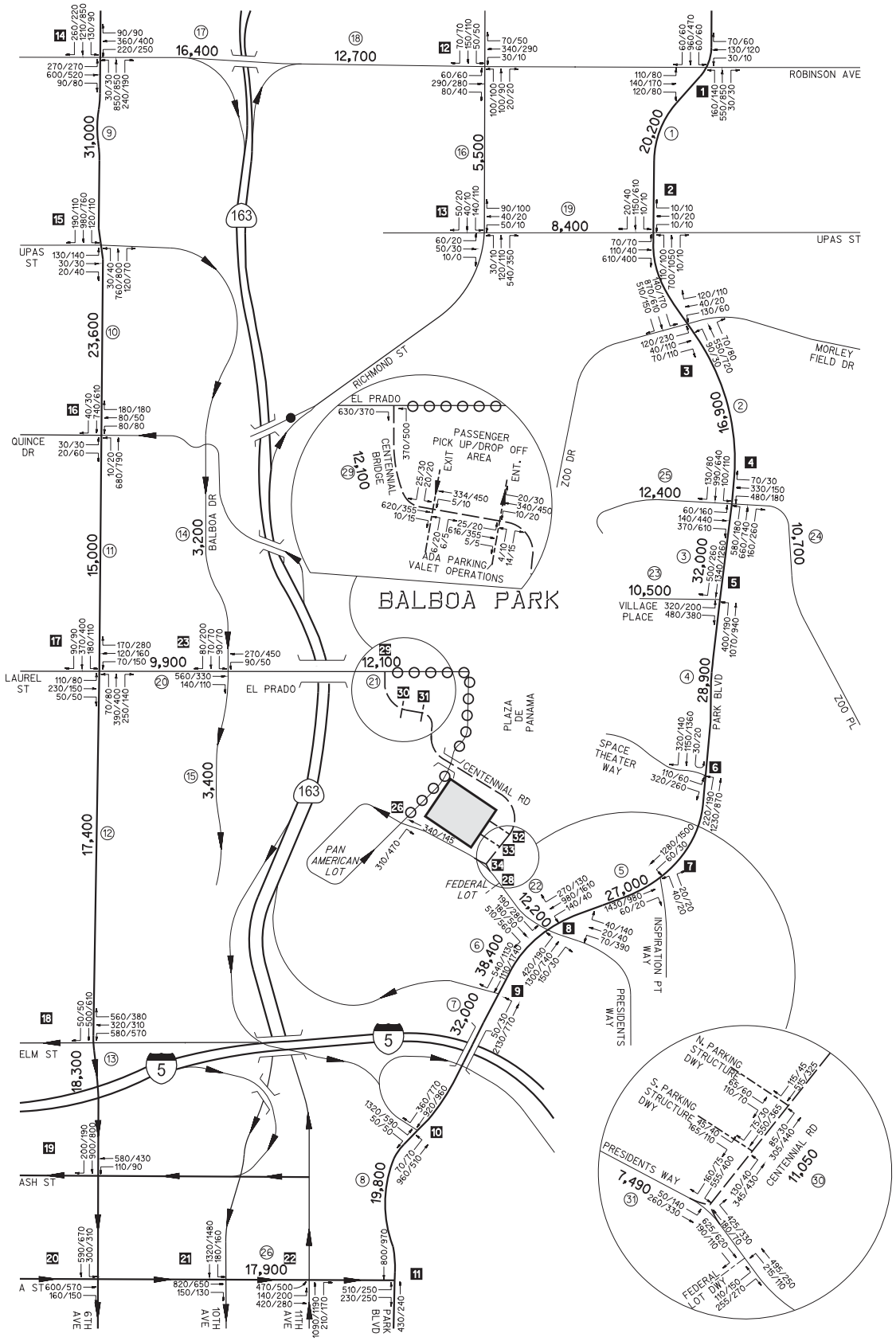
Map Source: Rick Engineering, January 2012



Note: Project does not add or redistribute traffic on external roadways. Thus, the with and without scenarios have identical traffic volume on the external roadways. This graphic illustrates the proposed internal roadway configuration and volumes.

LEGEND

- XXXX = ADT
- XXXX/XXXX = AM/PM PEAK HR
- = NO VEHICULAR ACCESS
- = PROPOSED ROADWAY
- = PROPOSED DRIVEWAY
- = PROPOSED PARKING GARAGE
- X = INTERSECTION NUMBER
- (X) = SEGMENT NUMBER

No Scale

FIGURE 4.4-16

Year 2030 Plus Project Traffic Volumes - Weekend

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Intersections

Tables 4.4-11 and 4.4-12 show the traffic analysis for external and internal intersections in the year 2030 with project, respectively. Under the year 2030 with project conditions, all external intersections would operate at acceptable LOS D or better except the following four (see Table 4.4-11):

- Park Boulevard/Space Theatre Way (eastbound left turn, LOS F, PM peak on weekdays and LOS F, AM and PM peaks on the weekend)
- Park Boulevard/Presidents Way (LOS E, PM peak on weekday and LOS E, AM peak, LOS F, PM peak on the weekend)
- Park Boulevard/SR-163 northbound on ramp (LOS E, PM peak on the weekend)
- Sixth Avenue/Robinson Avenue (LOS F, PM peak, weekday and LOS F, AM peak, and LOS E, PM peak on the weekend).

The project would have no impact to traffic at these external intersections, as the project would not result in volume or delay changes or delays at these locations.

Table 4.4-12 shows that all internal intersections would operate at acceptable LOS D or better under the year 2030 with the project conditions, except the following one:

- Presidents Way/Centennial Road (southbound left, LOS F on the weekend)

The traffic analysis did not complete a without project intersection analysis at the Presidents Way/Centennial Road intersection, as Centennial Road does not currently exist; however, there is currently an intersection at this location (Presidents Way/Gold Gulch). This intersection in the year 2030 without the project would experience low traffic volumes and is assumed to operate at an acceptable LOS, as the Gold Gulch parking lot only contains 43 parking spaces and is typically underutilized (PCI 2011). The project would result in a significant increase in utilization of this intersection in the year 2030 considering through traffic would be rerouted through this intersection, and would result in operations of LOS F.

4.4.2.2 Significance of Impacts

a. Construction Impacts

With the addition of the worst-case construction traffic, intersections and segments would continue to operate at acceptable levels. Thus, construction traffic impacts would be less than significant.

b. Existing Plus Project Conditions Impacts

As indicated in Section 4.4.2.1(b), all segments and intersections would operate at acceptable levels under the existing plus project conditions. Thus, project impacts would be less than significant.

c. Near-term (Year 2015) Plus Project Impacts

As indicated in Section 4.4.2.1(c), three street segments and one intersection would operate at unacceptable levels in the near-term (year 2015) with project conditions. As the project would not increase traffic volumes, increase delay or alter capacity of these roadways and this intersection, the project would have a less than significant impact to street segments and intersections in the year 2015.

d. Year 2030 Plus Project Impacts

As indicated in Section 4.4.2.1(d), eight street segments and five intersections would operate at unacceptable levels in the year 2030 with project conditions. The project would not increase traffic volumes, increase delay or alter capacity at any of these locations except one; Presidents Way/Centennial Road. The project would result in the degradation of this intersection from an acceptable operating level to LOS F due to the rerouting of traffic through this intersection. Thus, the project impact at Presidents Way/Centennial Road in the year 2030 would be significant.

4.4.2.3 Mitigation, Monitoring, and Reporting

a. Construction Activities Mitigation

The project would not result in significant construction-related traffic impacts. Thus, no mitigation is necessary.

b. Existing Plus Project Conditions Mitigation

The project would not result in significant traffic impacts to segments or intersections under the existing plus project conditions. Thus, no mitigation is necessary.

c. Near-term (Year 2015) Plus Project Mitigation

The project would not result in significant traffic impacts to segments or intersections under the near-term (year 2015) plus project conditions. Thus, no mitigation is necessary.

d. Year 2030 Plus Project Mitigation

The project would have a significant impact at the Presidents Way/Centennial Road intersection in the year 2030. The following mitigation would be implemented to reduce the impact:

TR-1: Starting in 2026, the Presidents Way/Centennial Road intersection shall be monitored for intersection failure (i.e., LOS E or F) at two year increments. If the monitoring efforts reveal that the Presidents Way/Centennial Road intersection fails, it shall be reconfigured to make the eastbound Presidents Way approach stop-controlled instead of the Centennial Road approach. The intersection monitoring shall continue until the Palisades area is converted to parkland per the Central Mesa Precise Plan, or the reconfiguration is completed.

4.4.2.4 Significance of Impacts After Mitigation

With the implementation of mitigation **TR-1**, the Presidents Way/Centennial Road intersection would operate at acceptable LOS C in the year 2030. Thus, mitigation **TR-1** would mitigate the impact at the Presidents Way/Centennial Road intersection to below a level of significant.

4.4.3 Issue 2: Circulation and Access

Would the proposal result in a substantial alteration to present circulation movements including effects on existing public access to beaches, parks, or other open space areas?

Based on the City's 2011 Significance Determination Thresholds, impacts related to circulation and access would be significant if the project would:

- Result in the construction of a roadway which is inconsistent with the General Plan and/or a community plan; or the roadway would not properly align with other existing or planned roadways.
- Result in a substantial restriction in access to publicly or privately owned land.

The thresholds referred to above are typically used for standard traffic analyses for impacts on city streets. Since the project would also affect internal Park roads and intersections, additional thresholds are needed to address these circumstances. Thus, impacts would also be significant if the project would:

- Result in pedestrian/vehicular conflicts
- Result in substantial queuing
- Result in an increase in through-park travel

4.4.3.1 Impacts

ALL PROJECT COMPONENTS

The project area does not provide access to any beaches, but does provide access to Balboa Park. As discussed under Section 4.1, the proposal to retain two-way traffic on the Cabrillo Bridge and close El Prado to through traffic is not consistent with the CMPP. However, the alignment of the Centennial Road from the Mall to the Organ Pavilion parking structure and Presidents Way is consistent with the alignment of this road as identified in the CMPP.

a. Pedestrian/Vehicular Conflicts

As described above, pedestrian/vehicular traffic conflicts exist within the core plaza areas (i.e., Plaza de California, the Mall, West El Prado, and Plaza de Panama) (see Figure 4.4-4). As described in detail in Section 3.0, the project would remove vehicular traffic from these areas and reroute the vehicular traffic around the core plaza areas to connect to existing external streets (see Figure 3-3). A tram service would be provided via Pan American Road East for all Park users, including the disabled (see Figure 3-30). Pedestrian access would be provided along the proposed access road and would be preserved within the remaining project area (see Figure 3-31). A pedestrian bridge would provide direct pedestrian access from the Alcazar parking lot to the Plaza de Panama. The Palm Canyon Walkway would be preserved, but rerouted and extended. The project would maintain bicycle access (see Figure 3-32).

With the removal of public vehicular traffic from the internal plaza areas, pedestrian access would be improved and the majority of existing pedestrian/vehicular conflicts would be reduced. The existing pedestrian-vehicular conflict within the Alcazar parking lot would be reduced by providing designated raised pedestrian crossings and a designated pick-up/drop-off lane (see Figures 3-18 and 3-21), but it is not feasible to eliminate it considering it is necessary to provide a through traffic lane that connects to the Centennial Bridge.

While the project proposes additional tram service, conflicts with pedestrians would be minimal since trams would travel at low speeds along designated routes and would be oriented to accommodate and serve pedestrians. ADA access would be provided, as shown on Figures 3-19 and 3-21. Overall, the project would improve internal vehicular and pedestrian traffic circulation.

b. Queuing

Queuing at the proposed parking structure access would be minimal since the pay on foot method could handle more volume (services between 380 to 800 people per hour) than the expected peak hour traffic volume (200 vehicles per hour).

c. Through-Park Travel

The BPMP and CMPP contain policies that discourage through-park traffic. The TIA includes an analysis of cross park travel times pre- and post-project in order to determine whether there would be an increase in drivers using the Park as a shortcut between the West Mesa and Park Boulevard. The travel path on which the analysis is based is along El Prado from the west side of the Plaza de California, through the Plaza de Panama, south along Pan American Road, then east along Presidents Way to the intersection of Presidents Way and the Gold Gulch access road which totals 0.5 mile. The project would introduce a new stop-controlled intersection at El Prado/Centennial Road, pedestrian crossings at the Alcazar parking lot and a new unsignalized intersection at Centennial Road/Presidents Way. However, the project would shorten the travel distance by approximately 0.05 mile.

Based on the lineal feet of travel roadway, intersection control, pedestrian crossings (minimum of 100 pedestrian crossings per hour), and an assumed travel speed of 15 mph; the TIA estimated that the existing travel time within the core of the Park is approximately 2 minutes and 50 seconds. Comparatively, the project is estimated to have a travel time of 2 minutes and 13 seconds.

With the estimated travel time for the project being approximately 37 seconds less than existing, the TIA estimates that cut through traffic between the West Mesa and Park Boulevard/Inspiration Point (and vice versa) would not increase substantially compared to the existing condition.

4.4.3.2 Significance of Impacts

The project would alter the internal circulation in the northwestern area of Balboa Park. This internal access change would reduce pedestrian/vehicular conflicts, and would not result in substantial queuing. Thus, project impacts to circulation and access would be less than significant.

The TIA estimates that the average cross park travel time for cut-through traffic would decrease by 37 seconds as a result of project implementation. This would not be a significant increase compared to the existing condition. There is no City significance determination threshold for travel time, thus the significance of this impact cannot be evaluated.

4.4.3.3 Mitigation, Monitoring and Reporting

Project impacts to circulation and access would be less than significant; no mitigation would be required.

4.4.4 Issue 3: Parking

Would the proposal result in an increased demand for off-site parking and/or existing parking?

Would the proposal result in effects on existing parking?

Based on the 2011 Significance Determination Thresholds, non-compliance with the City's parking ordinance does not necessarily constitute a significant environmental impact. However, it can lead to a decrease in the availability of existing public parking in the vicinity of the project. Generally, if a project is deficient by more than 10 percent of the required amount of parking and at least one of the following criteria applies, then a significant impact may result:

- The project's parking shortfall or displacement of existing parking would substantially affect the availability of parking in an adjacent residential area, including the availability of public parking.
- The parking deficiency would severely impede the accessibility of a public facility, such as a park or beach.

4.4.4.1 Impacts

ALL PROJECT COMPONENTS

a. Construction Impacts

The project would result in the loss of approximately 70 parking stalls in the Organ Pavilion parking lot during Phase I. Based on Park records and previous studies (Tilghman 2006), there is sufficient current capacity at the Federal Building and Inspiration Point parking lots to handle the temporary parking loss. The project would require construction workers to park at these lots and would provide a tram for transport between the Inspiration Point parking lot and Plaza de Panama.

Once the Organ Pavilion parking structure is complete in Phase II, parking would be rerouted from the existing Alcazar parking lot to the new parking structure. Parking would continue to be available to visitors and employees at the Federal Building and Inspiration Point parking lots and tram service would continue to be provided by the project.

The Alcazar parking lot would continue to be closed during Phase III but the new proposed project parking structure would be open. ADA parking would continue to be available in the Plaza de Panama, Pan American lot or various ancillary lots. Construction employees would continue to be required to utilize the Inspiration Point lot and the tram service would continue to be provided by the project in Phase III.

In Phase IV, ADA parking would be eliminated in the Plaza de Panama, but would be available in the Alcazar parking lot. Adequate parking would available in the immediate project area during this phase, as the new proposed project parking structure and the Alcazar parking lot would be open.

In summary, the project would make accommodations for adequate parking for visitors and employees during construction. Therefore, impacts would be less than significant.

b. Operation Impacts

The project would permanently remove all parking from the Plaza de Panama and would construct a three-level underground paid parking structure where the existing Organ Pavilion lot is located. The existing Alcazar parking lot would be reconfigured and parking would be limited to ADA and valet spaces. Also, the valet service would utilize a portion of the bottom floor of the parking structure for "stacked parking." Overall, the project would result in a net gain of 273 parking spaces within the Central Mesa study area (see Table 3-1) and would shift the prime parking spaces from employees to visitors and ADA accessible spaces.

According to the Parking Study (see Appendix D-2), changes in parking demand in other lots would result due to the paid parking in the new parking structure. Employees and visitors would no longer have the option of parking in the Plaza de Panama or the Alcazar parking lot (with the exception of ADA parking). In addition, the Organ Pavilion parking lot would be replaced with a paid parking structure. Therefore, there would be a shift in the parking options and habits for some parkers that formerly used these facilities. It is anticipated that employees and staff would relocate to non-paid lots, including the Pan American, the Federal, and Inspiration Point parking lots.

Currently visitors recirculate throughout the Plaza de Panama in search of available parking when other, more remote lots have an adequate supply of parking. Therefore, it can be anticipated that some visitors would drive directly to the new structure where there would be the certainty of parking. This has been demonstrated in Golden Gate Park in San Francisco when paid parking in a centrally located garage was implemented in 2007 in conjunction with the construction of two new institutions. Street parking and parking lots were replaced with an 800-stall underground garage. Although there is free street parking available within walking distance to the new institutions, many of these spaces are taken by employees and staff arriving at the park prior to the visitors. The garage (which charges $3.50/hour on weekdays and $4.50/hour on weekends) has a very high utilization. Based on interviews with City of San Francisco staff and management of the garage's private operator, visitors to Golden Gate Park make the garage their first choice for parking based on availability and location. The parking fee does not seem to be a deterrent to maintaining high occupancy levels.

One of the effects of paid parking in the parking structure on "free" lots in the area would be a shift in the location of employee parking. Currently, a majority (82 percent) of Park employees and staff arrive by 10:00 a.m. before the institutions open and park in the close, most convenient parking spaces. As free parking in proximity to the institutions is removed by the project and close-in parking would be in the paid parking structure, many employee parkers would likely shift to free lots, including the Pan American (closest to the Prado), Federal Building and Inspiration Point parking lots. The anticipated shift in employee parking to the free lots would cause some of these lots to reach maximum occupancy levels on a regular basis, although the parking demand study (see Appendix D-2) shows overall parking demand for free parking would not exceed the overall Balboa Park supply. Overall, the project would not impact off-site parking.

The Parking Study (see Appendix D-2) determined that visitors (about 125 during the weekend peak hour) who want to avoid the paid parking lot would circulate within the core of the Park (Pan American Federal and Inspiration Point parking lots) to find free parking spaces. Based on peak parking occupancy counts at these lots, ample spaces would be provided. Similarly, visitors (estimated at about 50 during the weekend peak hour) who want to search free parking in the nearby neighborhoods (West Mesa) would be able to do so (primarily on Balboa Drive). This number is estimated to be fairly low due to the walking distance between Balboa Drive and the center of Plaza de Panama (2,200 feet).

4.4.4.2 Significance of Impacts

The project would result in an increase of parking spaces in Balboa Park and would not increase the overall parking demand in Balboa Park. Parking in adjacent areas outside of Balboa Park would not be affected. Since the project would not increase the demand for off-site parking, impacts would be less than significant.

4.4.4.3 Mitigation, Monitoring, and Reporting

Impacts would be less than significant. No mitigation is required.

4.4.5 Issue 4: Traffic Hazards

Would the proposal result in an increase in traffic hazards to motor vehicles, bicyclists, or pedestrians due to a proposed non-standard design feature?

4.4.5.1 Impacts

ALL PROJECT COMPONENTS

Project construction would include standard safety practices, such as flagmen and signals for equipment and material movements. Also, construction detours and activities are not anticipated to result in traffic hazards as a traffic control plan would be implemented.

Once constructed, the project would reduce the conflict crossing areas from 20 to 6 within the study area, a reduction of approximately 70 per cent (Figure 4. 4-17 and Table 4.4-13). The existing conflict at the Alcazar parking lot would remain; however, it would be reduced by the project with the provision of designated pedestrian crossings with crosswalks.

The proposed access roadway has been designed in compliance with the City of San Diego road standards with City-approved deviations. Where the access road would travel through the Alcazar parking lot, a loading and unloading pullout area would be provided to reduce hazards to through traffic. Also, the parking lot area would be separated from the through traffic lanes.

As discussed in Section 4.4.2.1, the internal access points would increase the number of intersections operating at acceptable levels in the year 2030 and, therefore, the project would reduce hazardous traffic conditions.

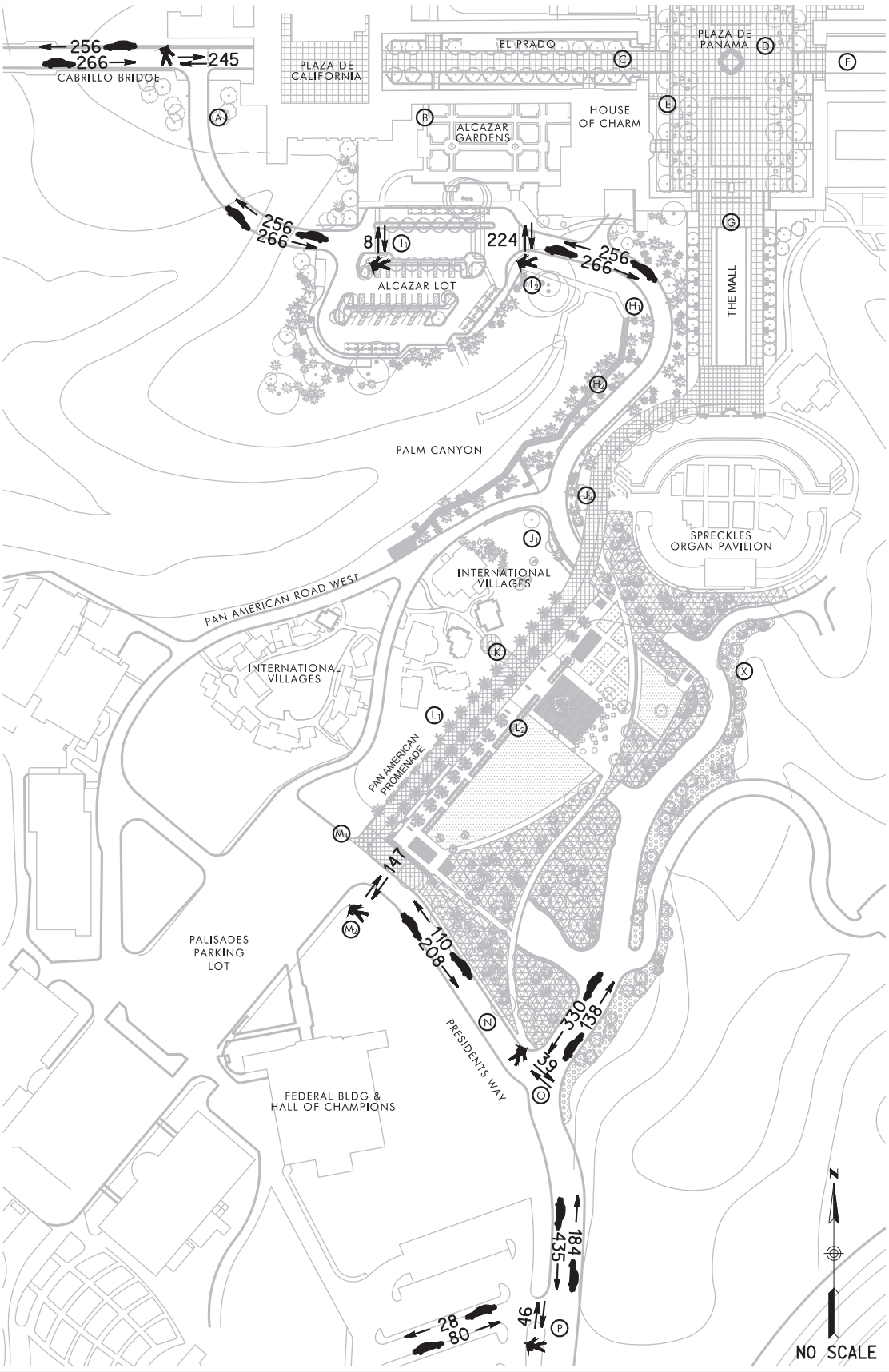
4.4.5.2 Significance of Impacts

The project has been designed to provide safe and effective bicycle and pedestrian access and circulation. Project access intersections would operate at an acceptable level of service. The project would not increase traffic hazards for motor vehicles, bicyclists, or pedestrians. Impacts would be less than significant.

4.4.5.3 Mitigation, Monitoring, and Reporting

Impacts would be less than significant. No mitigation is required.

Map Source: Rick Engineering, January 2012



LEGEND
= PEDESTRIANS PER HOUR
= VEHICLES PER HOUR
Ⓐ = CONFLICT AREA LETTER DESIGNATION CORRESPONDS TO TABLE 4.4-13

No Scale

FIGURE 4.4-17

Proposed Project Pedestrian Crossings Volumes

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TABLE 4.4-13
PEDESTRIAN AND VEHICLE TRAFFIC VOLUMES

Area	Description	Existing			Proposed Project		
		Vehicle	Pedestrian	Total	Vehicle	Pedestrian	Total
A	El Prado just east of Cabrillo Bridge	522	31	553	522	245	767
B	El Prado just east of Plaza de California	522	337	859	NA	NA	NA
C	El Prado just west of Plaza de Panama	522	137	659	NA	NA	NA
D	North portion of Plaza de Panama	155	461	616	NA	NA	NA
E_1	South portion of Plaza de Panama crossing the southbound traffic	241	502	743	NA	NA	NA
E_2	South portion of Plaza de Panama crossing the northbound traffic	254	502	756	NA	NA	NA
F	East of Plaza de Panama	NA	NA	NA	NA	NA	NA
G_1	South of Plaza de Panama crossing the southbound traffic	241	273	514	NA	NA	NA
G_2	South of Plaza de Panama crossing the northbound traffic	254	273	527	NA	NA	NA
H_1	West of Alcazar Garden Lot Driveway entrance	112	248	360	NA	NA	NA
H_2	Palm Canyon to Spreckles Organ Pavilion crossing	NA	NA	NA	NA	NA	NA
I_1	Alcazar Garden Lot West Crossing	NA	NA	NA	522	8	530
I_2	East of Alcazar Garden Lot Driveway east	112	244	356	522	224	746
J_1	Crossing Pan American Road West at corner of Pan American Road and Pan American Road West	48	328	376	NA	NA	NA
J_2	Crossing Pan American Road West at corner of Pan American Road and Pan American Road West	602	426	1,028	NA	NA	NA
K	Crossing Pan American Road north of Organ Pavilion Lot northwest entrance	508	24	532	NA	NA	NA
L_1	Crossing Pan American Road at the northwest entrance of Organ Pavilion lot	508	69	577	NA	NA	NA
L_2	Crossing Organ Pavilion Lot entrance	249	196	445	NA	NA	NA
M_1	Crossing Pan American Road at corner of Presidents Way and Pan American Road	481	55	536	NA	NA	NA
M_2	Crossing Presidents Way at corner of Presidents Way and Pan American Road	548	147	695	318	147	465
N	Southeast entrance of Organ Pavilion Lot	66	71	137	NA	NA	NA
O	Gold Gulch and Presidents Way	23	39	62	468	39	507
P	Federal/Aerospace Lot	108	46	154	108	46	154
X	New Park to Spreckles Organ Pavilion crossing	NA	NA	NA	NA	NA	NA
Total Conflict Areas				20			6
Total (Volumes)		6,076	4,409	10,485	2,460	709	3,169
Percent Increase/Decrease from Existing (Volumes)				0%			-70%

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4.5 Air Quality

An air quality technical report was completed by RECON in December 2011. The technical report addresses the potential for the project to emit air pollutants both during project construction and during post-construction daily project operations. The air quality technical report is summarized below and included in its entirety as Appendix E of this EIR.

4.5.1 Existing Conditions

The project site lies within the SDAB, which is regulated locally by the SDAPCD. Air quality at a given location is a function of the kinds and amounts of pollutants being emitted into the air locally and throughout the basin and the dispersal rates of pollutants within the region. The major factors affecting pollutant dispersion are wind speed and direction, the vertical dispersion of pollutants (which is affected by inversions), and the local topography.

Air quality is commonly expressed as the number of days per year in which air pollution levels exceed federal standards set by the federal Environmental Protection Agency (EPA) or state standards set by CARB.

4.5.1.1 Existing Regulatory Framework

a. Federal Clean Air Act

The federal Clean Air Act (CAA) was enacted in 1970 (and amended several times since) for the purpose of protecting and enhancing the quality of the nation's air resources. In 1971, the federal EPA developed National Ambient Air Quality Standards (NAAQS) for six pollutants of concern: ozone (O_3), carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), lead, and PM_{10}. In 1997, the NAAQS were refined by replacing the one-hour ozone standard with an eight-hour ozone standard and by adding a new standard for suspended particulates 2.5 microns or less in diameter ($PM_{2.5}$). The current NAAQS are presented in Table 4.5-1 and represent the maximum levels of background pollution considered safe, with an adequate margin of safety, to protect public health and welfare considering long-term exposure of the most sensitive groups in the general population (i.e., children, senior citizens, and people with breathing difficulties).

TABLE 4.5-1
AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards[1]		Federal Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.07 ppm (137 µg/m^3)		0.075 ppm (147 µg/m^3)		
Respirable Particulate Matter (PM_{10})	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		–		
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	No Separate State Standard		35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	15.0 µg/m^3		
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m^3)	Non-dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m^3)	None	Non-dispersive Infrared Photometry (NDIR)
	1 Hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		–	–	–
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	Gas Phase Chemi-luminescence	0.053 ppm (100 µg/m^3)[8]	Same as Primary Standard	Gas Phase Chemi-luminescence
	1 Hour	0.18 ppm (339 µg/m^3)		0.100 ppm[8]	None	
Sulfur Dioxide (SO_2)[9]	24 Hour	0.04 ppm (105 µg/m^3)	Ultraviolet Fluorescence	–	–	Ultraviolet Fluorescence; Spectro-photometry (Pararosaniline Method)[9]
	3 Hour	–		–	0.5 ppm (1300 µg/m^3)[9]	
	1 Hour	0.25 ppm (655 µg/m^3)		0.075 ppm (196 µg/m^3)[9]	–	
Lead[10]	30 Day Average	1.5 µg/m^3	Atomic Absorption	–	–	–
	Calendar Quarter	–		1.5 µg/m^3	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average[11]	–		0.15 µg/m^3		
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer – visibility of ten miles or more (0.07 – 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		No Federal Standards		
Sulfates	24 Hour	25 µg/m^3	Ion Chroma-tography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[10]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chroma-tography			

SOURCE: State of California 2010.

ppm = parts per million; µg/m^3 = micrograms per cubic meter; – = not applicable.

TABLE 4.5-1
AMBIENT AIR QUALITY STANDARDS
(continued)

[1]California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, suspended particulate matter—PM10, PM2.5, and visibility reducing particles—are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[2]National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. Environmental Protection Agency (EPA) for further clarification and current federal policies.

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

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

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

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

[7]Reference method as described by the EPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the EPA.

[8]To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010).

[9]On June 2, 2010, the U.S. EPA established a new 1-hour SO_2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. EPA also proposed a new automated Federal Reference Method (FRM) using ultraviolet technology, but will remain the older pararosaniline methods until the new FRM have adequately permeated State monitoring networks. The EPA also revoked both the existing 24-hour SO_2 standard of 0.14 ppm and the annual primary SO_2 standard of 0.030 ppm, effective August 23, 2010. The secondary SO_2 standard was not revised at that time; however, the secondary standard is undergoing a separate review by EPA.

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

[11]National lead standard, rolling 3-month average; final rule signed October 15, 2008.

b. California Clean Air Act

The EPA allowed states the option to develop different (stricter) air quality standards. Through the California CAA signed into law in 1988, the CARB has generally set more stringent limits on the seven criteria pollutants as shown in Table 4.5-1.

The California CAA additionally requires that air quality management districts implement regulations to reduce emissions from mobile sources through the adoption and enforcement of transportation control measures and:

- demonstrate the overall effectiveness of the air quality program;
- reduce nonattainment pollutants at a rate of 5 percent per year, or include all feasible measures and expeditious adoption schedule;
- implement public education programs;
- reduce per-capita population exposure to severe nonattainment pollutants according to a prescribed schedule;
- include any other feasible controls that can be implemented, or for which implementation can begin, within 10 years of adoption of the most recent air quality plan; and
- rank control measures by cost-effectiveness and implementation priority.

c. State Implementation Plan

The State Implementation Plan (SIP) is a collection of documents that set forth the state's strategies for achieving ambient air quality standards. The SDAPCD is responsible for preparing and implementing the portion of the SIP applicable to the SDAB. The SDAPCD adopts rules, regulations, and programs to attain state and federal air quality standards, and appropriates money (including permit fees) to achieve its objectives.

d. Regional Air Quality Strategy

The SDAPCD prepared the 1991/1992 Regional Air Quality Strategy (RAQS) in response to requirements set forth in the California CAA. Attached as part of the RAQS are the Transportation Control Measures (TCMs) adopted by SANDAG. Updates of the RAQS and corresponding TCM are required every three years. The RAQS and TCM set forth the steps needed to accomplish attainment of state and federal ambient air quality standards. The most recent update of the RAQS and TCM occurred in 2009.

4.5.1.2 Existing Air Quality in the Project Area

The SDAPCD maintains 10 air quality monitoring stations throughout the greater San Diego metropolitan region. Air pollutant concentrations and meteorological information

are continuously recorded at these stations. Measurements are then used by scientists to help forecast daily air pollution levels.

Table 4.5-2 summarizes the number of days per year during which state and federal standards were exceeded in the SDAB overall during the years 2005 to 2009. The San Diego–Union Street monitoring station, located approximately 1.4 miles southwest of the project site, and the San Diego—Beardsley Street monitoring station, located approximately 2 miles south of the project site, are the nearest stations to the project area. The San Diego—Union Street monitoring station measures CO. The San Diego–Beardsley Street monitoring station measures ozone, CO, NO_2, SO_2, PM_{10}, and $PM_{2.5}$. Table 4.5-3 provides a summary of measurements of ozone, CO, NO_2, SO_2, PM_{10}, and $PM_{2.5}$ collected at the San Diego–Union Street and San Diego—Beardsley Street monitoring stations for the years 2005 through 2009.

As detailed below, the SDAB is classified as a federal nonattainment area for ozone and a state nonattainment area for ozone, PM_{10}, and $PM_{2.5}$.

a. Ozone

Nitrogen oxides and hydrocarbons (reactive organic gases [ROGs]) are known as the chief "precursors" of ozone. These compounds react in the presence of sunlight to produce ozone. Ozone is the primary air pollution problem in the SDAB. Because sunlight plays such an important role in its formation, ozone pollution, or smog, is mainly a concern during the daytime in summer months.

About half of smog-forming emissions come from vehicles. More strict automobile emission controls, including more efficient automobile engines, have played a large role in the steady decrease in ozone levels in the SDAB since the late 1970s. However, not all of the ozone within the SDAB is derived from local sources. Under certain meteorological conditions, such as during Santa Ana wind events, ozone and other pollutants are transported from the Los Angeles Basin and combine with ozone formed from local sources to produce elevated ozone levels in the SDAB.

In the SDAB overall, during the five-year period of 2005 to 2009 the former national 1-hour ozone standard of 0.12 parts per million (ppm) was exceeded one day in 2007 and two days in 2008. The stricter state 1-hour ozone standard of 0.09 ppm was exceeded 16 days in 2005, 23 days in 2006, 21 days in 2007, 18 days in 2008, and eight days in 2009.

Neither the former national 1-hour ozone standard of 0.12 ppm nor the stricter 1-hour state standard for ozone of 0.09 ppm were exceeded at the San Diego–Beardsley Street monitoring station during the 5-year period of 2005 to 2009.

In order to address adverse health effects due to prolonged exposure, the U.S. EPA phased out the national 1-hour ozone standard and replaced it with the more protective 8-hour ozone standard. The SDAB is currently a nonattainment area for the previous (1997) national 8-hour standard and is recommended as a nonattainment area for the revised (2008) national 8-hour standard of 0.075 ppm.

In the SDAB overall, during the five-year period of 2005 to 2009 the former national 8-hour ozone standard of 0.08 ppm was exceeded by five days in 2005, 14 days in 2006, seven days in 2007, 11 days in 2008, and four days in 2009. The revised national 8-hour standard of 0.075 was exceeded by 24 days in 2005, 38 days in 2006, 27 days in 2007, 35 days in 2008, and 24 days in 2009. The stricter state 8-hour ozone standard of 0.07 ppm was exceeded by 51 days in 2005, 68 days in 2006, 50 days in 2007, 69 days in 2008, and 47 days in 2009.

Neither the previous national 8-hour standard of 0.08 ppm nor the revised national 8-hour standard of 0.075 ppm were at the San Diego–Beardsley Street monitoring station during the 5-year period from 2005 to 2009. The stricter state 8-hour ozone standard of 0.07 ppm was exceeded by one day in 2006, one day in 2007, and one day in 2008.

Local agencies can control neither the source nor the transport of pollutants from outside the air basin. The SDAPCD's policy, therefore, has been to control local sources to reduce locally produced emissions. Through its TCMs, enhanced motor vehicle inspection and maintenance program overseen by the Bureau of Automotive Repair, and the clean-fuel vehicle program overseen by CARB, continuing reductions in ozone concentrations are anticipated.

Actions that have been taken in the SDAB to reduce ozone concentrations include:

- **TCMs, if vehicle travel and emissions exceed attainment demonstration levels.** TCMs are strategies that will reduce transportation-related emissions by reducing vehicle use or improving traffic flow.

- **Enhanced motor vehicle inspection and maintenance program.** The smog-check program is overseen by the Bureau of Automotive Repair. The program requires most vehicles to pass a smog test once every two years before registering in the state of California. The smog-check program monitors the amount of pollutants automobiles produce. One focus of the program is identifying "gross polluters," or vehicles that exceed two times the allowable emissions for a particular model. Regular maintenance and tune-ups, changing oil, and checking tire inflation can improve gas mileage and lower air pollutant emissions. It can also reduce traffic congestion due to preventable breakdowns, further lowering emissions.

TABLE 4.5-2
AMBIENT AIR QUALITY SUMMARY – SAN DIEGO AIR BASIN

Pollutant	Average Time	California Ambient Air Quality Standards[a]	Attainment Status	National Ambient Air Quality Standards[b]	Attainment Status[c]	Maximum Concentration					Number of Days Exceeding State Standard					Number of Days Exceeding National Standard				
						2005	2006	2007	2008	2009	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009
O_3	1 hour	0.09 ppm	N	N/A	N/A	0.113	0.121	0.134	0.139	0.119	16	23	21	18	8	--	--	--	--	--
O_3	8 hours	0.07ppm	N	0.075 ppm	N	0.090	0.100	0.092	0.110	0.098	51	68	50	69	47	24	38	27	35	24
CO	1 hour	20 ppm	A	35 ppm	A	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na
CO	8 hours	9 ppm	A	9 ppm	A	4.71	3.61	5.18	3.51	3.24	0	0	0	0	0	0	0	0	0	0
NO_2	1 hour	0.18 ppm	A	0.100 ppm[d]	A	0.109	0.097	0.101	0.123	0.091	0	0	0	0	0	--	--	--	--	--
NO_2	Annual	0.030 ppm	A	0.053 ppm	A	0.015	0.017	0.015	0.015	0.016	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX
SO_2	1 hour	0.25 ppm	A	0.075 ppm	A	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na
SO_2	3 hours	N/A	N/A	N/A	N/A	Na	Na	Na	Na	Na	--	--	--	--	--	--	--	--	--	--
SO_2	24 hours	0.04 ppm	A	N/A	N/A	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	--	--	--	--	--
PM_{10}	24 hours	50 $\mu g/m^3$	N	150 $\mu g/m^3$	U	154.0	134.0	392.0	158.0	123.0	29/52.7*	27/159.4*	27/158.6*	30/163.4*	25/146.4*	1*	0*	1*	1*	0*
PM_{10}	Annual	20 $\mu g/m^3$	N	N/A	N/A	32.1	54.0	58.4	56.1	53.9	EX	EX	EX	EX	EX	--	--	--	--	--
$PM_{2.5}$	24 hours	N/A	N/A	35 $\mu g/m^3$	A	44.1	63.3	151.0	44.0	78.4	--	--	--	--	--	1.2	2.1	11.4	3.5	3.4
$PM_{2.5}$	Annual	12 $\mu g/m^3$	N	15 $\mu g/m^3$	A	Na	13.1	13.3	14.9	12.1	Na	EX	EX	EX	EX		NX	NX	NX	NX

SOURCE: State of California 2011. California Air Quality Data Statistics. California Air Resources Board Internet Site. URL http://www.arb.ca.gov/adam/welcome.html.
*Measured Days/Calculated Days - Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year. Data to determine federal calculated days were not available.
[a]California standards for ozone, carbon monoxide (except at Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, and PM_{10} are values that are not to be exceeded. Some measurements gathered for pollutants with air quality standards that are based upon 1-hour, 8-hour, or 24-hour averages, may be excluded if the CARB determines they would occur less than once per year on average.
[b]National standards other than for ozone and particulates, and those based on annual averages or annual arithmetic means are not to be exceeded more than once a year. The 1-hour ozone standard is attained if, during the most recent 3-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one.
[c]A = attainment; N = non-attainment; U = Unclassifiable; N/A = not applicable; Na = data not available; NX = annual average not exceeded; EX = annual average exceeded.
[d]Effective January 22, 2010. Not applicable to monitoring from 2005 through 2009.
ppm = parts per million, $\mu g/m^3$ = micrograms per cubic meter.

TABLE 4.5-3
SUMMARY OF AIR QUALITY MEASUREMENTS RECORDED AT THE SAN DIEGO – BEARDSLEY STREET AND UNION STREET MONITORING STATIONS

Pollutant/Standard	2005	2006	2007	2008	2009
SAN DIEGO—BEARDSLEY STREET					
Ozone					
Days State 1-hour Standard Exceeded (0.09 ppm)	0	0	0	0	0
Days State 8-hour Standard Exceeded (0.07 ppm)	0	1	1	1	0
Days Federal 1-hour Standard Exceeded (0.12 ppm)	0	0	0	0	0
Days '97 Federal 8-hour Standard Exceeded (0.08 ppm)	0	0	0	0	0
Days '08 Federal 8-hour Standard Exceeded (0.075 ppm)	0	0	0	0	0
Max. 1-hr (ppm)	0.074	0.082	0.087	0.087	0.085
Max 8-hr (ppm)	0.063	0.071	0.073	0.073	0.063
Carbon Monoxide					
Days State 1-hour Standard Exceeded (20 ppm)	0	0	0	0	0
Days State 8-hour Standard Exceeded (9 ppm)	0	0	0	0	0
Days Federal 1-hour Standard Exceeded (35 ppm)	0	0	0	0	0
Days Federal 8-hour Standard Exceeded (9 ppm)	0	0	0	0	0
Max. 1-hr (ppm)	4.50	5.30	4.40	3.50	4.00
Max. 8-hr (ppm)	3.10	3.27	3.01	2.60	2.77
Nitrogen Dioxide					
Days State 1-hour Standard Exceeded (0.18 ppm)	0	0	0	0	0
Max 1-hr (ppm)	0.100	0.094	0.098	0.091	0.078
Annual Average (ppm)	Na	0.021	0.018	0.019	0.017
Sulfur Dioxide					
Days State 24-hour Standard Exceeded (0.04 ppm)	0	0	0	0	0
Max. Daily (ppm)	0.005	0.009	0.006	0.007	0.006
Annual Average (ppm)	Na	0.004	0.002	0.003	0.001
PM_{10}*					
Measured Days State 24-hour Standard Exceeded (50 $\mu g/m^3$)	5	11	4	4	3
Calculated Days State 24-hour Standard Exceeded (50 $\mu g/m^3$)	Na	64.5	24.4	23.6	18.2
Measured Days Federal 24-hour Standard Exceeded (150 $\mu g/m^3$)	0	0	0	0	0
Calculated Days Federal 24-hour Standard Exceeded (150 $\mu g/m^3$)	0	0	0	0	0
Max. Daily ($\mu g/m^3$)	78.0	74.0	111.0	59.0	60.0
State Annual Average ($\mu g/m^3$)	Na	34.3	31.2	29.3	29.4
Federal Annual Average ($\mu g/m^3$)	37.0	33.6	30.5	28.6	Na
$PM_{2.5}$*					
Measured Days '97 Federal 24-hour Standard Exceeded (65 $\mu g/m^3$)	0	0	1	0	0
Calculated Days '97 Federal 24-hour Standard Exceeded (65 $\mu g/m^3$)	0	0	Na	0	0
Measured Days '06 Federal 24-hour Standard Exceeded (35 $\mu g/m^3$)	2	2	8	3	3
Calculated Days '06 Federal 24-hour Standard Exceeded (35 $\mu g/m^3$)	Na	2.1	8.9	3.5	3.4
Max. Daily ($\mu g/m^3$)	44.1	63.3	71.4	42.0	52.1
State Annual Average ($\mu g/m^3$)	Na	13.1	11.7	10.7	11.8
Federal Annual Average ($\mu g/m^3$)	Na	13.1	12.7	13.7	11.7
SAN DIEGO—UNION STREET					
Carbon Monoxide					
Days State 1-hour Standard Exceeded (20 ppm)	0	0	0	0	Na
Days State 8-hour Standard Exceeded (9 ppm)	0	0	0	0	Na
Days Federal 1-hour Standard Exceeded (35 ppm)	0	0	0	0	Na
Days Federal 8-hour Standard Exceeded (9 ppm)	0	0	0	0	Na
Max. 1-hr (ppm)	5.30	10.80	8.7	7.7	Na
Max. 8-hr (ppm)	3.89	3.50	5.18	2.24	Na

SOURCE: State of California 2011.
Na = Not available.
* Calculated days value. Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.

- **Clean-fuel vehicle program.** The clean-fuel vehicle program, overseen by CARB, requires the development of cleaner burning cars and clean alternative fuels by requiring the motor vehicle industry to develop new technologies to meet air quality requirements. Clean-fuel vehicles are those that meet the emissions standards set in the 1990 amendments to the CAA. Cleaner vehicles and fuels will result in continued reductions in vehicle pollutant emissions despite increases in travel.

b. Carbon Monoxide

The SDAB is classified as a state attainment area and as a federal maintenance area for carbon monoxide (County of San Diego 1998). Until 2003, no violations of the state standard for CO had been recorded in the SDAB since 1991, and no violations of the national standard had been recorded in the SDAB since 1989. The violations that took place in 2003 were likely the result of massive wildfires that occurred throughout the county. No violations of the state or federal CO standards have occurred since 2003. As shown in Tables 4.5-2 and 4.5-3, the state and national standards have not been exceeded at the San Diego—Beardsley Street monitoring station, the San Diego—Union Street monitoring station, or the SDAB during the five-year period from 2005 to 2009.

Small-scale, localized concentrations of CO above the state and national standards have the potential to occur at intersections with stagnation points such as those that occur on major highways and heavily traveled and congested roadways. Localized high concentrations of CO are referred to as “CO hot spots” and are a concern at congested intersections, where automobile engines burn fuel less efficiently and their exhaust contains more CO.

c. PM_{10}

PM_{10} is particulate matter with an aerodynamic diameter of 10 microns or less. Ten microns is about one-seventh of the diameter of a human hair. Particulate matter is a complex mixture of very tiny solid or liquid particles composed of chemicals, soot, and dust. Sources of PM_{10} emissions in the SDAB consist mainly of urban activities, dust suspended by vehicle traffic, and secondary aerosols formed by reactions in the atmosphere.

Under typical conditions (i.e., no wildfires), particles classified under the PM_{10} category are mainly emitted directly from activities that disturb the soil, including travel on roads and construction, mining, or agricultural operations. Other sources include windblown dust, salts, brake dust, and tire wear (County of San Diego 1998). For several reasons hinging on the area’s dry climate and coastal location, the SDAB has special difficulty in developing adequate tactics to meet present state particulate standards.

The SDAB is designated as federal unclassified and state nonattainment for PM_{10}. The measured federal PM_{10} standard was exceeded once in 2005, once in 2007, and once in

2008 in the SDAB. The 2007 exceedance occurred on October 21, 2007, at a time when major wildfires were raging throughout the county. Consequently, this exceedance was likely caused by the wildfires and would be beyond the control of the SDAPCD. As such, this event is covered under the U.S. EPA's Natural Events Policy that permits, under certain circumstances, the exclusion of air quality data attributable to uncontrollable natural events (e.g., volcanic activity, wild land fires, and high wind events). The 2005 and 2008 exceedances did not occur during wildfires and are not covered under this policy. The stricter state standard was exceeded a calculated number of days of 52.7 days in 2005, 159.4 days in 2006, 158.6 days in 2007, 163.4 days in 2008, and 146.4 days in 2009. Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard, had measurements been collected every day. Particulate measurements are collected every six days.

At the San Diego—Beardsley Street monitoring station, the national 24-hour PM_{10} standard was not exceeded during the years 2005 through 2009. The stricter state 24-hour PM_{10} standard was exceeded 5 days in 2005, 11 days in 2006, 4 days in 2007, 4 days in 2008, and 3 days in 2009.

d. $PM_{2.5}$

Airborne, inhalable particles with aerodynamic diameters of 2.5 microns or less have been recognized as an air quality concern requiring regular monitoring. Federal regulations required that $PM_{2.5}$ monitoring begin January 1, 1999 (County of San Diego 1999). The San Diego–Beardsley Street monitoring station is one of five stations in the SDAB that monitors $PM_{2.5}$. Federal $PM_{2.5}$ standards established in 1997 include an annual arithmetic mean of 15 micrograms per cubic meter ($\mu g/m^3$) and a 24-hour concentration of 65 $\mu g/m^3$. As discussed above, the 24-hour $PM_{2.5}$ standard has been changed to 35 $\mu g/m^3$. However, this does not apply to the monitoring from 2004 to 2006. State $PM_{2.5}$ standards established in 2002 are an annual arithmetic mean of 12 $\mu g/m^3$. Table 4.5-3 shows that the prior 24-hour $PM_{2.5}$ standard of 65 $\mu g/m^3$ was exceeded once in 2007. The new standards of 35 $\mu g/m^3$ was exceeded 2 days in 2005, 2 days in 2006, 8 days in 2007, 3 days in 2008, and 3 days in 2009.

The SDAB was classified as an attainment area for the previous federal 24-hour $PM_{2.5}$ standard of 65 $\mu g/m^3$ and has also been classified as an attainment area for the revised federal 24-hour $PM_{2.5}$ standard of 35 $\mu g/m^3$ (U.S. EPA 2004, 2009). The SDAB is a non-attainment area for the state $PM_{2.5}$ standard (State of California 2005).

e. Other Criteria Pollutants

The national and state standards for NO_2, SO_x, and previous standard for lead are being met in the SDAB, and the latest pollutant trends suggest that these standards will not be exceeded in the foreseeable future. As discussed above, new standards for these

pollutants have been adopted, and new designations for the SDAB will be determined in the future. The SDAB is also in attainment of the state standards for hydrogen sulfides, sulfates, and visibility reducing particles.

4.5.2 Issue 1: Plan Consistency

Would the proposal conflict with or obstruct implementation of the applicable air quality plan?

According to the City's Significance Determination Thresholds, impacts related to air quality would be significant if the project would:

- Conflict with or obstruct implementation of the applicable air quality plan.

4.5.2.1 Impacts

ALL PROJECT COMPONENTS

As described above, the California Clean Air Act requires areas that are designated nonattainment of state ambient air quality standards to prepare and implement plans to attain the standards by the earliest practicable date. The SDAB is designated federal nonattainment for ozone and state nonattainment for ozone, PM_{10}, and $PM_{2.5}$. Accordingly, the RAQS was developed to identify feasible emission control measures and provide expeditious progress toward attaining the state ozone standards. The two pollutants addressed in the RAQS are volatile organic compounds (VOCs) and oxides of nitrogen (NO_x), which are precursors to the formation of ozone. Projected increases in motor vehicle usage, population, and industrial growth create challenges in controlling emissions to maintain and further improve air quality. The RAQS, in conjunction with the TCM, were most recently adopted in 2009 as the air quality plan for the region. The other plan for the SDAB is the San Diego portion of the California SIP. California's SIP consists of a comprehensive State Strategy designed to attain ozone, PM_{10}, and $PM_{2.5}$ standards.

Since the project does not propose a change in land use from the City's General Plan, it can be considered consistent with the growth assumptions in the RAQS and SIP (State of California 1989a). The project would require amendments to the BPMP and CMPP; however, it would not result in intensifying the use of the park or an increase in traffic generation. The project would provide more parking than the existing condition; however, additional parking would not generate additional trips. Therefore, the project would not conflict with the RAQS.

4.5.2.2 Significance of Impacts

Because the project does not propose a change in land use designation nor intensity of use, it would not require a change in the growth assumptions upon which the assumption RAQS and SIP are based. Therefore, the project would not conflict with the RAQS or SIP and impacts associated with conflicts with regional air quality plans would be less than significant.

4.5.2.3 Mitigation, Monitoring, and Reporting

Impacts would be less than significant. No mitigation is required.

4.5.3 Issue 2: Violation of Air Quality Standards

Would the proposal result in a violation of any air quality standard or contribute substantially to an existing or projected air quality violation?

According to the City's Significance Determination Thresholds, impacts related to air quality would be significant if the project would:

- Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

4.5.3.1 Impacts

ALL PROJECT COMPONENTS

The SDAB does not comply with the federal and/or state criteria pollutant standards for ozone, PM_{10}, and $PM_{2.5}$. However, the project would not introduce any new stationary sources of emissions and would not contribute to exceedance of air quality standards. Emissions due to construction and operation of the project are discussed in Section 4.5.5 below.

4.5.3.2 Significance of Impacts

Since the project would not create a new stationary source of emissions and would not result in a violation of any air quality standard or contribute to an existing air quality violation, impacts would be less than significant.

4.5.3.3 Mitigation, Monitoring, and Reporting

Impacts would be less than significant. No mitigation is required.

4.5.4 Issue 3: Increase in Particulates or Ozone

Would the proposal exceed 100 pounds per day of particulate matter (dust) or exceed quantitative thresholds for ozone precursors (NO_x) and VOC?

According to the City's Significance Determination Thresholds, impacts related to air quality would be significant if the project would:

- Result in 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 release emissions which exceed quantitative thresholds for ozone precursors)

4.5.4.1 Impacts

ALL PROJECT COMPONENTS

a. Construction Emissions

Construction-related pollutants result from dust raised during demolition and grading, emissions from construction vehicles, and chemicals used during construction. Fugitive dust emissions vary greatly during construction and are dependent on the amount and type of activity, silt content of the soil, and the weather. Vehicles moving over paved and unpaved surfaces, demolition, excavation, earth movement, grading, and wind erosion from exposed surfaces are all sources of fugitive dust. Construction operations are subject to the requirements established in Regulation 4, Rules 52, 54, and 55, of the SDAPCD's rules and regulations.

Heavy-duty construction equipment is usually diesel powered. In general, emissions from diesel-powered equipment contain more nitrogen oxides, sulfur oxides, and particulate matter than gasoline-powered engines. However, diesel-powered engines generally produce less carbon monoxide and less ROGs than do gasoline-powered engines. Standard construction equipment includes dozers, rollers, scrapers, dewatering pumps, backhoes, loaders, paving equipment, delivery/haul trucks, jacking equipment, welding machines, pile drivers, and so on. The project's construction includes a total of four phases, as described in Section 3.8. Table 4.5-4 summarizes the construction equipment parameters for each phase.

TABLE 4.5-4
CONSTRUCTION EQUIPMENT PARAMETERS

Phase	Length (Days)	Equipment Type	Amount	Horsepower	Load Factor
Phase I	45	Cranes	1	208	0.43
		Forklifts	5	149	0.30
		Skid Steer Loaders	1	37	0.55
		Tractors/Loaders/Backhoes	6	75	0.55
Phase II	305	Aerial Lifts	2	34	0.46
		Air Compressors	4	78	0.48
		Bore/Drill Rigs	1	82	0.75
		Cranes	5	208	0.43
		Excavators	2	157	0.57
		Forklifts	5	149	0.30
		Generator Sets	4	84	0.74
		Grader	1	162	0.61
		Pavers	1	89	0.62
		Pumps	3	84	0.74
		Skid Steer Loaders	8	37	0.55
		Tractors/Loaders/Backhoes	11	75	0.55
Phase III	85	Pavers	1	89	0.62
		Pumps	1	84	0.74
		Skid Steer Loaders	5	37	0.55
		Tractors/Loaders/Backhoes	1	75	0.55
Phase IV	85	Cranes	1	208	0.43
		Forklifts	2	149	0.30
		Pumps	2	84	0.74
		Skid Steer Loaders	8	37	0.55
		Tractors/Loaders/Backhoes	8	75	0.55

Since a subcontractor has not yet been selected for the project, the exact make, model, and age of the equipment cannot be known at this time. Equipment with model year 2008 or later would have Tier 3 or Tier 4 engines. For the purposes of this analysis, it was assumed that equipment would be older and have Tier 2 engines.

Standard dust and emission control during grading operations would be implemented to reduce potential nuisance impacts and to ensure compliance with SDAPCD rules and regulations. The following standard fugitive dust control measures are required as part of the grading permit and are considered part of the project design and were taken into account for calculating construction emissions:

1. All unpaved construction areas shall be sprinkled with water or other acceptable SDAPCD dust control agents at least three times daily and during dust-generating activities to reduce dust emissions. Additional watering or acceptable SDAPCD dust control agents shall be applied during dry weather or windy days until dust emissions are not visible.

2. Apply soil stabilizers to inactive areas.

3. A 15-mile-per-hour speed limit on unpaved surfaces shall be enforced.

4. On dry days, dirt and debris spilled onto paved surfaces shall be swept up immediately to reduce resuspension of particulate matter caused by vehicle movement. Approach routes to construction sites shall be cleaned daily of construction-related dirt in dry weather.

5. Disturbed areas shall be hydroseeded, landscaped, or developed as quickly as possible and as directed by the City of San Diego and/or SDAPCD to reduce dust generation.

Emissions were estimated using the California Emissions Estimator Model (CalEEMod) computer program. Additionally, emissions due to export hauling activities discussed in Chapter 3.4.6.4, Project Description, were modeled. The schedule duration for the parking structure excavation and export activity would be approximately 40 consecutive working days using dual shifts. Soil export hauling would be coordinated to occur outside the peak traffic hours. The operation would require a fleet of 20 to 25 double bottom dump trucks cycling every 45 to 60 minutes between the project site and the Arizona Street Landfill. This would equate to 13,600 to 17,000 round trips over a distance of approximately 2.8 miles, or 76,160 to 95,200 total hauling miles traveled. The number of trips would be distributed evenly over the 40-day hauling period. This would result in a total of 340 to 425 trips per day so 425 trips per day was used as a worst-case analysis.

Table 4.5-5 shows the total projected construction maximum daily emission levels for each criteria pollutant.

TABLE 4.5-5
SUMMARY OF WORST-CASE CONSTRUCTION EMISSIONS
(pounds per day)

Pollutant	2012	2013	2014	SDAPCD Significance Thresholds[2]
ROG	34	31	28	137
NO_x	225	210	195	250
CO	148	145	143	550
SO_x[1]	0	0	0	250
PM_{10} Dust	3	3	3	–
PM_{10} Exhaust	15	14	12	–
PM_{10}	19	17	16	100
$PM_{2.5}$ Dust	0	0	0	–
$PM_{2.5}$ Exhaust	15	14	12	–
$PM_{2.5}$	16	14	13	55

[1]Emissions calculated by CalEEMod are for SO_2.
[2]Threshold for $PM_{2.5}$ was obtained from the Southern California Air Quality Management District (SCAQMD).

As seen in Table 4.5-5, the level of maximum daily construction emissions is projected to be less than the applicable thresholds for all criteria pollutants. It should also be noted that construction impacts would be short term. While construction activities would

generate diesel particulate emissions known to be carcinogenic, diesel particulate emissions impact to human health during construction would be less than significant due to the relatively short-term nature of project construction and the fact that heavy equipment exhaust emissions would not be significant.

b. Operation Emissions

Mobile source emissions originate from traffic generated by a project. Implementation of this project, however, would not result in an increase in traffic. Area source emissions result from activities such as use of natural gas or consumer products. Implementation of this project would not result in any increase in area source emissions. Therefore, there would be no impact related to mobile or area source emissions.

4.5.4.3 Significance of Impacts

a. Construction Emissions

Emission due to construction of the project would be less than applicable thresholds for all criteria pollutants. Impacts would be less than significant.

b. Operation Emissions

There would be no impact related to mobile or area source emissions.

4.5.4.4 Mitigation, Monitoring, and Reporting

a. Construction Emissions

Impacts would be less than significant. No mitigation is required.

b. Operation Emissions

Impacts would be less than significant. No mitigation is required.

4.5.5 Issue 4: Sensitive Receptors

Would the proposal expose sensitive receptors to substantial pollutant concentrations?

According to the City's Significance Determination Thresholds, impacts related to air quality would be significant if the project would:

- Expose sensitive receptors (including, but not limited to, schools, hospitals, resident care facilities, or daycare centers) to substantial pollutant concentrations including air toxics such as diesel particulates

4.5.5.1 Impacts

The potential for exposure of sensitive receptors to substantial pollutant concentrations was evaluated through analysis of localized carbon monoxide concentrations as well as toxic air emissions and odors.

ALCAZAR PARKING LOT

a. Localized Carbon Monoxide Impacts

Sensitive receptors within the project area include park visitors and plants. Since the Alcazar parking lot is proposed to be redesigned, a CO assessment was performed to consider the potential effects of vehicle traffic, loading, and drop-off activities on these receptors. The generation of CO emission factors was based on the vehicle fleet using the EMFAC2007 program (State of California 2006). Emission factors were calculated for summer and winter average high and low temperatures of 75 and 50 degrees Fahrenheit, respectively, and an average relative humidity of 70 percent. Other parameters provided by the model for the SDAB were used in the calculation of individual emission factors for each type of vehicle in the fleet.

Vehicle activities in the Alcazar parking lot would include both through traffic and idling in pick-up and drop-off zones. EMFAC2007 only calculates idle exhaust (tailpipe emissions that occur when a vehicle is idling) for heavy-duty trucks that idle for extended periods of time during loading operations. Because vehicle activities would include both through traffic and idling, the worst-case emission factor of 1.96 grams per mile at a slow speed of 3 mph was considered to be appropriate.

These emission factors were then applied to the vehicles and the resulting emissions were dispersed using the CALINE4 dispersion model (State of California 1989b). Predicted concentrations of carbon monoxide were modeled at a grid of receivers spaced 10 meters apart in the Alcazar Garden. These modeled receivers are shown in Figure 4.5-1. CALINE4 is a line source dispersion model that does not specifically address topographic variability or intervening structures (e.g., flat site topography was assumed). It does not include the potential effects due to the presence of the surrounding buildings (e.g., downwash).

To determine the effect the project would have on air quality in the Alcazar Garden, the peak hour volume was modeled for two scenarios: (1) the existing configuration with traffic traveling on El Prado north of the Alcazar Garden, and (2) the proposed configuration with traffic traveling south of the Alcazar Garden over Centennial Bridge and through the Alcazar parking lot.

The CALINE4 dispersion model takes into account wind characteristics. Wind direction, speed, and frequency for the 5-year period from 2006 through 2010 were taken into

account based on a wind rose developed for Lindbergh Field surface wind data. This information included direction and strength. The wind rose is shown in Figure 4.5-1. Table 4.5-6 provides the angles, average speeds, and relative durations of the wind used in the analysis. Separate CALINE4 runs were made for each 22.5-degree wind angle.

TABLE 4.5-6
WIND DIRECTION AND RELATIVE DURATION

Wind Direction	Angle	Average Wind Speed (meters/second)	Relative Duration (%)
N	0.0	1.8	6.72
NNE	22.5	1.8	4.26
NE	45.0	1.8	2.62
ENE	67.5	1.8	1.69
E	90.0	2.0	2.13
ESE	112.5	2.4	1.58
SE	135.0	2.7	1.01
SSE	157.5	3.7	3.29
S	180.0	3.4	8.18
SSW	202.5	3.3	7.25
SW	225.0	3.6	7.24
WSW	247.5	3.5	3.82
W	270.0	3.8	6.93
WNW	292.5	4.0	22.55
NW	315.0	3.1	10.44
NNW	337.5	2.2	7.11
Calm	n/a	n/a	3.18

As indicated, at each receiver for each modeled wind angle the CO concentration was calculated. The individual wind angle concentrations were then weighted for the relative duration of the wind and combined to develop the total CO concentration at each modeled location for both the existing configuration and the proposed configuration.

As shown in Table 4.5-3, the highest one-hour measured CO concentration at the San Diego—Union Street monitoring station was 10.8 ppm (on December 9, 2006). The worst case background concentrations typically occur in the winter. With the development of cleaner technologies, background CO concentrations are expected to fall over time. Therefore, this maximum one-hour CO concentration was used in the CO hot spot analysis as the worst-case background CO concentration.

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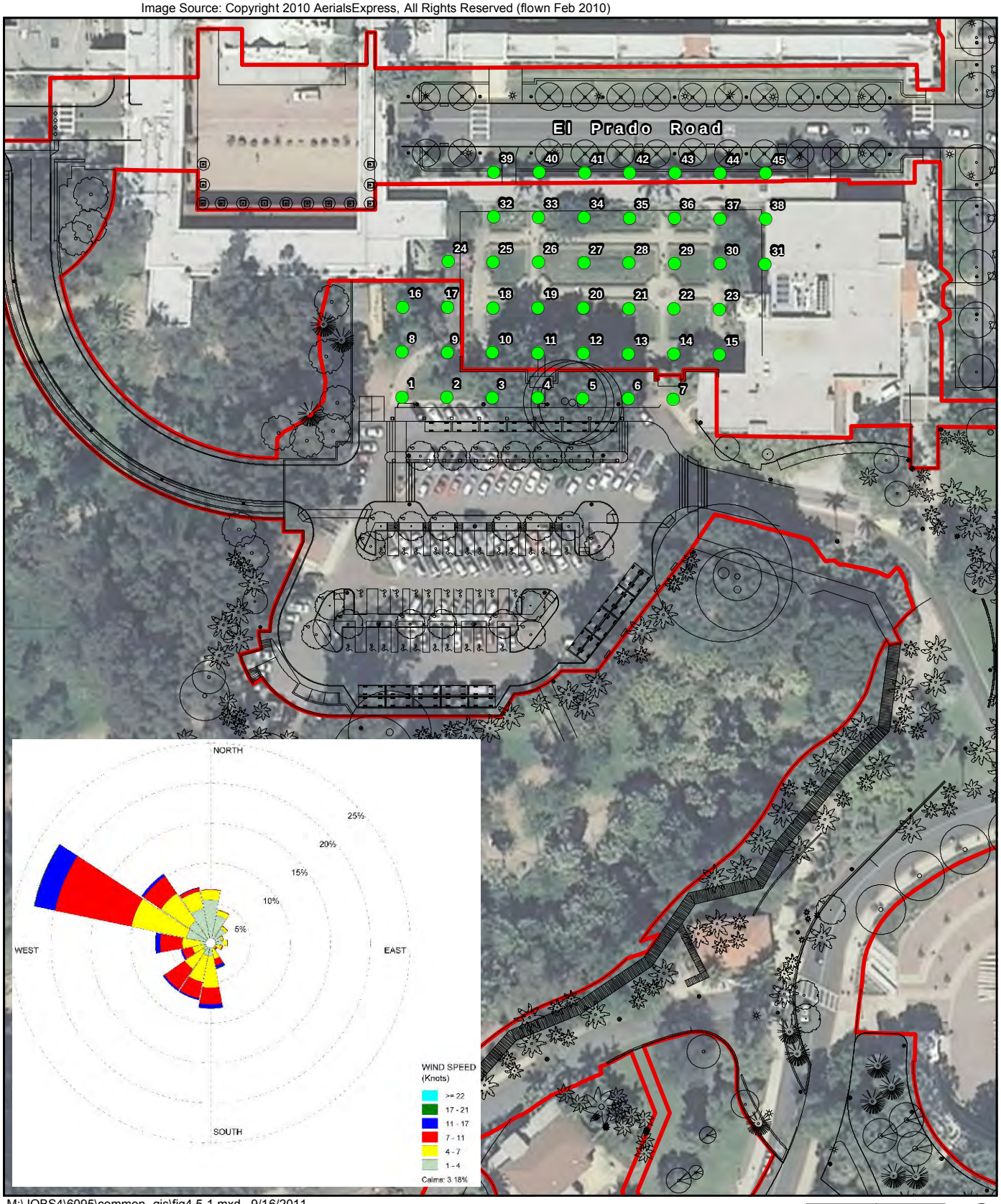

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Project Area

Proposed Alcazar Parking Lot Design

Modeled Receptors

FIGURE 4.5-1

Alcazar Garden Modeled Receptors

The worst-case future one-hour CO concentrations for both the existing configuration and the project are shown in Table 4.5-7. As shown, the project would reduce the CO concentrations at most locations in the Alcazar Garden relative to the existing condition. This is due to the wind patterns and the location of the vehicles relative to the Alcazar Garden (see Figure 4.5-1). There are a few locations where the modeled CO concentrations would be higher than the existing condition (Receivers 6-12). This is because these receivers would be closer to vehicle traffic under the project than they currently are under the existing configuration. However, these concentrations shown in Table 4.5-7 would be less than significant. Overall CO concentrations in the Alcazar Garden would be reduced relative to the existing condition because the project would move vehicles further from the garden and in a favorable wind direction relative to the garden.

As also shown in Table 4.5-7, the CO concentrations would range from 10.800 to 10.807 ppm. This includes a 10.80 ppm background concentration. These concentrations are less than the federal and state standards of 35 ppm and 20 ppm, respectively.

Vehicle parking activities would also occur at the proposed parking garage. However, the parking garage is not a sensitive use and the southeast elevation of the structure would be open to allow for ventilation. CO concentrations at receptors adjacent to the parking garage would be similar to those modeled above at the Alcazar Garden and would be less than significant.

b. Toxic Air Emissions

As demonstrated by the CO air dispersion modeling discussed above, CO concentrations in the Alcazar Garden would be less as a result of the project. This is because of the prevailing wind patterns. For the same reasons, concentrations of other vehicle pollutants, including PM and diesel particulate matter, in the Alcazar Garden would be less with the project than those with the existing configuration. Impacts would be less than significant.

4.5.5.2 Significance of Impacts

a. Localized Carbon Monoxide Impacts

The project would reduce CO concentrations in the Alcazar Garden because of the project area wind characteristics and the location of vehicle traffic in relation to receivers in the Alcazar Garden. Impacts would be less than significant.

TABLE 4.5-7
FUTURE WORST-CASE ALCAZAR GARDEN CO CONCENTRATIONS
(ppm)

Receiver	Proposed Project (Traffic Through Alcazar Parking Lot South of Alcazar Garden)	Existing Configuration (Traffic on El Prado North of Alcazar Garden)	Difference
1	10.800	10.818	-0.018
2	10.800	10.818	-0.017
3	10.801	10.818	-0.017
4	10.801	10.818	-0.017
5	10.801	10.818	-0.017
6	10.806	10.804	0.002
7	10.806	10.804	0.002
8	10.806	10.804	0.002
9	10.806	10.804	0.001
10	10.806	10.804	0.001
11	10.807	10.804	0.002
12	10.806	10.804	0.002
13	10.804	10.805	-0.001
14	10.804	10.805	-0.001
15	10.804	10.804	-0.001
16	10.804	10.804	-0.001
17	10.804	10.804	-0.001
18	10.804	10.804	-0.001
19	10.804	10.804	-0.001
20	10.804	10.804	0.000
21	10.803	10.807	-0.004
22	10.804	10.808	-0.005
23	10.804	10.808	-0.004
24	10.801	10.809	-0.009
25	10.801	10.809	-0.009
26	10.801	10.809	-0.009
27	10.801	10.809	-0.009
28	10.802	10.809	-0.007
29	10.802	10.809	-0.007
30	10.802	10.809	-0.007
31	10.803	10.811	-0.008
32	10.801	10.813	-0.012
33	10.801	10.813	-0.012
34	10.800	10.813	-0.012
35	10.800	10.813	-0.012
36	10.801	10.813	-0.011
37	10.801	10.813	-0.011
38	10.802	10.812	-0.010
39	10.801	10.820	-0.020
40	10.800	10.821	-0.020
41	10.800	10.820	-0.020
42	10.800	10.820	-0.019
43	10.801	10.820	-0.019
44	10.801	10.820	-0.019
45	10.801	10.820	-0.019

NOTE: Includes 1-hour CO background concentration of 10.80 ppm.

b. Toxic Air Emissions

For the same reasons outlined above for CO concentrations, the project would reduce vehicle emission concentrations in the Alcazar Garden. Impacts would be less than significant.

4.5.5.3 Mitigation, Monitoring, and Reporting

a. Localized Carbon Monoxide Impacts

Impacts would be less than significant. No mitigation is required.

b. Toxic Air Emissions

Impacts would be less than significant. No mitigation is required.

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4.6 Biological Resources

RECON biologists conducted a general biological resources survey on April 4 and September 23, 2011, to assess the current condition of the biological resources on-site and for the temporary access road, respectively. A general biological resources survey was also conducted within the Arizona Street Landfill on January 3, 2012. The general biological resources survey also included a directed search for sensitive plants and animals that would have been apparent during the time of the survey. The findings of the biological letter report are summarized below and the report is included as Appendix F to this EIR.

4.6.1 Existing Conditions

4.6.1.1 Existing Flora and Fauna

a. Flora

As listed in Table 4.6-1 and shown on Figures 4.6-1a and 4.6-1b, the project site, the proposed temporary access road, and the Arizona Street Landfill support six different vegetation communities/land cover types: Eucalyptus woodland, ornamental plantings, native landscaping, disturbed land, non-native grassland, and developed land.

TABLE 4.6-1
VEGETATION AND LAND COVER TYPES

Vegetation and Land Cover Types	Tier	Project Acres	Temporary Access Road Acres	Arizona Street Landfill Acres
Eucalyptus Woodland	IV	0.63	0.07	0.0
Ornamental Plantings	IV	4.33	0.11	0.0
Developed Land	IV	10.44	0.25	0.0
Disturbed Land	IV	0.0	0.0	13.96
Native Landscaping	IV	0.0	0.03	0.0
Non-native Grassland	IIIB	0.0	0.0	7.01
TOTAL		15.4	0.46	20.97

Eucalyptus woodland occurs to the south of the Laurel Street Bridge below the existing museum buildings and parking lots, totaling approximately 0.63 acre within the project area and 0.07 acre within the temporary access road. Ornamental plantings total approximately 4.33 acres throughout the project area and 0.11 acre within the temporary access road. Native landscaping totals approximately 0.03 acre located adjacent to the temporary access road south of Cabrillo Bridge and connecting to SR-163. This area has been planted for ornamental purposes with native species dominated by planted Fremont cottonwood (*Populus fremontii)*, western sycamore (*Platanus racemosa*), and coast live oak (*Quercus agrifolia*) trees.

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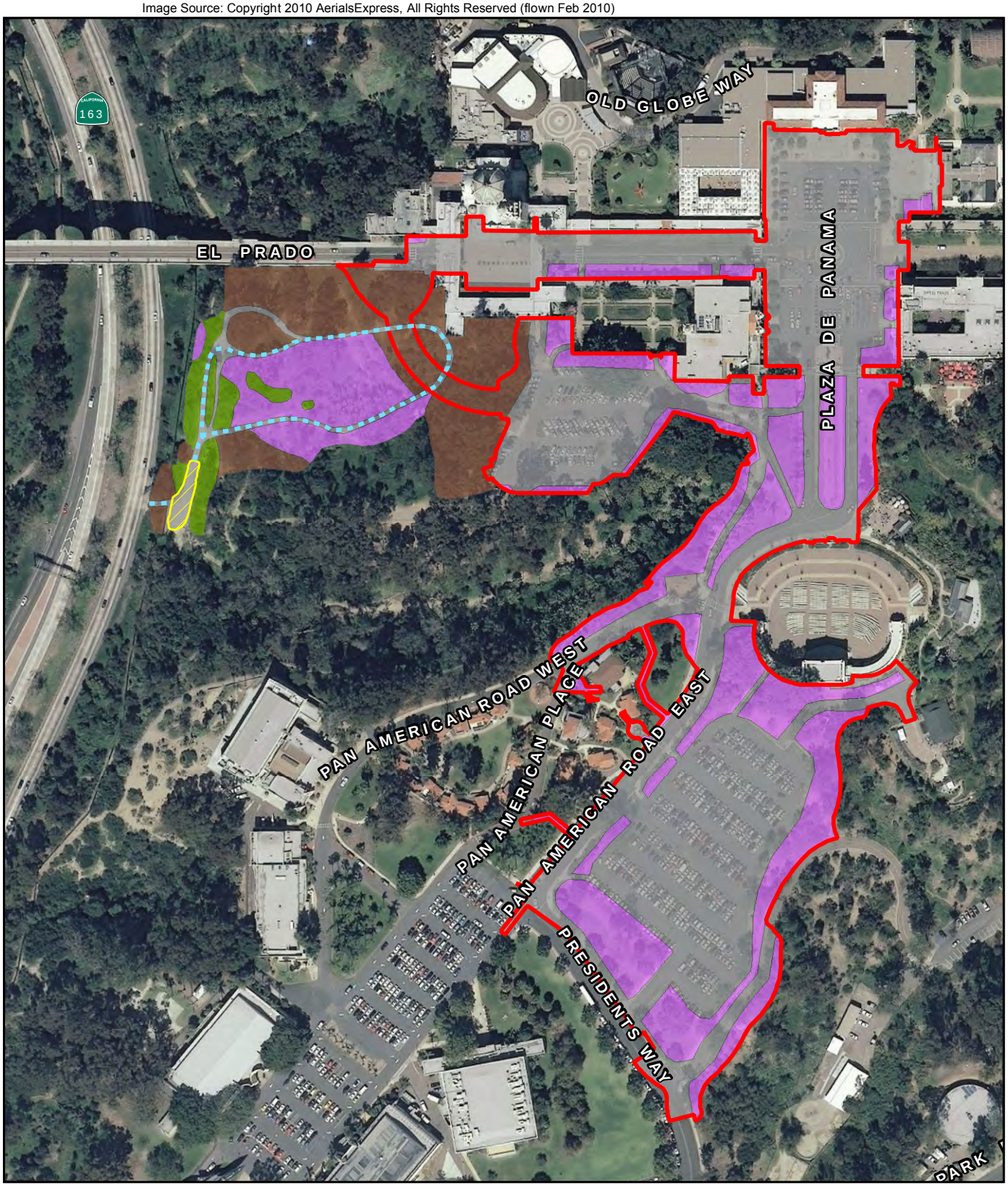

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Project Area

Off-site Project Components

Existing Temporary Access Road

Staging and Storage Area

Vegetation and Land Cover Types

Developed

Eucalyptus Woodland

Native Landscaping

Ornamental Plantings

FIGURE 4.6-1a

Biological Resources

Project Site and Temporary Impact Location

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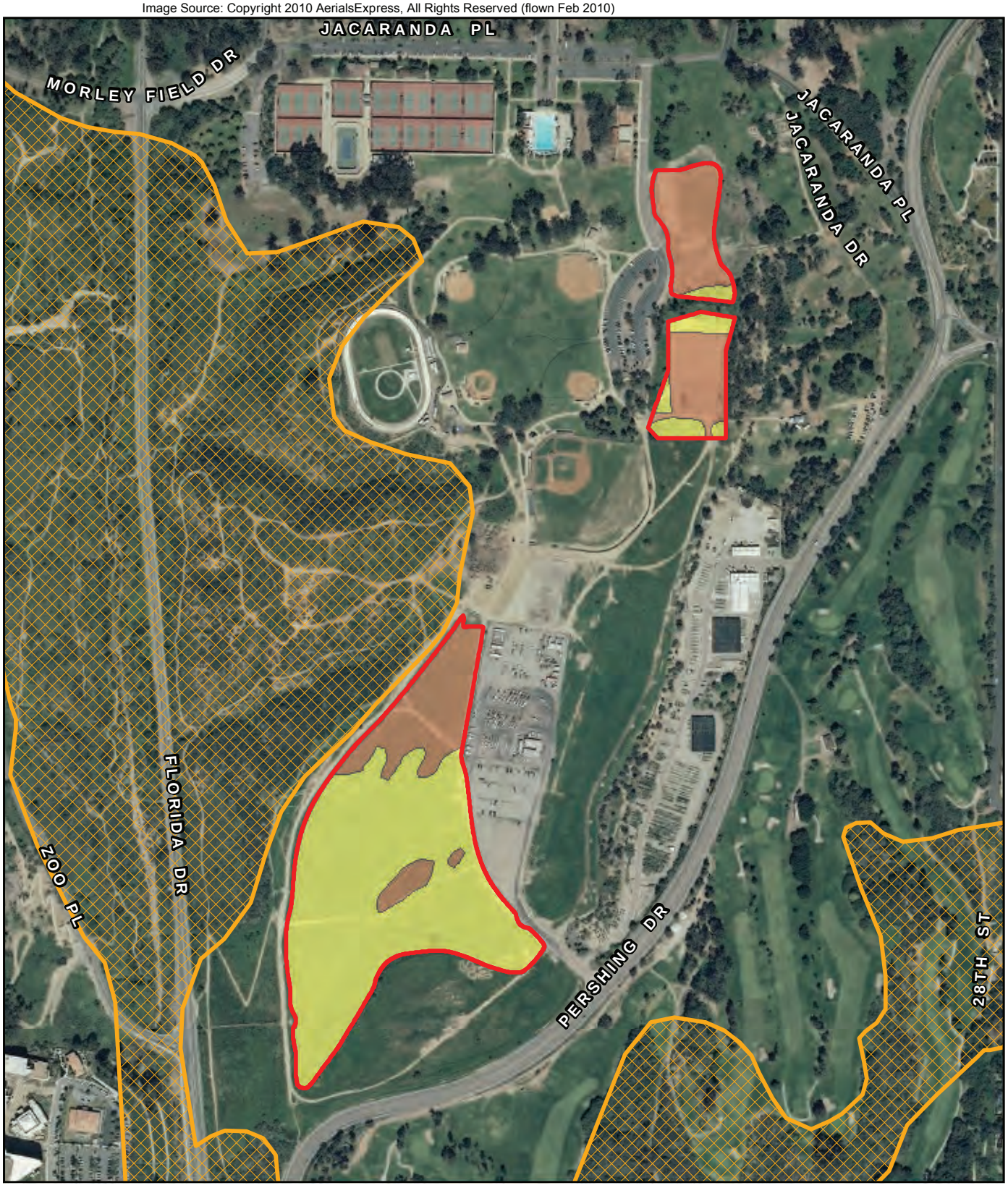

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Off-site Project Components

City of San Diego MHPA

Vegetation and Land Cover Types

Disturbed

Non-native Grassland

FIGURE 4.6-1b

Biological Resources

Off-site Fill Disposal Site at the Arizona Street Landfill

Non-native grassland is located within the Arizona Street Landfill. This is a Tier IIIB MSCP vegetation classification and total is approximately 7.01 acres. The non-native grassland is dominated by ripgut grass (*Bromus diandrus*) and wild oats (*Avena barbata*). Mulch was placed on the Arizona Street Landfill for erosion control purposes. In accordance with Order 97-11 "Waste Discharge Requirements for Post-closure Maintenance of Inactive Nonhazardous Waste Landfills in the San Diego Region" Item C 5, adopted by the San Diego Regional Water Quality Control Board (includes Arizona Street Landfill), vegetation used after closure of the landfill was selected to require minimum irrigation and maintenance and not impair the integrity of the containment structures including the existing cover. Landscaping overlaying the landfill portion of the site included shallow rooted native grasses and shrubs suited for inland valleys of southern California.

Disturbed land is found within the Arizona Street Landfill and totals approximately 13.96 acres. Areas that are dominated by non-native or weedy plant species are considered disturbed habitat. This area is also the main area in which the landfill is situated. Developed land comprises 10.44 acres within the project area and 0.25 acre within the temporary access road includes paved roads dirt roads, sidewalks, parking lots, and buildings of Balboa Park.

A total of 62 plant species were identified during the three surveys within the project area, temporary access road, and Arizona Street Landfill. Of this total, 13 species (20.9 percent) are native to southern California and 49 species (79 percent) are non-native. The total number of plant species identified does not include the numerous other species of horticultural plants used in the gardens and other green areas of the park that would be part of the ornamental plantings land cover type.

b. Fauna

The wildlife species observed within the survey area are predominantly urban species. Common bird species observed during the survey include Anna's hummingbird (*Calypte anna*), American crow (*Corvus brachyrhynchos hesperis*), and house finch (*Carpodacus mexicanus frontalis*). All of these species have adapted to residential and developed areas. Sensitive wildlife species are discussed below in Section 4.6.1.2c.

4.6.1.2 Sensitive Species

Assessments for the potential occurrence of sensitive species were based upon known ranges, habitat preferences for the species, species occurrence records from the California Natural Diversity Database, and species occurrence records from other sites in the vicinity of the project site.

a. Sensitive Vegetation Communities

Non-native grassland, a Tier IIIB MSCP vegetation community, occurs within the Arizona Street Land fill site. As indica ted i n Section 4.6.1.1(a) a bove, non-native grassland established over time after the placement of mulch for erosion control purposes.

No sensitive vegetation communi ties occur within the project area or within th e temporary access road. The native landscaping is not considered a sensitive vegetation community as it has b een clear ly planted for ornamental purposes associated with Caltrans improvements to SR-163.

b. Sensitive Plants

No sensitive plants were detected during the survey and no ne are expected to occur on the project site, as it is dominated by ornamen tal plants and developed land. Sp ecies that are known to occur in the project vicinity, which are federally list ed threatened o r endangered, or are con sidered a City of San Diego narrow endemic, are discussed in Appendix F. However, none of the species listed are expected to occur within the project area or within the temporary access road.

c. Sensitive Wildlife

All wildlife species kn own to occur in the project vicin ity that are federally listed threatened or endangered or that have potential to occur b ased on sp ecies range are addressed in Appendix F.

Coastal California Gnatcatcher. This species is federally listed as threatened, a CDFG species of special concern, and are a covered MSCP species (State of California 2009, 2010b, City of San Dieg o 2002). Th e coastal California gna tcatcher has a documen ted USFWS location within approximat ely one mile of the sur vey area. T his spe cies was detected adjacent to the Arizona Street Landfill during general surveys.

4.6.1.5 Wildlife Movement and Corridors

Wildlife movement corridors are defined as areas that connect suitable wildlife habitat areas in a region other wise fragmented by rugged terrain , changes in vegetation, o r human disturbance. Natural features such as canyon drainages, ridgelines, or areas with vegetation cover provi de corridors for wildlife travel. Wildlife move ment corridors are important because they provide access to mates, food, and water; allow the dispersal of individuals away from high popula tion density areas; and facilitate th e exchange o f genetic traits between populations. Wildlife movement corridors are considered sensitive by the City of San Diego and resource and conservation agencie s. The prop erty is located at the top of an urban canyon system and adjacent to Florida Canyon. The areas do not function as major wildlife movement corridors.

4.6.1.6 Regulatory Framework

a. Natural Habitat Conservation and Planning

The Natural Community Conservation Planning (NCCP) Program was enacted by the State of California in 1991 to provide long-term regional protection of natural vegetation and wildlife diversity while allowing compatible development. The NCCP process was initiated to provide an alternative to single-species conservation efforts (habitat conservation plans). Instead, the NCCP is intended to provide a regional approach to the protection of species within a designated natural community. In the City of San Diego, the MSCP is an outgrowth of this planning.

b. Multiple Species Conservation Program

The MSCP is a comprehensive, long-term habitat conservation planning program that covers approximately 900 square miles in southwestern San Diego County under the federal and state Endangered Species Acts and state NCCP Act of 1991. The planned MSCP regional preserve is targeted at 172,000 acres. Local jurisdictions, including the City, implement their portions of the regional umbrella MSCP through Subarea plans, which describe specific implementing mechanisms. The City's MSCP Subarea Plan was approved in March 1997. The City's MSCP study area includes 206,124 acres within its municipal boundaries. The City's planned MSCP preserve totals 56,831 acres, with 52,012 acres (90 percent) targeted for preservation. In 2004, the City committed to increasing the conservation target by 715 acres in association with revisions to the City's brush management regulations in response to local fires.

The MSCP Subarea Plan is a plan and process for the issuance of incidental take permits for listed species under Section 10(a)(1)(B) of the federal Endangered Species Act and section 2835 under the state Endangered Species Act. The primary goal of the MSCP Subarea Plan is to conserve viable populations of sensitive species and to conserve regional biodiversity while allowing for reasonable economic growth. In July 1997, the City signed an Implementing Agreement with the USFWS and the California Department of Fish and Game (CDFG). The Implementing Agreement serves as a binding contract between the City, the USFWS, and the CDFG that identifies the roles and responsibilities of the parties to implement the MSCP and Subarea Plan. The agreement allows the City to issue incidental take authorizations for "MSCP Covered" species. Applicable state and federal permits are still required for wetlands and listed species that are not covered by the MSCP.

"MSCP Covered" refers to species covered by the City's Federal ITP issued pursuant to Section 10(a) of the FESA (16 USC § 1539(a)(2)(A)). Under the FESA, an incidental take permit is required when non-federal activities would result in "take" of a threatened or endangered species. An HCP must accompany an application for a Federal ITP. Take

authorization for federally listed wildlife species covered in the HCP shall generally be effective upon approval of the HCP.

As of April 20, 2010, the City of San Diego may no longer rely on its Federal ITP for authorization for incidental take of the two vernal pool animal species and five plant species (the seven vernal pool species). Development involving the take of the seven vernal pool species requires authorization from the USFWS through the federal process until the City of San Diego completes a new HCP and enters into another Implementing Agreement for a new Federal ITP for those species. No vernal pools occur on the project site.

c. Multi-Habitat Planning Area

One of the primary objectives of the MSCP is to identify and maintain a preserve system, which allows for animals and plants to exist at both the local and regional levels. The MSCP has identified large blocks of native habitat having the ability to support a diversity of plant and animal life known as "core biological resource areas." "Linkages" between these core areas provide for wildlife movement. These lands have been determined to provide the necessary habitat quality, quantity, and connectivity to sustain the unique biodiversity of the San Diego region. Input from responsible agencies and other interested participants resulted in creation of the City's MHPA. The MHPA is the area within which the permanent MSCP preserve would be assembled and managed for its biological resources. MHPA lands are considered by the City to be a sensitive biological resource.

In accordance with the MSCP, for parcels located outside the MHPA:

> There is no limit on the encroachment into sensitive biological resources, with the exception of wetlands, and listed non-covered species' habitat [which are regulated by state and federal agencies] and narrow endemic species…impacts to sensitive biological resources must be assessed and mitigation, where necessary, must be provided in conformance with the City's Biological Guidelines (City of San Diego 2002).

To address the integrity of the MHPA, guidelines were developed to manage land uses adjacent to the MHPA. The adjacency guidelines are intended to be addressed on a project-by-project basis either in the planning or management stage. These guidelines address the issues of drainage, toxics, lighting, noise, barriers, invasives, brush management, and grading/development.

The nearest MHPA lands are within Florida Canyon, approximately 25 feet to the west of the Arizona Street Landfill (refer to Figure 4.1-4).

d. Land Development Code/Environmentally Sensitive Lands

On December 9, 1997, the ESL Regulations were adopted by ordinance as a part of the LDC. The purpose of the ESL Regulations is to protect and preserve environmentally sensitive lands (e.g., sensitive biological resources, steep hillsides, coastal beaches, sensitive coastal bluffs, and special flood hazard areas), along with the viability of the species supported by those lands. The regulations are intended to assure that development occurs in a manner that protects the overall quality of the resources and the natural and topographic character of the area. The ESL defines "sensitive biological resources" as those lands included within the MHPA as identified in the MSCP Subarea Plan, and other lands outside of the MHPA that contain: wetlands; vegetation communities classifiable as Tier I, II, IIIA or IIIB; habitat for rare, endangered or threatened species; or narrow endemic species. No sensitive biological resources pursuant to the ESL occur on the project site.

e. Land Development Manual/Biology Guidelines

The Biology Guidelines aid in the implementation and interpretation of ESL Regulations. Also, Section III of these Guidelines (Biological Impact Analysis and Mitigation Procedures) also serves as standards for the determination of impact and mitigation under the CEQA. The guidelines are the baseline biological standards for processing Neighborhood Development Permits, Site Development Permits and Coastal Development Permits issued pursuant to the ESL.

f. Migratory Bird Treaty Act

Raptors (birds of prey) and active raptor nests, as well as most other bird nests, are protected by the California Fish and Game Code 3503.5, which states that it is "unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird" unless authorized. In addition, active nests of most bird species are protected during the breeding season under the federal Migratory Bird Treaty Act (MBTA).

g. City of San Diego Significance Determination Thresholds

Potential impacts to biological resources are assessed through review of the project's consistency with the City's ESL Regulations, Biology Guidelines, and MSCP Subarea Plan. Before a determination of the significance of an impact can be made, the presence and nature of the biological resources must be established. Thus, significance determination, pursuant to the City's Significance Determination Thresholds, proceeds in two steps: (1) determine if significant biological resources are present; and (2) determine the sensitivity of identified biological resources in terms of direct, indirect, and cumulative impacts that would result from project implementation.

1. Sensitive biological resources are defined by the City of San Diego Municipal Code as:

   - Lands that have been included in the MHPA as identified in the City of San Diego MSCP Subarea Plan (City of San Diego 1997);
   - Wetlands (as defined by the Municipal Code, Section 113.0103);
   - Lands outside the MHPA that contain Tier I Habitats, Tier II Habitats, Tier IIIA Habitats, or Tier IIIB Habitats as identified in the Biology Guidelines (July 2002 or current edition) of the Land Development manual;
   - Lands supporting species or subspecies listed as rare, endangered, or threatened;
   - Lands containing habitats with narrow endemic species as listed in the Biology Guidelines of the Land Development manual; and
   - Lands containing habitats of covered species as listed in the Biology Guidelines of the Land Development manual.

2. Occurrence of any of the following situations associated with identified biological resources may indicate significant direct and indirect biological impacts.

   a. Direct Impacts

      - Any encroachment in the MHPA is considered a significant impact to the preservation goals of the MSCP. Any encroachment into the MHPA (in excess of the allowable encroachment by a project) would require a boundary adjustment, which would include a habitat equivalency assessment to ensure that what would be added to the MHPA is at least equivalent to what would be removed.
      - Lands containing Tier I, II, IIIA, and IIIB habitats and all wetlands are considered sensitive and declining habitats. Impacts to these resources may be considered significant.
      - Impacts to individual sensitive species, outside of any impacts to habitat, may also be considered significant based upon the rarity and extent of impacts. Impacts to state or federally listed species and all narrow endemics should be considered significant.
      - Certain species covered by the MSCP and other species not covered by the MSCP may be considered significant on a case-by-case basis taking into

consideration all pertinent information regarding distribution, rarity, and the level of habitat conservation afforded by the MSCP.

b. Indirect Impacts

The Significance Determination Thresholds indicate that depending on the circumstances, indirect effects of a project may be as significant as the direct effects of the project. Indirect effects include, but are not limited to, the following impacts:

- Introduction of urban meso-predators into a biological system
- Introduction of urban runoff into a biological system
- Introduction of invasive exotic plant species into a biological system
- Noise and lighting impacts
- Alteration of a dynamic portion of a system, such as streamflow characteristics or fire cycles
- Loss of a wetland buffer that includes no environmentally sensitive lands.

4.6.2 Issue 1: Sensitive Species

Would the proposal result in a substantial adverse impact, either directly or through habitat modifications, on any species identified as candidate, sensitive, or special status species in the MSCP or other local or regional plans, policies, or regulations or by the CDFG or USFWS?

According to the City's Significance Determination Thresholds, impacts related to biological resources would be significant if the project would:

- Result in a substantial adverse impact, either directly or through habitat modifications, on any species identified as candidate, sensitive, or special status species in the MSCP or other local or regional plans, policies, or regulations or by the CDFG or USFWS.

4.6.2.1 Impacts

ALL PROJECT COMPONENTS

a. Plant Species

No sensitive plants were detected during the general biological resources surveys and none are expected to occur within the project area, the temporary access road, or at the

Arizona Street Landfill, as they are dominated by ornamental and native landscape plantings, eucalyptus woodland, and developed land. Species that are known to occur in the project vicinity are discussed in Appendix F. There would be no impact to sensitive plant species.

b. Wildlife Species

Although no sensitive wildlife species were observed within the project area or the temporary access road, coastal California gnat catcher was detected adjacent to the Arizona Street Landfill during the general biological resources survey. Impacts to the coastal California gnatcatcher would be significant.

Although raptors are not expected to nest within the project area, there are numerous trees within the project area that could serve as raptor nesting habitat. Impacts to nesting raptors, including removal of an active nest or causing nest abandonment during construction activities, would be considered significant and require mitigation. Direct impacts to migratory birds using the site could occur if construction activities disrupt breeding activities or inadvertently kill species covered under the MBTA. Impacts to migratory or nesting birds would be significant.

4.6.2.2 Significance of Impacts

a. Plant Species

No sensitive plants were detected or expected to occur within the project area or the temporary access road. Thus, there would be no impacts to sensitive plant species as a result of the project.

b. Wildlife Species

The project has the potential to result in direct and indirect impacts to nesting raptors and species covered under the MBTA during construction activities. The project also has the potential to result in direct and indirect impacts to coastal California gnatcatcher. These impacts would be significant.

4.6.2.3 Mitigation, Monitoring, and Reporting

a. Plant Species

No impacts to sensitive plant species would occur as a result of the project; mitigation would not be required.

b. Wildlife Species

Implementation of mitigation measure **LU-1** would reduce direct and indirect impacts to coastal California gnatcatcher to less than significant. The following mitigation measure would reduce significant impacts to nesting raptors and other species covered under the MBTA.

BR-1

I. Prior to the issuance of any grading permits and/or the first pre-construction meeting, the owner/permittee shall submit evidence to the ADD of the Entitlements Division verifying that a qualified biologist has been retained to implement the biological resources mitigation program as detailed below (see A through D):

   A. Prior to the first pre-construction meeting, the applicant shall provide a letter of verification to the ADD of LDR stating that a qualified Biologist, as defined in the City of San Diego Biological Resource Guidelines, has been retained to implement the biological resources mitigation program.

   B. At least 30 days prior to the pre-construction meeting, a second letter shall be submitted to the MMC section which includes the name and contact information of the Biologist and the names of all persons involved in the Biological Monitoring of the project.

   C. At least 30 days prior to the pre-construction meeting, the qualified Biologist shall verify that any special reports, maps, plans and time lines, such as but not limited to, revegetation plans, plant relocation requirements and timing, avian or other wildlife protocol surveys, impact avoidance areas or other such information has been completed and updated.

   D. The qualified biologist (project biologist) shall attend the first preconstruction meeting.

II. If project grading is proposed during the raptor breeding season (February 1–September 15), the project biologist shall conduct a pre-grading survey for active raptor nests within 300 feet of the development area and submit a letter report to MMC prior to the preconstruction meeting

   A. If active raptor nests are detected, the report shall include mitigation in conformance with the City's Biology Guidelines (i.e. appropriate buffers, monitoring schedules, etc.) to the satisfaction of the ADD of the Entitlements Division. Mitigation requirements determined by the project biologist and the ADD of Entitlements shall be incorporated into the project's Biological Construction Monitoring Exhibit and monitoring results incorporated in to the final biological construction monitoring report.

B. If no nesting raptors are detected during the pre-grading survey, no mitigation is required.

III. Prior to the issuance of any grading permit, the project biologist shall verify that the following project requirements regarding the MBTA are shown on the construction plans:

No direct impacts shall occur to nesting birds, their eggs, chicks, or nests during the breeding season. If construction activities are to occur during the bird breeding season, pre-construction surveys will be necessary to confirm the presence or absence of breeding birds. If nests or breeding activities are located on-site, an appropriate buffer area around the nesting site shall be maintained until the young have fledged.

4.6.2.4 Significance of Impacts after Mitigation

Implementation of mitigation measures **BR-1** and **LU-1** for sensitive wildlife would reduce impacts to less than significant.

4.6.3 Issue 2: Sensitive Habitat

Would the proposal result in a substantial adverse impact on any Tier I habitats, Tier II habitats, Tier IIIA habitats, or Tier IIIB habitats as identified in the Biology Guidelines of the Land Development Manual or other sensitive natural community as identified in local or regional plans, polies, regulations or by the CDFG or USFWS?

According to the City's Significance Determination Thresholds, impacts related to biological resources would be significant if the project would:

- Result in a substantial adverse impact on any Tier I habitats, Tier II habitats, Tier IIIA habitats, or Tier IIIB habitats as identified in the Biology Guidelines of the Land Development Manual or other sensitive natural community as identified in local or regional plans, polies, regulations or by the CDFG or USFWS.

4.6.3.1 Impacts

ALL PROJECT COMPONENTS

As shown in Table 4.6-2 and Figures 4.6-2a and 4.6-2b, the project would impact 0.63 acre of eucalyptus woodland, 4.33 acres of ornamental plantings, and 10.44 acres of developed land, for a total impact area of 15.4 acres.

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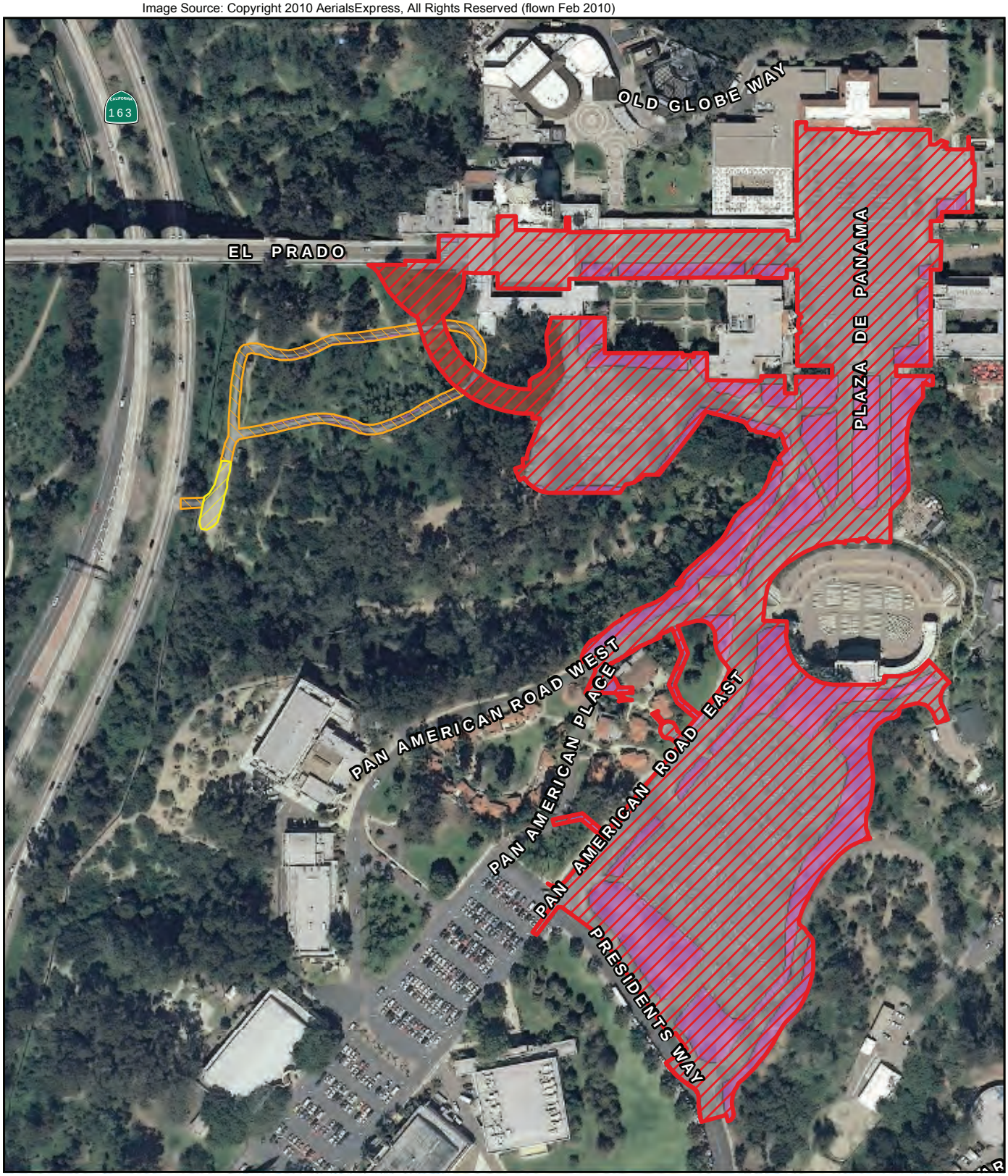

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- Project Impacts
- Potential Temporary Access Road Impacts
- Staging and Storage Area

Vegetation and Land Cover Types

- Developed
- Eucalyptus Woodland
- Native Landscaping
- Ornamental Plantings

FIGURE 4.6-2a

Proposed Impacts to Biological Resources

Project Site and Temporary Impact Location

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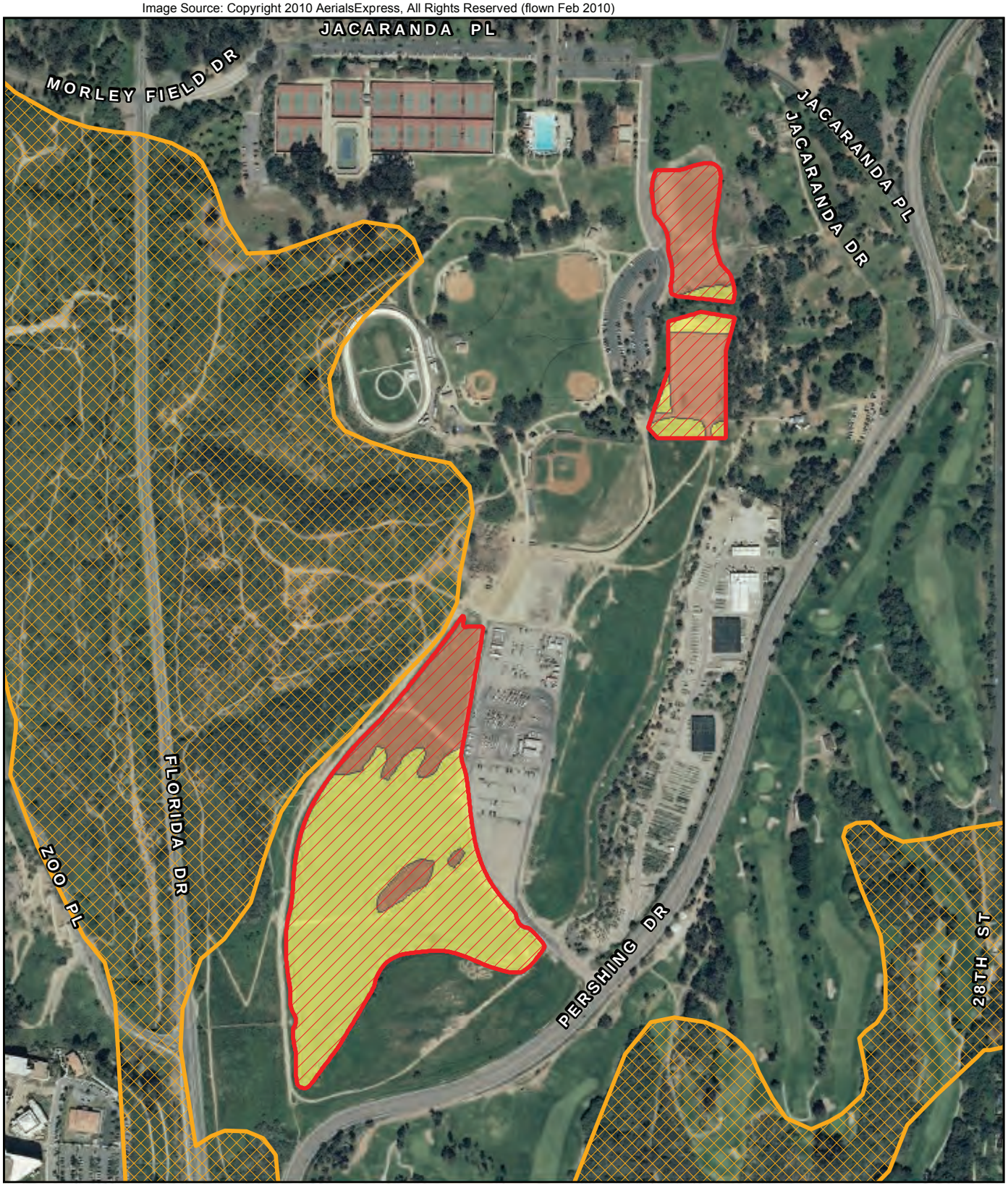

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Project Impacts

City of San Diego MHPA

Vegetation and Land Cover Types

Disturbed

Non-native Grassland

FIGURE 4.6-2b

Proposed Impacts to Biological Resources

Off-site Fill Disposal Site at the Arizona Street Landfill

Impacts to vegetation communities adjacent to the temporary access road could result during construction in the event that construction activities should disrupt the adjacent vegetation. To assess this potential impact, an Area of Potential Effect (APE) was determined. The APE includes the area from the centerline of the access road extending 9 feet on either side (18 feet total). Potential impacts within the APE are estimated to be 0.07 acre of Eucalyptus woodland, 0.11 acre of ornamental plantings, 0.25 acre of developed land (the existing access road), and 0.03 acre of native landscaping (see Figures 4.6-2a and 4.6-2b). The native landscaping is not considered a sensitive vegetation community as it has been clearly planted for ornamental purposes associated with Caltrans improvements to SR-163.

Project activities within the Arizona Street Landfill would impact 7.01 acres of non-native grassland and 13.96 acres of disturbed land, for a total of 20.97 acres. Overall, the project would impact 36.83 acres of vegetation/land cover types.

TABLE 4.6-2
IMPACTS TO VEGETATION AND LAND COVER TYPES

Vegetation and Land Cover Types	Tier	Project Area (acres)	Temporary Access Road (acres)	Arizona Street Landfill (acres)	Total Acres
Non-native Grassland	IIIB	0	0 7.01		7.01
Eucalyptus Woodland	IV	0.63	0.07	0	0.7
Ornamental Plantings	IV	4.33	0.11	0	4.44
Developed Land	IV	10.44	0.25	0	10.69
Disturbed Land	IV	0	0	13.96	13.96
Native Landscaping	IV	0	0.03	0	0.03
TOTAL		15.4	0.46	20.97	36.83

Impacts to non-native grassland (Tier IIIB) would be less than significant. Per the City of San Diego CEQA Significance Determination Thresholds (City of San Diego 2011), habitat mitigation is not required for impacts to areas that have been planted for the purpose of erosion control per a permit requirement. The non-native grassland that occurs within this area was allowed to establish following placement of mulch as an erosion control measure. Therefore, mitigation is not required for non-native grassland impacts within this site. All other vegetation communities impacted by the project are within the Tier IV (other uplands) habitat types and would not be significant according to the City Thresholds. All project impacts are outside the MHPA.

4.6.3.2 Significance of Impacts

The project would impact one sensitive habitat, non-native grassland. The project impact to non-native grassland within the Arizona Street Landfill area would be less than significant pursuant to the Significance Determination Thresholds, as the vegetation in the area was established for erosional control pursuant to a permit requirement. In

addition, hydroseed would be placed on the fill disposal area following earthwork activities within the Arizona Street Landfill. Consistent with the "passive" park uses and the Park and Recreation land use goals for the Arizona Street Landfill, the hydroseeded areas would not be irrigated. The hydroseed mix would consist of native non-invasive species.

Project impacts to Tier IV (other uplands) habitat types would also be less than significant, as Tier IV habitats are not sensitive. Overall, impacts to sensitive habitats would be less than significant.

4.6.3.3 Mitigation, Monitoring, and Reporting

Impacts would be less than significant; therefore, no mitigation is required.

4.6.4 Issue 3: Wildlife Corridors

Would the proposal interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native or resident migratory wildlife corridors, including linkages identified in the MSCP, or impede the use of native wildlife nurseries?

According to the City's Significance Determination Thresholds, impacts related to biological resources would be significant if the project would:

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native or resident migratory wildlife corridors, including linkages identified in the MSCP, or impede the use of native wildlife nurseries.

4.6.4.1 Impacts

ALL PROJECT COMPONENTS

As discussed above, the project site does not currently function as a wildlife movement corridor. The site is dominated by disturbed and developed land. The property is located at the top of an urban canyon system and is not part of a major wildlife movement corridor. Additionally, the Arizona Street Landfill site is also at the top of an urban canyon system; however, it is adjacent to the Florida Canyon MHPA. No designated habitat linkage or wildlife movement corridor exists near the Arizona Street Landfill site. Project activities at the Arizona Street Landfill site would conform to MHPA Land Use Adjacency Guidelines and would not interfere substantially with the movement of any native resident or migratory fish or wildlife species. Therefore, impacts to wildlife movement would be less than significant.

4.6.4.2 Significance of Impacts

No designated habitat linkage or wildlife corridor exists near the project site, temporary access road, or Arizona Street Landfill site. Impacts associated with the substantial interference of a wildlife movement corridor would be less than significant.

4.6.4.3 Mitigation, Monitoring, and Reporting

No significant impacts regarding wildlife movement would occur; therefore, no mitigation is required.

4.6.5 Issue 4: Invasive Species

Would the proposal result in the introduction of invasive species of plants into the area?

According to the City's Significance Determination Thresholds, impacts related to biological resources would be significant if the project would:

- Result in the introduction of invasive species of plants into the area.

4.6.5.1 Impacts

ALL PROJECT COMPONENTS

Invasives are aggressive non-native plant species that threaten natural habitats by outcompeting native species and reducing biodiversity. These plants thrive in areas disturbed by activities such as grading, construction, and off-road-vehicle use or fire.

No invasive plant species would be introduced into the project area. The project includes a conceptual landscape plan, which is incorporated into the project design to ensure that indirect effects due to invasive species would not occur. The plan provides a list of plant materials that would respond to a variety of locations, orientations, levels of refinement, and land use transitions and edge conditions.

Fill areas within the landfill would be hydroseeded with a mix of native non-invasive species that would not require irrigation and are consistent with "passive" park uses and Park and Recreation land use goals for the Arizona Street Landfill. The program of erosion control, construction activities, soil export and placement, and haul route monitoring would be managed by the construction contractor. As such, impacts related to the introduction of invasive plant species would be less than significant.

4.6.5.2 Significance of Impacts

The project would not introduce invasive species to the project area; therefore, impacts would be less than significant.

4.6.5.3 Mitigation, Monitoring, and Reporting

No significant impacts resulting from invasive plants would occur; therefore, no mitigation would be required.

4.6.6 Issue 5: MSCP

Would the proposal conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan, either within the MSCP or in the surrounding area?

According to the City's Significance Determination Thresholds, impacts related to biological resources would be significant if the project would:

- Conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan, either within the MSCP or in the surrounding area.

4.6.6.1 Impacts

ALL PROJECT COMPONENTS

As discussed above, the aforementioned Florida Canyon MHPA is adjacent to a portion of the Arizona Street Landfill. The placement of fill and grading operations within the Arizona Street Landfill disposal site has the potential to result in significant indirect impacts to the MHPA associated with noise, lighting, drainage, and the introduction of invasive plants.

4.6.6.2 Significance of Impacts

The export generated from construction of the Organ Pavilion parking structure would be disposed within the Arizona Street Landfill site and grading activities would have the potential to result in significant indirect impacts to the adjacent MHPA.

4.6.6.3 Mitigation, Monitoring, and Reporting

Mitigation measure **LU-1**, detailed in Section 4.1, provides specific measures that shall be adhered to before a construction permit is issued, before construction starts, and

during construction in order to ensure that the project is in conformance with the associated discretionary permit conditions, the MSCP, and the Land Use Adjacency Guidelines for the MHPA. Implementation of mitigation measure **LU-1** would, therefore, mitigate potential impacts to a level below significance.

4.6.6.3 Significance of Impacts after Mitigation

Implementation of mitigation measure **LU-1** would reduce indirect impacts to the adjacent MHPA to less than significant.

4.7 Energy Conservation

Public Resources Code Section 21100(b)(3) and CEQA Guidelines Section 15126.4 require EIRs to analyze energy conservation as it is applicable to the project, and in particular to describe any wasteful, inefficient, and unnecessary consumption of energy caused by a project, along with a description of feasible mitigation measures.

The analysis of energy conservation consists of a summary of the energy regulatory framework, the existing conditions at the project site, a discussion of the project's potential impacts on energy resources, and identification of the project design features or mitigation measures that may reduce energy consumption. This section evaluates potential impacts to energy conservation in accordance with Appendix F of the CEQA Guidelines and federal, state, and regional regulations.

4.7.1 Existing Conditions

4.7.1.1 San Diego Gas and Electric

San Diego Gas and Electric (SDG&E) is the owner and operator of natural gas and electricity transmission and distribution infrastructure in San Diego County. SDG&E is regulated by the California Public Utilities Commission (CPUC) which is responsible for making sure that California utilities' customers have safe and reliable utility service at reasonable rates and sets the gas and electricity rates for SDG&E. The project's energy needs would be supplied through the various combinations of energy resources available within the project area, and involving the anticipated future energy resource use patterns discussed in this section.

Table 4.7-1 lists SDG&E's current energy sources. As shown, SDG&E uses biomass, geothermal, hydroelectric, solar, and wind sources and obtained 10 percent of its energy from renewable resources in 2009. As directed by the California Renewables Portfolio Standard in Senate Bill 1078, SDG&E and other statewide energy utility providers are targeted to achieve a 33 percent renewable energy mix by 2020. Currently, nearly 11 percent of SDG&E's renewables procurement is from resources located in San Diego County. The remainder is from renewable energy sources located in Riverside, Orange, and Kern Counties (SDG&E 2010).

TABLE 4.7-1
SDG&E POWER CONTENT

Energy Source	SDG&E 2009 Power Mix* (actual)
Renewables	10%
Biomass and waste	3%
Geothermal	<1
Small hydroelectric	<1%
Solar	<1%
Wind	7%
Coal	7%
Large Hydroelectric	3%
Natural Gas	62%
Nuclear	18%
TOTAL	100%

SOURCE: SDG&E October 2010b.
*86 percent of SDG&E 2009 power mix is specifically purchased from individual suppliers.
NOTE: 10 per cent of SDG&E 2009 power mix is purchased from individual renewable suppliers.

There are two major electricity generating power plants in San Diego County, Encina Power Plant and San Onofre Nuclear Generating Station. There are also a number of smaller electricity generating plants in the county that are used as backup during times of peak power demand. These in-region assets are currently capable of generating approximately 2,360 megawatts (MW) of electricity, about 55 per cent of the region's summer peak demand. However, San Diego's older in-region resources typically run at partial capacity (1,628 MW) due to air quality, high fuel cost, and other reasons.

Power generation and power use are not linked geographically. Electricity generated within the San Diego region is not dedicated to users in the SDG&E service area. Instead, electricity generated in the county is fed into the statewide utility grid and made generally available to users statewide. SDG&E purchases electricity from this statewide grid, through various long-term contracts. Natural gas is also imported into southern California and originates from any of a series of major supply basins located from Canada to Texas. Gas is pumped out and shipped to receipt points that connect with major interstate gas pipelines. The Wheeler receipt point, located near Bakersfield, California, is where SDG&E receives deliveries of Canadian natural gas to be received into the Southern California Gas system. Several liquid natural gas plants are proposed in Mexico, which would provide an additional source of natural gas to southern California. SDG&E currently purchases nearly 80 per cent of its electricity and natural gas needs from out-of-region energy sources.

There is an SDG&E substation located within Balboa Park, approximately one-quarter mile from the eastern edge of the project site. There are no other energy facilities located within or surrounding the project site.

4.7.1.2 Regulatory Setting

The following regulations and guidelines provide the framework for energy conservation. According to the majority of these programs and their requirements, the increased and growing demands for non-renewable energy supplies are best addressed through conservation.

Federal and state agencies regulate energy use and consumption through various means and programs. On the federal level, the U.S. Department of Transportation, the U.S. Department of Energy (DOE), and the EPA are three federal agencies with substantial influence over energy policies and programs. Generally, federal agencies influence and regulate transportation energy consumption through establishment and enforcement of fuel economy standards for automobiles and light trucks, through funding of energy-related research and development projects, and through funding for transportation infrastructure improvements.

On the state level, the CPUC and California Energy Commission (CEC) are two agencies with authority over different aspects of energy. The CPUC regulates privately owned utilities in the energy, rail, telecommunications, and water fields. The CEC collects and analyzes energy-related data, prepares statewide energy policy recommendations and plans, promotes and funds energy efficiency programs, and adopts and enforces appliance and building energy efficiency standards.

a. Federal

Federal Energy Policy and Conservation Act and Amendments

Minimum standards of energy efficiency for many major appliances were established by the U.S. Congress in the federal Energy Policy and Conservation Act of 1975, and have been subsequently amended by succeeding energy legislation, including the federal Energy Policy Act of 2005. The DOE is required to set appliance efficiency standards at levels that achieve the maximum improvement in energy efficiency that is technologically feasible and economically justified.

Corporate Average Fuel Economy Standards

The federal Corporate Average Fuel Economy (CAFE) standard determines the fuel efficiency of certain vehicle classes in the United States. In 2007, as part of the Energy and Security Act of 2007, CAFE standards were increased for new light-duty vehicles to 35 miles per gallon by 2020. In May 2009, President Obama announced plans to increase CAFE standards to require light-duty vehicles to meet an average fuel economy of 35.5 miles per gallon by 2016.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 established new standards for a few equipment types not already subjected to a standard, and updated some existing standards. Perhaps the most significant new standard it establishes is for general service lighting, which will be deployed in two phases. First, by 2012–2014 (phased over several years), common light bulbs will be required to use about 20–30 percent less energy than present incandescent bulbs. Second, by 2020, light bulbs must consume 60 percent less energy than today's bulb; this requirement will effectively phase out the incandescent light bulb.

b. State

State Standards Addressing Vehicular Emissions

California Assembly Bill 1493 (Pavley), enacted on July 22, 2002, required CARB to develop and adopt regulations to reduce greenhouse gases (GHG) emitted by passenger vehicles and light duty trucks. CARB adopted regulations in 2004 but due to legal delays was not granted the authority by the EPA to proceed until 2009. The adopted regulations apply to the vehicle manufacture of 2009 and later model year vehicles. With this action, it is expected that the new regulations (Pavley I) will reduce GHG emissions from California passenger vehicles by about 22 per cent in 2012 and about 30 per cent in 2016 (CARB 2010b). GHG reductions would result from improved vehicle design that includes small engines with superchargers, continuously variable transmissions, and hybrid electric drives. These types of vehicle design would further improve fossil fuel economy, allowing harmonization with the federal rules and CAFE standards for passenger/light duty vehicles.

California Code of Regulations Title 24, Part 6 California Energy Code

All new construction in California must meet Title 24 energy standards (CEC 2008). Title 24, which provides energy efficiency standards for residential and nonresidential buildings, was established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to incorporate new energy efficiency technologies and methods. For example, the current Title 24 standards achieve a minimum 15 percent reduction in the combined space heating, cooling, and water heating energy compared to the previous 2005 Title 24 energy standards.

California Code of Regulations Title 24, Part 11 California Green Building Code

The California Green Building Standards Code, referred to as CALGreen, was added to Title 24 as Part 11 in 2009, and became effective January 1, 2011. This code institutes

mandatory minimum environmental performance standards that include the same energy efficiency requirements as Part 6 of Title 24, with optional Tier I and II standards for even greater energy efficiency. The code also mandates a 20 percent reduction in indoor water use, with voluntary goals and incentives for projects achieving 30 percent and over reduction. Because the provision of water involves large amounts of energy consumption, reduced water consumption would result in reduced energy demand.

Energy Action Plan

The state Energy Action Plan, drafted and approved in 2003 by the CPUC, the California Energy Commission, and the California Power Authority, provides policy guidance for future resource additions. The goal of the Energy Action Plan (2003, updated in 2005) is to ensure that adequate, reliable, and reasonably priced electrical power and natural gas supplies, including prudent reserves, are achieved and provided through policies, strategies, and actions that are cost-effective and environmentally sound for California's consumers and taxpayers (State of California 2005).

c. Regional

SDG&E Long Term Resource Plan

In 2004, SDG&E filed a long-term energy resource plan (LTRP) with the CPUC, which identifies how it will meet the future energy needs of customers in SDG&E's service area. The LTRP identifies several energy demand reduction (i.e., conservation) targets, as well as goals for increasing renewable energy supplies, new local power generation, and increased transmission capacity.

Consistent with Senate Bill 1078, the goals for increased renewable energy supplies in the 2004 LTRP call for acquiring 20 percent of SDG&E's energy mix from renewables by 2010 and 33 percent by 2020. This bill requires the state's three investor-owned utilities, including SDG&E, to increase their purchases of power generated from renewable resources in order to reduce reliance on fossil fuels and to reduce GHG emissions.

The LTRP also calls for greater use of in-region energy supplies, including renewable energy installations. By 2020, the LTRP states that SDG&E intends to achieve and maintain the capacity to generate 75 per cent of summer peak demand with in-county generation. The LTRP also identifies the procurement of 44 percent of its renewables to be generated and distributed in-region by 2020.

d. Local

Balboa Park Cultural Partnership Sustainability Program

The Balboa Park Cultural Partnership (BPCP) established a park-wide sustainability program that includes 26 cultural institutions, the City of San Diego, SDG&E, and many

other community stakeholders. The BPCP compiled the 2010 –2012 Economic and Environmental Sustainability Strategic Plan for Balboa Park. The plan identifies energy efficiency and conservation goals, formalizes sustainability strategies, identifies sustainability focus areas, details information programs, and identifies funding. Its goal is to reduce Balboa Park electric bills by $1.5 million per year, increase water conservation by 50 percent, and increase recycling at Balboa Park by 50 percent.

4.7.2 Issue 1: Energy Use

Would the construction and operation of the proposal result in the use of excessive amount of electric power, fuel, or other forms of energy (e.g., natural gas, oil) during the construction or long-term operation phase of the proposal?

Neither the State CEQA Guidelines Appendix G nor the City of San Diego's CEQA Significance Determination Thresholds (2011) contains pecific thresholds to identify when a significant energy-use impact has occurred. State CEQA Guidelines Appendix F, Energy Conservation, provides direction as to the type of information, analysis, and mitigation that should be considered in evaluating a proposed project, but does not provide specific energy conservation thresholds.

Per Appendix F of the State CEQA Guidelines, the goal of conserving energy implies the wise and efficient use of energy. In order to assure that energy implications are considered in project decisions, CEQA requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy. Accordingly, potentially significant energy implications of a project should be considered in an EIR.

4.7.2.1 Impacts

ALL PROJECT COMPONENTS

a. Construction-Related Fuel Use

Grading and construction activities consume energy through the operation of heavy off-road equipment, trucks, and worker traffic. Construction details and phasing are discussed in Section 3.8.

Heavy equipment requirements for the various construction phases were based on similar projects' construction requirements and assumptions contained in the CalEEMod model used to project air quality and GHG emissions. Table 4.5-4 in the Air Quality section presents a summary of the maximum anticipated heavy equipment requirements for all phases of construction.

The consumption of fuel during the construction phase was determined based on the following assumptions:

- All construction-related carbon dioxide (CO_2) emissions would be due to the combustion of fossil fuels.
- All off-road (heavy) equipment would be diesel powered and all worker vehicles would be gasoline powered.

To calculate the total fuel consumed by off-road construction equipment, the CO_2 emission estimates (in pounds) were divided by the CO_2 emission factor (in pounds per gallon). In addition, fuel-energy consumed by the anticipated hauling/delivery trucks and worker vehicles can be similarly quantified. It was assumed that all off-road equipment and on-road trucks were diesel powered and all worker vehicles were gasoline powered.

Table 4.7-2 summarizes the CO_2 emissions and gallons of fuel consumed.

TABLE 4.7-2
CONSTRUCTION FUEL CONSUMPTION

	Off-Road Equipment	Hauling Trucks	Vendor Trucks	Worker Vehicles	Total
CO_2 Emissions (pounds per year)					
Phase I – 2012	232,565	0	3,263	13,250	249,078
Phase II – 2012	598,113	22	11,993	30,799	640,927
Phase II – 2013	5,843,147	309	117,330	294,581	6,255,367
Phase III – 2013	96,430	0	2,006	40,367	138,803
Phase III – 2014	72,973	0	1,521	29,895	104,389
Phase IV – 2014	677,325	0	30,071	43,343	750,739
TOTAL	7,520,554	331	166,184	452,234	8,139,303
Emission Factor (pounds CO_2 per gallon)	*22.67*	*22.37*	*22.37*	*19.56*	--
Fuel Consumed (Gallons)					
Phase I – 2012	10,396	0	146	677	11,219
Phase II – 2012	26,737	1	536	1,574	28,849
Phase II – 2013	261,205	14	5,245	15,057	281,521
Phase III – 2013	4,311	0	90	2,063	6,464
Phase III – 2014	3,262	0	68	1,528	4,858
Phase IV – 2014	30,278	0	1,344	2,215	33,838
TOTAL	**336,189**	**15**	**7,429**	**23,116**	**366,749**

As shown in Table 4.7-2, off-road construction equipment would consume approximately 336,189 gallons of diesel fuel, hauling/delivery trucks would consume approximately 7,444 gallons of diesel fuel, and worker vehicles would consume approximately 23,116 gallons of fuel. More efficient equipment that uses clean-fuel technologies or electric-based engines would be employed wherever feasible during construction to reduce total fuel-energy consumption.

b. Long-term Operational-Related Energy Use

Long-term operational energy use associated with the project includes energy consumption related to obtaining and using water and in disposing of waste, and fuel-energy consumption by operation of vehicles.

Electricity Consumption

The project would include a new parking structure as well as several park amenities, including a visitor center, valet station, and restrooms and electricity would be required for interior and exterior facilities.

Electricity consumption for each component is described below:

- The parking structure would consume 660,000 kilowatts per hour (kWh) of electricity per year (Kuhn, personal communication 2011).

- The total electricity requirement for the visitor center (1,400 square feet), valet station (36 square feet for enclosed portion), and restrooms (1,585 square feet) was estimated based on an average commercial use. The average electricity consumption rate for commercial uses was obtained from consumption data published by the United States Energy Information Administration (EIA). The average annual consumption rate for commercial uses is 14.1 kWh per square foot per year (EIA 2006). This rate was multiplied by the total square footage of the buildings to obtain the total annual electricity consumption of 42,596 kWh.

- Exterior lighting not associated with the parking structure or any other proposed structures would require 233 50-watt lights that would be on for 12 hours per day in the evening and nighttime hours. This would consume 51,027 kWh per year.

Table 4.7-3 shows the total electrical demand. As shown, future electrical energy demand is estimated at 719,678 kWh of electricity per year.

TABLE 4.7-3
FUTURE PROJECT ELECTRICAL DEMAND

	Size (square feet)	Generation Rate	Total kWh
Parking Structure	--	--	660,000
Visitor Center	1,400	14.1 kWh/square foot/year	19,740
Valet Station	36	14.1 kWh/square foot/year	508
Restrooms	1,585	14.1 kWh/square foot/year	22,348
Exterior Lighting	--	219 kWh/light/year	17,082
TOTAL --		--	719,678

Natural Gas Consumption

Natural gas is used for heating. For this project it was determined that natural gas would be used only in the amenity buildings (visitor center, valet station, and restrooms). Like electricity, the total natural gas requirement for the visitor center, valet station, and restrooms is not known at this time. To estimate the natural gas consumption for these buildings, it was assumed that the natural gas consumption would be similar to an average commercial use. The natural gas consumption rate for a commercial consumer was assumed to be 1.2 thousand British thermal units per square foot per year (CARB 2011). This rate was multiplied by the total square footage of the buildings to obtain the total annual natural gas consumption of 3,554 cubic feet per year. Table 4.7-4 shows the total natural gas consumption.

TABLE 4.7-4
FUTURE PROJECT NATURAL GAS CONSUMPTION

Size	(square feet)	Generation Rate	Total BTU	Total Cubic Feet
Visitor Center	1,400	1,200 BTU/square foot/year	1,680,000	1,647
Valet Station	36	1,200 BTU/square foot/year	43,200	42
Restrooms	1,585	1,200 BTU/square foot/year	1,902,000	1,865
TOTAL --		--	3,625,200	3,554

BTU = British thermal unit.

Water Use

The provision of potable water consumes large amounts of energy associated with source and conveyance, treatment, distribution, end use, and wastewater treatment. This type of energy use is known as embodied energy. The energy consumption associated with water use was calculated by multiplying the embodied energy in a gallon of potable water by the total number of gallons projected to be consumed by the project. For these estimates, it is assumed that water delivered to the project site would have an embodied energy of 2,779 kWh/acre-foot, or 0.0085 kWh/gallon (Torcellini et al. 2003).

A preliminary water demand analysis was prepared for the project (Rick Engineering 2011a). The analysis calculates the estimated increase in total water use for the project to be 5.85 acre-feet per year. The embodied energy demand associated with this water is 16,300 kWh per year, or 16.30 MW per hour (MWh) per year.

Solid Waste

A preliminary waste management plan was prepared for the project (Appendix O). This report determined that there would be no significant increase in solid waste generation during the operational phase and estimates that 94.3 percent of construction and demolition waste would be diverted through recycling during construction. Therefore,

there would be no net increase in energy consumption associated with the disposal of solid waste for either the construction or operational phases of the project.

Vehicle Use

Energy is also used for transportation, in the form of fuel for vehicular trips. The project would not generate any additional traffic volumes. Therefore, there would be no increase in vehicle energy use due to the project.

4.7.2.2 Significance of Impacts

a. Construction-Related Fuel Use

Construction of the project would result in increased energy demand associated with the consumption of diesel fuel in construction equipment and gasoline in worker vehicles during the construction period (approximately two years). This fuel consumption (366,749 gallons) would be short term and would not comprise an excessive use of energy. There are no conditions on-site or in the project design that would require non-standard equipment or construction practices that would increase fuel-energy consumption above typical rates. Therefore, the proposed project would not result in the use of excessive amounts of fuel during the construction phase of the project and impacts would be less than significant.

b. Long-term Operation Energy Use

Through the BPCP Sustainability Plan and through compliance with CalGreen standards, the project would consume less-than-average rates of energy and long-term operational energy impacts would be less than significant.

4.7.2.3 Mitigation, Monitoring, and Reporting

a. Long-term Operation Energy Use

Impacts would be less than significant. No mitigation is required.

b. Construction-Related Energy Use

Impacts would be less than significant. No mitigation is required.

4.8 Geologic Conditions

GEOCON prepared a preliminary geotechnical investigation for the project site in May 2011. The results of the geotechnical investigation are summarized below and included as Appendix G of this EIR.

4.8.1 Existing Conditions

The project area is located in the western portion of the Peninsular Ranges Geomorphic Province of southern California, on a large mesa extending from Mission Valley south to Chollas Valley. The mesa lies within the coastal plain of San Diego County. The coastal plain measures 5–15 miles wide, is slightly elevated, and deeply dissected by a series of mesas. Elevations at the site vary from approximately 210 feet to 265 AMSL. Cut and fill slopes (with heights of approximately 45 feet) exist throughout the site. Along the north and east sides of the project site, cut slopes (approximately 20 to 40 feet in height) transition into native hillside slopes.

Balboa Park as a whole is characterized by a mesa-canyon topography of relatively level uplands, strongly dissected by deep, narrow canyons. Balboa Park is divided into four mesa areas: (1) the western mesa paralleling Sixth Avenue; (2) the Central Mesa along Park Boulevard and including the Prado and Palisades area; (3) the eastern Morley Field Mesa; and the (4) smaller mesa to the southeast of the Park.

4.8.1.1 Geology and Soils

The project site (including the Arizona Street Landfill) is underlain by undocumented fill, Lindavista Formation (also known as very old paralic deposits), and San Diego Formation (Figure 4.8-1). These formations are described below.

a. Undocumented Fill (Qudf)

Undocumented fill was encountered at depths of approximately 8 to 19 feet below existing grade in the area south of the existing Organ Pavilion parking lot and 1 to 6 feet below grade in other areas of the site. The undocumented fill generally consists of silty to clayey sand, with few gravel and cobble. The near surface soils (material within approximately 3 feet of existing grade) generally consist of *very low* to *low* expansive materials. This undocumented fill is not considered suitable for support of structural fill and/or structural loading and would require remedial grading.

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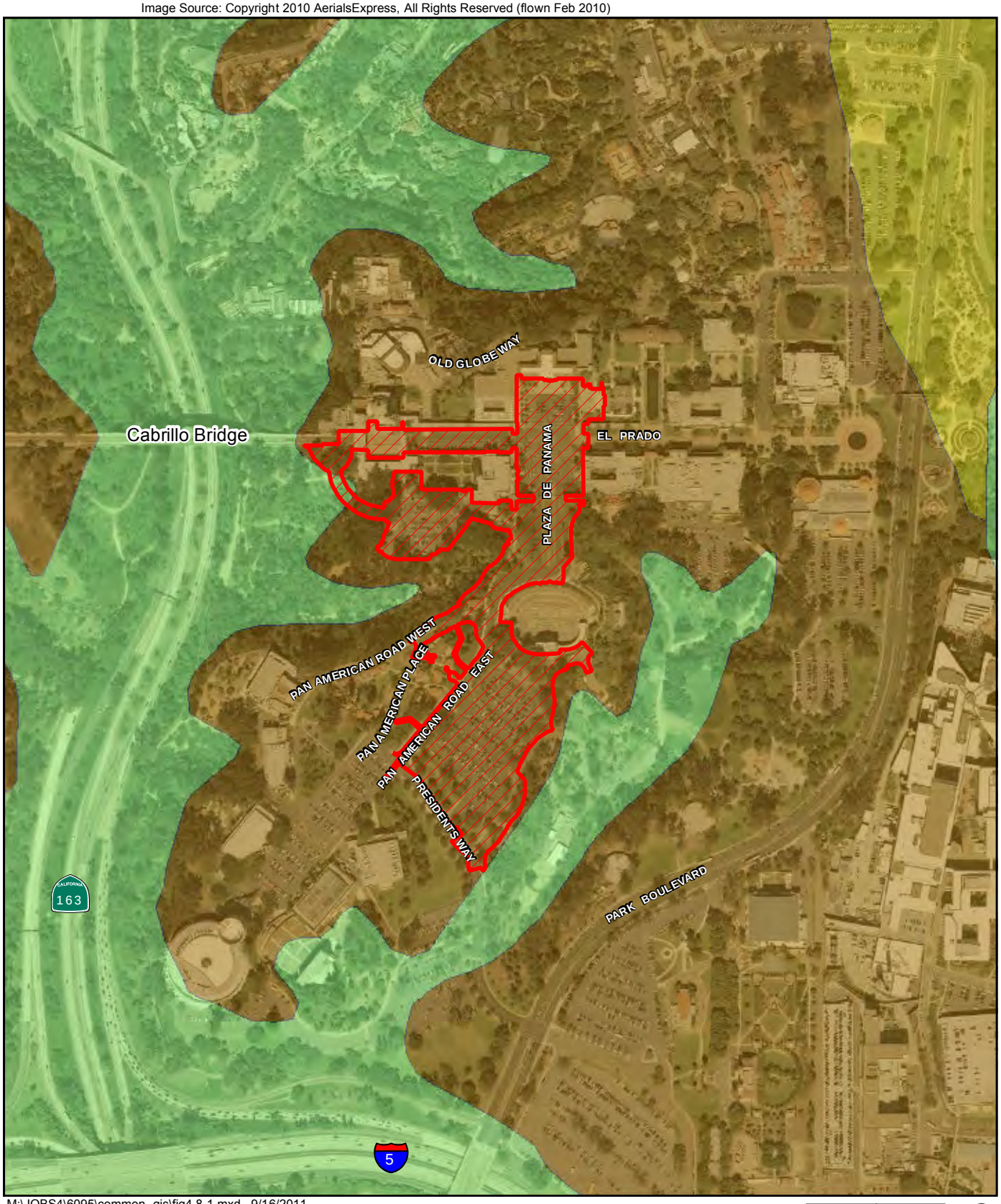

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Project Area

Geologic Formations

- San Diego formation (early Pleistocene and late Pliocene)
- Very old Paralic Deposits (Linda Vista)
- Very old Paralic Deposits (Tierra Santa Terrace)

FIGURE 4.8-1

Geological Formations

b. Very Old Paralic Deposits (Linda Vista Formation; Qvop)

Very old paralic deposits (also referred to as the Linda Vista Formation) were encountered at depths ranging from at grade to 8 feet below existing grade. This formation consists of dense, moist, reddish brown and yellowish brown to light reddish brown, silty sand with gravel and cobble. The very old paralic deposits are considered suitable for support of structural fill and/or structural loading.

c. San Diego Formation (Tsd)

Tertiary-aged San Diego Formation underlies the undocumented fill and very old paralic deposits throughout the site. The San Diego Formation is exposed at grade in the open space area west of Alcazar parking lot. The unit generally consists of dense, mottled olive brown to yellowish brown and light gray to light grayish brown, fine sand and sandy silt and is generally massive. The San Diego Formation is considered suitable for the support of structural fill and/or structural loading.

4.8.1.2 Groundwater

Groundwater seepage and ponding are often the result of alteration of the permeability characteristics of the soil, alteration in drainage patterns, or increased precipitation or irrigation water. Groundwater seepage or ponding could occur after development of the project site, even where none was present before development. No groundwater seepage or ponding was noted within the project site or the immediate vicinity.

4.8.1.3 Geologic Structure/Faults

While there are no active faults known to traverse the project site, several known active faults are located within the vicinity, including the Rose Canyon Fault, located approximately 1 mile to the west. In addition, the potentially active Florida Canyon and Texas Street faults are located approximately 0.35 mile and 1.03 miles east of the project site, respectively. Other active faults in the region that could possibly affect the project site include the Coronado Bank, San Diego Trough, and San Clemente fault zones to the west, the Elsinore and San Jacinto fault zones to the north, and the Agua Blanca and San Miguel fault zones to the south. Probable ground shaking levels at the project site could range from slight to strong depending on such factors as the magnitude of the seismic event and the distance to the epicenter.

4.8.1.4 Geologic Hazards

Based on the Seismic Safety Study maps (City of San Diego 2008a), the project site is located within geologic hazards categories 51 and 52. Category 51 is assigned to level mesas underlain by terrace deposits and bedrock and has a nominal relative risk

potential. Category 52 is assigned to other level areas with gently sloping to steep terrain, a favorable geologic structure, and low risk potential.

a. Landslides

There are no landslides at the project site or in a location that could impact the project site.

b. Liquefaction

Liquefaction typically occurs when a site is located in a zone with seismic activity, and where on-site soils are relatively cohesionless, groundwater is encountered within 50 feet of the surface, and soil relative densities are less than about 70 percent. The potential for liquefaction during a strong earthquake is limited to soils that are in a relatively loose, unconsolidated condition and located below the groundwater table. Materials within the project site are not subject to liquefaction due to soil density as well as lack of shallow groundwater.

c. Tsunamis

Tsunamis are great sea waves produced by a submarine earthquake or volcanic eruption. The potential for a tsunami to affect the project site is low due to the elevation of the project site and because the project site is approximately 1.5 miles from the San Diego Bay.

d. Seiches

Seiches are periodic oscillations in large bodies of water such as lakes, harbors, bays, or reservoirs. The potential for a seiche to affect the project site is low because the site is approximately 1.5 miles from the San Diego Bay.

4.8.1.5 Regulatory Framework

a. California Building Code

Slope instability or erosion problems in the City are primarily regulated through the California Building Code (CBC) and the City's Grading Ordinance (see below). The CBC requires special foundation engineering and investigation of soils on proposed development sites located in geologic hazard areas. These reports must demonstrate either that the hazard presented by the project will be eliminated or that there is no danger for the intended use. The CBC also contains design and construction regulations pertaining to seismic safety for buildings. These regulations cover issues such as ground motions, soil classifications, redundancy, drift, and deformation compatibility.

Other applicable state regulations include the Alquist-Priolo Earthquake Fault Zoning Act of 1972, the Seismic Hazards Mapping Act of 1997, and the Unreinforced Masonry Law of 1986.

b. City of San Diego Land Development Code

The City's Grading Ordinance is located within the LDC as Section §142.0101. The purpose of the City's grading regulations is to address slope stability, protection of property, erosion control, water quality, and landform preservation and to protect the public health, safety, and welfare of persons, property, and the environment. To reduce slide danger and erosion hazards, a grading permit must be obtained for all projects involving the process of moving soil and rock from one location to another. The grading ordinance is designed in part to assure that development in earthquake- or landslide-prone areas does not threaten human life or property.

4.8.2 Issues 1 and 2: Geologic Hazards

Would the proposal expose people or property to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards?

Would the proposal be located on a geologic unit or soil that is unstable or that would become unstable as a result of the proposal, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

The City's 2011 Significance Determination Thresholds do not include thresholds for the issue of geology. Instead, this section relies upon the City's Initial Study Checklist questions for Geologic Conditions.

4.8.2.1 Impacts

ALL PROJECT COMPONENTS

Since the project involves grading for construction and new structures, the potential hazards related to geologic conditions are discussed in more detail below. For purposes of analyzing impacts associated with geology and soils, the following discussions are inclusive of all components of the project.

a. Geology and Soils

The undocumented fill located on-site is not suitable for the support of structures and therefore, could expose people to hazards. The undocumented fill would need to be completely removed within the areas proposed for grading prior to site development. The very old paralic deposits and San Diego formation on-site are considered suitable for the support of settlement-sensitive structures.

Removal and recompaction of the undocumented fill is a standard grading technique required by the CBC and included as recommendations in the geotechnical report prepared for the project (see Appendix G). Adherence to these requirements would ensure that impacts associated with compressible soils would be less than significant.

b. Groundwater

No groundwater seepage or ponding was found within the site or immediate vicinity. Groundwater seepage or ponding could occur after development of the project site, even where none was present before development. Standard engineering design for proper surface drainage of irrigation and rainwater, and subsurface drainage structures if necessary, is required for construction of the project. Proper engineering design of drainage features and structures and compliance with the CBC would reduce the risk of groundwater seepage to less than significant.

c. Geologic Structure/Faults

The active Rose Canyon Fault is the dominant source of potential ground motion at the project site. In addition, the potentially active Florida Canyon and Texas Street Faults are also potential generators of significant ground motion at the site. While the site is located in a seismically active area, no particular characteristic of the site indicates an unusual or heightened seismic risk comparative to the San Diego region. The site is not crossed by a known active fault. Construction is required to comply with CBC. Proper engineering design of all new structures and compliance with the CBC would reduce earthquake hazards to less than significant.

d. Geologic Hazards

Landslides

As discussed above, there are no landslides at the project site or in a location that could impact the project site. Landslide hazards are less than significant.

Liquefaction

Materials within the project site are not considered subject to liquefaction due to soil density as well as lack of shallow groundwater. Liquefaction hazards would be less than significant.

Tsunamis

The potential for a tsunami to affect the project site is low due to the elevation of the project site as well as distance from the nearest shoreline (approximately 1.5 miles). Tsunami hazards would be less than significant.

Seiches

The San Diego Bay is approximately 1.5 miles west of the project site. The potential hazards resulting from a seiche would be low due to the elevation of the project site and the distance to the San Diego Bay. Impacts would be less than significant.

e. Arizona Street Landfill

As described in Chapters 3.0 and 4.10, the Arizona Street Landfill is an inactive Class III municipal solid waste facility that stopped receiving waste in 1974. It currently has an interim cap consisting of native on-site soils placed over the solid waste. The cap thickness varies from 3 to 15 feet thick and is covered primarily with non-native grassland vegetation. The project would place additional fill soil, generated from excavation activities at the Organ Pavilion parking lot, on top of the existing cap. Pursuant to the EMPP, only passive recreational uses and non-programmed recreational uses would occur at the fill disposal site; no habitable structures are proposed. Thus, there would be no exposure of people or property to geologic hazards as a result of this off-site project component. Impacts would be less than significant.

4.8.2.2 Significance of Impacts

There are no significant soils or geologic conditions that were observed or known to exist on the project site that would preclude development of the project. Implementation of standard design considerations and recommendations of the geotechnical report (attached as Appendix G) and the CBC would avoid potential geological impacts.

4.8.2.3 Mitigation, Monitoring, and Reporting

No mitigation is required.

4.8.3 Issue 3: Erosion

Would the proposal result in a substantial increase in wind or water erosion of soils, either on or off the site?

The City's 2011 Significance Determination Thresholds do not include thresholds for the issue of geology. Instead, this section relies upon the City's Initial Study Checklist questions for Geologic Conditions.

4.8.3.1 Impacts

ALL PROJECT COMPONENTS

The two soil types present within the project site are "Gaviota fine sandy loam, 30 to 50 percent slopes" and "urban land." The Gaviota soil type has a soil erosion potential of "high" while the urban land soil type is used where ground cover consists of closely built-up areas in cities where buildings, streets, and sidewalks cover almost the entire surface, making identification impossible. Development of the project site would include grading activities that remove the existing cover, thereby exposing soils to potential runoff and erosion. Grading for the project would impact approximately 8.9 acres of the 15.4-acre site. Site earthwork would consist of grading several building pads, construction of cut and fill slopes, subgrade preparation, and trench and wall backfills. Approximately 163,000 cubic yards of cut and 21,000 cubic yards of fill would be required for grading on-site. Cut slopes would be a maximum of 30 feet. Maximum compacted fill slope height would be 25 feet. All slopes would be designed at a ratio of 2:1 or flatter. Exported material would be deposited at the former Arizona Street Landfill. Erosion control measures for deposit of the soil include landscaping and storm water control as identified in Section 3.0, Project Description and discussed further in Section 4.16, Water Quality. The City's Grading Ordinance requires extensive measures to control erosion during and after grading or construction. These include:

- Desilting basins, improved surface drainage, or planting of ground covers required early in the improvement process in areas that have been stripped of native vegetation or areas of fill material.

- Short-term measures such as sandbag placement and temporary detention basins.

- Catch basins.

- Restrictions on grading during the rainy season (November through March), depending on size of the grading operation, and on grading in proximity to sensitive wildlife habitat.

- Immediate post-grading slope revegetation or hydroseeding with erosion-resistant species to ensure coverage of the slopes prior to the next rainy season in accordance with Revegetation and Erosion Control Requirements found in section 142.0411 and Table 142-04F of the LDC, Landscape Regulations. All required revegetation and erosion control are required to be completed within 90 calendar days of the completion of grading or disturbance (LDC 142.0411 [c]).

Conformance to such mandated City grading requirements would ensure that proposed grading, construction, and fill disposal operations would avoid significant soil erosion

impacts. Incorporation of recommendations described in the geotechnical investigation into project grading design would additionally serve to lessen the potential soil erosion impacts (see Appendix G). Thus, potential impacts due to erosion would be less than significant.

4.8.3.2 Significance of Impacts

Adherence to the City's Grading Ordinance, CBC, and implementation of the recommendations described in the geotechnical investigation (see Appendix G) would ensure that erosion impacts would be less than significant.

4.8.3.3 Mitigation, Monitoring, and Reporting

Impacts would be less than significant; therefore, no mitigation is required.

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4.9 Greenhouse Gas Emissions

The following section addresses effects of the project with regard to global climate change. A greenhouse gas (GHG) emissions analysis technical report was prepared for the project by RECON Environmental in December 2011. The results and conclusions are summarized below and the report is included in its entirety as Appendix H of this EIR.

4.9.1 Existing Conditions

Global climate change is a change in the average weather of the earth, which can be measured by wind patterns, storms, precipitation, and temperature. The earth's climate is in a state of constant flux with periodic warming and cooling cycles. Extreme periods of cooling are termed "ice ages," which may then be followed by extended periods of warmth. For most of the earth's geologic history, these periods of warming and cooling have been the result of many complicated interacting natural factors that include: volcanic eruptions that spew gases and particles (dust) into the atmosphere; the amount of water, vegetation, and ice covering the earth's surface; subtle changes in the earth's orbit; and the amount of energy released by the sun (sun cycles). However, since the beginning of the Industrial Revolution around 1750, the average temperature of the earth has been increasing at a rate that is faster than can be explained by natural climate cycles alone.

With the Industrial Revolution came an increase in the combustion of carbon-based fuels such as wood, coal, oil, natural gas, and biomass. Industrial processes have also created emissions of substances not found in nature. This in turn has led to a marked increase in the emissions of gases shown to influence the world's climate. These gases, termed "greenhouse" gases, influence the amount of heat trapped in the earth's atmosphere. Because recently observed increased concentrations of GHGs in the atmosphere are related to increased emissions resulting from human activity, the current cycle of "global warming" is generally believed to be largely due to human activity. Of late, the issue of global warming or global climate change has arguably become the most important and widely debated environmental issue in the United States and the world. Because it is the collective of human actions taking place throughout the world that contributes to climate change, it is quintessentially a global or cumulative issue.

4.9.1.1 State and Regional GHG Inventories

The CARB performs statewide GHG inventories. The inventory is divided into nine broad sectors of economic activity: agriculture, commercial, electricity generation, forestry, high global warming potentials (GWP) emitters, industrial, recycling and waste, residential, and transportation. Emissions are quantified in million metric tons of CO_2 equivalent

($MMTCO_2E$). Table 4.9-1 shows the estimated statewide GHG emissions for the years 1990, 2000, 2004, and 2008.

TABLE 4.9-1
CALIFORNIA GHG EMISSIONS BY SECTOR IN 1990, 2000, 2004, AND 2008

Sector	1990 Emissions in $MMTCO_2E$ (% total)[1]	2000 Emissions in $MMTCO_2E$ (% total)[1]	2004 Emissions in $MMTCO_2E$ (% total)[1]	2008 Emissions in $MMTCO_2E$ (% total)[1]
Sources				
Agriculture	23.4 (5%)	25.44 (6%)	28.82 (6%)	28.06 (6%)
Commercial	14.4 (3%)	12.80 (3%)	13.20 (3%)	14.68 (3%)
Electricity Generation	110.6 (26%)	103.92 (23%)	119.96 (25%)	116.35 (24%)
Forestry (excluding sinks)	0.2 (<1%)	0.19 (<1%)	0.19 (<1%)	0.19 (<1%)
High GWP	--	10.95 (2%)	13.57 (3%)	15.65 (3%)
Industrial	103.0 (24%)	97.27 (21%)	90.87 (19%)	92.66 (19%)
Recycling and Waste	--	6.20 (1%)	6.23 (1%)	6.71 (1%)
Residential	29.7 (7%)	30.13 (7%)	29.34 (6%)	28.45 (6%)
Transportation	150.7 (35%)	171.13 (37%)	181.71 (38%)	174.99 (37%)
Unspecified Remaining[2]	1.3 (<1%)	--	--	--
Subtotal	*433.3*	*458.03*	*483.89*	*477.74*
Sinks				
Forestry Sinks	-6.7 (--)	-4.72 (--)	-4.32 (--)	-3.98 (--)
Total	**426.6**	**453.31**	**479.57**	**473.76**

SOURCE: CARB 2007a, 2010.
[1] Percentages may not total 100 due to rounding.
[2] Unspecified fuel combustion and ozone depleting substance (ODS) substitute use, which could not be attributed to an individual sector.

As shown in Table 4.9-1, statewide GHG emissions totaled 433 $MMTCO_2E$ in 1990, 458 $MMTCO_2E$ in 2000, 484 $MMTCO_2E$ in 2004, and 478 $MMTCO_2E$ in 2008. According to data from the CARB, it appears that statewide GHG emissions peaked in 2004 and are now beginning to decrease (CARB 2010). Transportation-related emissions consistently contribute the most GHG emissions, followed by electricity generation and industrial emissions.

The forestry sector is unique because it not only includes emissions associated with harvest, fire, and land use conversion (sources), but also includes removals of atmospheric CO_2 (sinks) by photosynthesis, which is then bound (sequestered) in plant tissues. As seen in Table 4.9-1, the forestry sector consistently removes more CO_2 from the atmosphere statewide than it emits. As a result, although decreasing over time, this sector represents a net sink, removing a net 6.5 $MMTCO_2E$ from the atmosphere in 1990, a net 4.5 $MMTCO_2E$ in 2000, a net 4.1 $MMTCO_2E$ in 2004, and a net 3.8 $MMTCO_2E$ in 2008.

A San Diego regional emissions inventory was prepared by the University of San Diego School of Law, Energy Policy Initiative Center which took into account the unique characteristics of the region. Their 2006 emissions inventory for San Diego is duplicated

below in Table 4.9-2. The sectors included in this inventory are somewhat different from those in the statewide inventory.

TABLE 4.9-2
SAN DIEGO COUNTY GHG EMISSIONS BY SECTOR IN 2006

Sector	2006 Emissions in $MMTCO_2E$ (% total)[1]	
Agriculture/Forestry/Land Use	0.7	(2%)
Waste	0.7	(2%)
Electricity	9.0	(25%)
Natural Gas Consumption	3.0	(8%)
Industrial Processes & Products	1.6	(5%)
On-Road Transportation	16.0	(45%)
Off-Road Equipment & Vehicles	1.3	(4%)
Civil Aviation	1.7	(5%)
Rail	0.3	(<1%)
Water-Borne Navigation	0.127	(<0.5%)
Other Fuels/Other	1.1	(3%)
Total	**35.5**	

SOURCE: University of San Diego 2008
[1] Percentages may not total 100 due to rounding.

Similar to the statewide emissions, transportation-related GHG emissions contributed the most countywide, followed by emissions associated with energy use.

4.9.1.2 Regulatory Framework

A summary of some of the key programs and regulations concerning GHG emissions and climate change is presented below. Additional information on other programs and regulations is contained in Appendix H.

a. International

The Coordinating Committee on the Ozone Layer was established by the United Nations Environment Program (UNEP) in 1977, and UNEP's Governing Council adopted the World Plan of Action on the Ozone Layer. Continuing efforts led to the signing in 1985 of the Vienna Convention on the Protection of the Ozone Layer. This resulted in the creation of the Montreal Protocol on Substances That Deplete the Ozone Layer (Montreal Protocol), an international treaty designed to protect the stratospheric ozone layer by phasing out production of ozone-depleting substances. The treaty was adopted on September 16, 1987 and went into force on January 1, 1989.

Similar to the events that led to the Montreal Protocol, to address growing concern about global climate change, 191 countries including the United States joined an international treaty known as the United Nations Framework Convention on Climate Change (UNFCCC). The UNFCCC recognizes that the global climate is a shared resource that

can be affected by industrial and other emissions of GHG, and that set an overall framework for intergovernmental efforts to tackle the challenges posed by global climate change. Under this treaty, governments gather and share information on GHG emissions, national policies and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change. The UNFCCC entered into force on March 21, 1994. However, this treaty generally lacked powerful, legally binding measures.

The Kyoto Protocol (Protocol) was adopted in December 1997. The Kyoto Protocol shares the UNFCCC's objective, principles, and institutions, as it significantly strengthens the UNFCCC by committing industrialized countries to individual, legally binding targets to limit or reduce their GHG emissions. Only parties to the UNFCCC that have also become parties to the Protocol are bound by the Protocol's commitments. More than 161 countries, constituting 55 per cent of global emissions, are under the protocol. Although former U.S Vice President Al Gore symbolically signed the Protocol in 1998, the Protocol has not been formally adopted by the U.S Senate.

b. Federal

The U.S. developed the Climate Change Action Plan (CCAP) in 1993, which consists of initiatives that involve all economic sectors and aims at reducing all significant GHG. The CCAP, backed by federal funding, cultivates cooperative partnerships between the government and the private sector to establish flexible and cost-effective ways to reduce GHG emissions within each sector. The CCAP encourages investments in new technologies, but also relies on previous actions and programs focused on saving energy, reducing transportation emissions, improving forestry management, and reducing waste.

In 2002, the U.S. set a goal to reduce its GHG Emissions Intensity (the ratio of GHG emissions to economic output) by 18 percent by 2012 through various reduction programs, including those identified in the CCAP. New programs included the Energy Star program, which labels energy efficient appliances and products, and the Green Power Partnership, which promotes replacing electricity consumption with green (i.e., renewable) energy sources.

With regard to the transportation sector, the national CAFE standards determine the fuel efficiency of certain vehicle classes in the U.S. After no changes since 1990, in 2007 the CAFE standards were increased for new light-duty vehicles to 35 mpg by 2020. In May 2009, President Obama announced plans to increase these CAFE standards to 35.5 mpg by 2016. With improved gas mileage, fewer gallons of transportation fuel would be combusted to travel the same distance, thereby reducing nationwide GHG emissions associated with vehicle travel.

On June 26, 2009, the U.S. House of Representatives passed the American Clean Energy and Security Act. The Act establishes a cap-and-trade plan for GHG, under which the government sets a limit (cap) on the total amount of GHG that can emitted from large U.S. sources. It requires a 17 percent emissions reduction from 2005 levels by 2020 and includes a renewable electricity standard that will require electricity providers to produce 20 percent of its electricity from renewable sources by 2020. The bill has not yet been approved by the Senate.

c. State

The State of California has a number of policies and regulations that are either directly or indirectly related to GHG emissions. Only those most relevant to land use development projects are included in this discussion.

Executive Order S-3-05

Executive Order (EO) S-3-05, signed by Governor Schwarzenegger on June 1, 2005, established the following GHG emission reduction targets for the state of California:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020 reduce GHG emissions to 1990 levels;
- By 2050 reduce GHG emissions to 80 percent below 1990 levels.

Assembly Bill 32

In response to EO S-3-05, the California legislature passed Assembly Bill 32 (AB 32), the "California Global Warming Solutions Act of 2006," which was signed by the governor on September 27, 2006. It required the CARB to adopt rules and regulations that would reduce statewide GHG emissions to 1990 levels by 2020. The CARB is also required to publish a list of discrete GHG emission reduction measures.

Specifically, AB 32, the California Global Warming Solutions Act of 2006, requires CARB to (State of California 2006):

- Establish a statewide GHG emissions cap for 2020, based on 1990 emissions by January 1, 2008.
  - ü In December 2007, CARB approved a 2020 emission limit of 427 million metric tons of CO_2 equivalent.
- Adopt mandatory reporting rules for significant sources of GHGs by January 1, 2009.
  - ü In December 2007, CARB adopted regulations requiring the largest industrial sources to report and verify their GHG emissions. Facilities began tracking emissions in 2008 and reports were due June 1, 2009. Emissions reporting for

2008 was allowed to be based on best available data. Beginning in 2010, emissions reports became more rigorous and subject to third-party verification.

This action builds on the earlier Senate Bill (SB) 177 (Sher) enacted in 2000, which established a nonprofit California Climate Action Registry for the purpose of administering a voluntary GHG emissions registry.

- Adopt a plan by January 1, 2009 indicating how emission reductions will be achieved from significant GHG sources via regulations, market mechanisms, and other actions.

  ü A Climate Change Scoping Plan (Scoping Plan) was approved on December 12, 2008. The Scoping Plan contains the main strategies California will implement to achieve a reduction of 174 million metric ton CO_2 equivalent ($MTCO_2E$) GHG emissions, or approximately 29 percent from the state's projected 2020 emission level of 596 million $MTCO_2E$ under a business-as-usual (BAU) scenario.

- Adopt regulations to achieve the maximum technologically feasible and cost-effective reductions in GHG, including provisions for using both market mechanisms and alternative compliance mechanisms.

- Convene an Environmental Justice Advisory Committee and an Economic and Technology Advancement Advisory Committee to advise CARB.

  ü In January 2007, the CARB appointed a 10-member Environmental Justice Advisory Committee and appointed members to the Economic and Technology Advancement Advisory Committee.

- Ensure public notice and opportunity for comment for all CARB actions.

  ü A number of CARB documents, including the 2020 Emissions Forecast, the Scoping Plan, and the Draft Recommended Approaches for Setting Interim Significance Thresholds, have been circulated for public review and comment.

- Prior to imposing any mandates or authorizing market mechanisms, CARB must evaluate several factors, including but not limited to impacts on California's economy, the environment, and public health; equity between regulated entities; electricity reliability; conformance with other environmental laws; and ensure that the rules do not disproportionately impact low-income communities.

As directed by AB 32, the Climate Change Scoping Plan prepared by CARB in December 2008 includes measures to reduce statewide GHG emissions to 1990 levels by 2020. These reductions are what CARB identified as necessary to reduce forecasted BAU 2020 emissions. CARB will update the Scoping Plan at least once every 5 years to allow evaluation of progress made and to correct the Scoping Plan's course where necessary.

As indicated in Table 4.9-3, the majority of reductions is directed at the sectors with the largest GHG emissions contributions—transportation and electricity generation—and involve statutory mandates affecting vehicle or fuel manufacture, public transit, and public utilities. The two measures most applicable to land use planning and development are the Regional Transportation Related GHG Targets and the Energy Efficiency measures. Implementing these two measures accounts for reduction of 31.3 $MMTCO_2E$ emissions, or 21 percent, of the total 146.7 $MMTCO_2E$ in reductions needed for capped sectors.

CARB also lists several other recommended measures which will contribute toward achieving the 2020 statewide reduction goal, but whose reductions are not (for various reasons, including the potential for double counting) additive with the measures listed in Table 4.9-3. These include state and local government operations measures, green building, mandatory commercial recycling and other additional waste and recycling measures, water sector measures, and methane capture at large dairies.

The Scoping Plan reduction measures and complementary regulations are described further in the following sections, and are grouped under the two headings of Transportation-related Measures and Non-Transportation-Related Measures as representative of the sectors to which they apply.

California Green Building Standards Code

With regard to energy use, the California Code of Regulations, Title 24, Part 6 is the California Energy Efficiency Standards for Residential and Nonresidential Buildings (also known as the California Energy Code). This code, originally enacted in 1978 establishes energy efficiency standards for residential and non-residential buildings in order to reduce California's energy consumption. The Code is updated periodically to incorporate and consider new energy efficiency technologies and methodologies as they become available. The most recent amendments to the Code are dated 2008, hence "2008 Title 24," but became effective January 1, 2010. The 2008 Title 24 standards require energy savings of 15-35 percent above the former 2005 Title 24. With 2008 Title 24, all buildings are mandated to achieve a minimum 15 percent reduction in their combined space heating, cooling and water heating energy compared to the 2005 Title 24 standards. Incentives in the form of rebates and tax breaks are provided on a sliding scale for buildings achieving energy efficiency above this minimum 15 percent reduction. By reducing California's energy consumptions, emissions of GHG may also be reduced.

Part 11 of the California Code of Regulations, Title 24, is CalGreen. This code was added to Title 24 in 2009 as a voluntary requirement. The 2010 version of CalGreen took effect January 2011 and instituted mandatory minimum environmental performance standards for all ground-up new construction of commercial and low-rise residential buildings, state-owned buildings, schools, and hospitals. It also includes voluntary tiers (I and II) with stricter environmental performance standards for these same categories of

TABLE 4.9-3
CARB SCOPING PLAN-RECOMMENDED GHG REDUCTION MEASURES

Recommended Reduction Measures	Reductions Counted Towards 2020 Target in $MMTCO_2E$ (% total)[2]
ESTIMATED REDUCTIONS RESULTING FROM THE COMBINATION OF CAPPED SECTORS AND COMPLEMENTARY MEASURES	**146.7**
California Light-duty Vehicle Greenhouse Gas Standards · Implement Pavley Standards · Develop Pavley II Light-duty Vehicle Standards	31.7 (22%)
Energy Efficiency · Building/Appliance Efficiency, New Programs, etc. · Increase CHP Generation by 30,000 GWh · Solar Water Heating (AB 1470 goal)	26.3 (18%)
Renewables Portfolio Standard (33% by 2020)	21.3 (14%)
Low Carbon Fuel Standard	15 (10%)
Regional Transportation-related GHG Targets[1]	5 (4%)
Vehicle Efficiency Measures	4.5 (3%)
Goods Movement · Ship Electrification at Ports · Systemwide Efficiency Improvements	3.7 (3%)
Million Solar Roofs	2.1 (2%)
Medium-/Heavy-duty Trucks · Heavy-duty Vehicle Greenhouse Gas Emissions Reduction (Aerodynamic Efficiency) · Medium- and Heavy-duty Vehicle Hybridization	1.4 (<1%)
High-speed Rail	1.0 (<1%)
Industrial Measures (for sources covered under cap & trade program) · Refinery Measures · Energy Efficiency and Co-benefits Audits	0.3 (<.5%)
Additional Reductions Necessary to Achieve the Cap	34.4 (23%)
ESTIMATED REDUCTIONS RESULTING FROM UNCAPPED SECTORS	**27.3**
Industrial Measures (for sources not covered under cap & trade program) · Oil and Gas Extraction and Transmission	1.1
High Global Warming Potential Gas Measures	20.2
Sustainable Forests	5.0
Recycling and Waste (landfill methane capture)	1.0
TOTAL REDUCTIONS COUNTED TOWARDS 2020 TARGET	**174**[3]

Source: Table 2 of the Climate Change Scoping Plan: A Framework for Change. Prepared by the California Air Resources Board, pursuant to AB 32 the California Global Warming Solution Act of 2006. December 2008.

[1] This number represents an estimate of what may be achieved from local land use changes. It is not the SB 375 regional target. CARB will establish regional targets for each Metropolitan Planning Organization following input of the Regional Targets Advisory Committee and a public stakeholders consultation process per SB 375.

[2] Percentages are relative to the capped sector subtotal of 146.7 $MMTCO_2E$, and may not total 100 due to rounding.

[3] The total reduction for the recommended measures slightly exceeds the 169 MMTCO2E of reductions estimated in the BAU 2020 Emissions Forecast. This is the net effect of adding several measures and adjusting the emissions reduction estimates for some other measures.

residential and non-residential buildings. Local jurisdictions must enforce the minimum mandatory requirements and may also adopt the Green Building Standards with amendments for stricter requirements.

The mandatory standards require:

- 20 percent mandatory reduction in indoor water use relative to specified baseline levels;
- 50 percent construction/demolition waste diverted from landfills;
- Mandatory inspections of energy systems to ensure optimal working efficiency; and
- Requirements for low-pollutant emitting exterior and interior finish materials such as paints, carpets, vinyl flooring, and particleboards.

The voluntary standards require:

- Tier I — 15 percent improvement in energy requirements, stricter water conservation requirements for specific fixtures, 65 percent reduction in construction waste, 10 percent recycled content, 20 per cent permeable paving, 20 percent cement reduction, cool/solar reflective roof; and
- Tier II — 30 percent improvement in energy requirements, stricter water conservation requirements for specific fixtures, 75 percent reduction in construction waste, 15 percent recycled content, 30 per cent permeable paving, 30 percent cement reduction, cool/solar reflective roof.

Similar to the compliance reporting procedure described above for demonstrating energy code compliance in new buildings and major renovations, compliance with the CalGreen water-reduction requirements must be demonstrated through completion of water use reporting forms for new low-rise residential and non-residential buildings. The water use compliance form must demonstrate a 20 percent reduction in indoor water use by either showing a 20 per cent reduction in the overall baseline water use as identified in CalGreen or a reduced per-plumbing-fixture water use rate.

Related to CalGreen are the earlier 2000 Sustainable Building Goal (EO D-16-00) and 2004 Green Building Initiative (EO S-20-04). The 2000 Sustainable Building Goal instructed that all state buildings be constructed or renovated and maintained as models of energy, water, and materials efficiency. The 2004 Green Building Initiative recognized further that significant reductions in GHG emissions could be achieved through the design and construction of new green buildings as well as the sustainable operation, retrofitting, and renovation of existing buildings.

The CARB Scoping Plan includes a Green Building Strategy with the goal of expanding the use of green building practices to reduce the carbon footprint of new and existing buildings. Consistent with CalGreen, the Scoping Plan recognized that GHG reductions

would be achieved through buildings that exceed minimum energy-efficiency standards, decrease consumption of potable water, reduce solid waste during construction and operation, and incorporate sustainable materials. Green building is thus a vehicle to achieve the Scoping Plan's statewide electricity and natural gas efficiency targets, and lower GHG emissions from waste and water transport sectors.

In the Scoping Plan, CARB projects that an additional 26 MMTCO$_2$E could be reduced through expanded green building (CARB 2008a, p. 17). However, this reduction is not counted toward the BAU 2020 reduction goal to avoid any double counting, as most of these reductions are accounted for in the electricity, waste, and water sectors. Because of this, CARB has assigned all emissions reductions that occur because of green building strategies to other sectors for meeting AB 32 requirements, but will continue to evaluate and refine the emissions from this sector.

Assembly Bill 1493

In relation to the transportation sector, AB 1493 (also referred to as Pavley or the California Light-Duty Vehicle Greenhouse Gas Standards) was enacted on July 22, 2002. It required the CARB to develop and adopt regulations to lower GHG emissions from passenger vehicles and light duty trucks to the maximum extent technologically feasible, beginning with the 2009 model year. CARB adopted regulations in 2004, but due to litigation and delays from the U.S. EPA was not granted authority to proceed until June 2009. With this action, it is expected that the new regulations (Pavley I) will reduce GHG emissions from California passenger vehicles by about 22 percent in 2012 and about 30 percent in 2016 (CARB 2010b). These reductions are to come from improved vehicle technologies such as small engines with superchargers, continuously variable transmissions, and hybrid electric drives.

Low Carbon Fuel Standard

Another key vehicle emission reduction measure identified in the CARB Scoping Plan is the Low Carbon Fuel Standard (LCFS). Signed as EO S-01-07 by Governor Schwarzenegger on January 18, 2007, it directs that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. CARB approved the LCFS as a discrete early action item. EO S-01-07 also instructs the California EPA to coordinate activities between the University of California, the California Energy Commission, and other state agencies to develop and propose a draft compliance schedule to meet the 2020 target.

Also identified in the CARB Scoping Plan to address vehicle emissions is the Regional Transportation-Related GHG Targets measure. This measure identifies policies to reduce transportation emissions through changes in future land use patterns and community design, as well as through improvements in public transportation, all of which are intended to reduce vehicle miles traveled (VMT). By reducing VMT, vehicle GHG

emissions would be reduced. Improved planning and the resulting development are seen as essential for meeting the AB 32/EO S-3-05 2050 emissions target (CARB 2008a). This measure is linked to SB 375 which directs that regional emissions targets be established for passenger vehicles by Metropolitan Planning Organizations in their Regional Transportation Plans as a Sustainable Communities Strategy to promote smart growth development.

d. City of San Diego

City of San Diego General Plan

The City of San Diego 2008 General Plan includes several climate change-related policies aimed at reducing GHG emissions from future development and City operations. For example, Conservation Element policy CE-A.2 aims to "reduce the City's carbon footprint" and to "develop and adopt new or amended regulations, programs, and incentives as appropriate to implement the goals and policies set forth" related to climate change. The Land Use and Community Planning Element, the Mobility Element, the Urban Design Element, and the Public Facilities, Services and Safety Element also identify GHG reduction and climate change adaptation goals. These elements contain policy language related to sustainable land use patterns, alternative modes of transportation, energy efficiency, water conservation, waste reduction, and greater landfill efficiency. The overall intent of these policies is to support climate protection actions, while retaining flexibility in the design of implementation measures, which could be influenced by new scientific research, technological advances, environmental conditions, or state and federal legislation.

Cumulative impacts of GHG emissions were qualitatively analyzed and determined to be significant and unavoidable in the 2008 Program EIR for the General Plan. A Program EIR Mitigation Framework was included that indicated "for each future project requiring mitigation (measures that go beyond what is required by existing programs, plans and regulations), project-specific measures will [need to] be identified with the goal of reducing incremental project-level impacts to less than significant; or the incremental contributions of a project may remain significant and unavoidable where no feasible mitigation exists."

Environmental Sustainability Strategic Plan for Balboa Park

The BPCP established a park-wide sustainability program that includes 26 cultural institutions, the City of San Diego, SDG&E, and many other community stakeholders. The BPCP compiled the 2010 –2012 Economic and Environmental Sustainability Strategic Plan for Balboa Park. The plan identifies energy efficiency and conservation goals, formalizes sustainability strategies, identifies sustainability focus areas, details information programs, and identifies funding. Its goal is to reduce Balboa Park electric

bills by $1.5 million per year, increase water conservation by 50 percent, and increase recycling at Balboa Park by 50 percent.

Specifically, the BPCP has initiated the following programs:

- BPCP benchmarks facilities and tracks weather normalized energy use intensity, respective GHG emissions, and water consumption using EPA's Portfolio Manager tool to better understand how efficiently energy is used and to develop and implement a plan to reduce energy.

- Leadership in Energy and Environmental Design (LEED) Certification: In partnership with SDG&E, the BPCP facilitated the LEED for Existing Building Certification process and encouraged facility directors to examine their buildings and initiatives and consider applying for certification.

- Implemented a Waste Recovery program to encourage facilities to divert solid waste and recycle, reuse, and reduce waste.

- Established group purchasing programs to encourage a Park-wide sustainable purchasing plan to reduce costs and identify sustainable products.

- Energy Efficiency Programs:

  - SDG&E's On-Bill Financing Program: BPCP participates with SDG&E and implements its on-bill financing program; facility directors learned how to implement this zero-financing option for qualifying energy efficient business improvements.

  - Energy Management Control Systems: Six institutions installed the system prior to 2010 and five more were scheduled to install the system in 2010/2011. Energy Management Control Systems display real-time energy monitoring so staff and visitors can see the current and past electricity production of the 100 kW SDG&E-owned photovoltaic system on the building's roof.

  - Lighting optimization and installation of light-emitting diode induction street lights and indoor lighting.

  - Smart metering.

  - Building retrofits.

  - Solar technology.

- Education and Training Programs

  - Contractors' Educational Seminars: Implemented a series of seminars designed to educate staff on sustainable products and specifically on ways to use/apply the products for energy efficiency and cost savings.

  - Lunch and Learns: These monthly meetings bring together staff to share lessons learned and find creative ways to work together to save energy. The group was informally established as an offshoot of the BPCP Collective Business Operations.

  - SDG&E and City of San Diego Educational Seminars: These sessions are designed to help attendees streamline energy efficiency processes and understand reporting requirements, invoicing procedures, and regulatory and policy updates.

  - Sustainability Workshops: Two major workshops, attended by more than 500 people, were held in 2008 and 2010 to educate all stakeholders on sustainability practices and principles.

These programs and efforts would be applied to the project area.

San Diego Sustainable Community Program

In 2002, the San Diego City Council unanimously approved the San Diego Sustainable Community Program (SCP) and requested that an *Ad Hoc* Advisory Committee be established to provide recommendations that would decrease GHG emissions from City operations. Actions identified in the SCP include:

1. Participation in the International Council for Local Environmental Initiatives (ICLEI) Cities for Climate Protection (CCP) Campaign to reduce GHG emissions, and in the California Climate Action Registry
2. Establishment of a reduction target of 15 per cent by 2010, using 1990 as a baseline (Note: this reduction target was not met)
3. Direction to use the recommendations of the *Ad Hoc* Advisory Committee as a means to expand the GHG Emission Reduction Action Plan for the City organization and broaden its scope to include community actions.

Cities for Climate Protection

As a participant in the ICLEI Cities for Climate Protection Program, the City made a commitment to voluntarily decrease its GHG emissions by 2030. The Program includes five milestones: (1) establish a CCP campaign, (2) engage the community to participate, (3) sign the U.S. Mayors Climate Protection Agreement, (4) take initial solution steps,

and (5) perform a GHG audit. The City has advanced past Milestone 3 by signing the Mayor's agreement and establishing actions to decrease City Operations' emissions.

Climate Protection Action Plan

In July 2005, the City of San Diego developed a Climate Protection Action Plan (CPAP) that identifies policies and actions to decrease GHG emissions from City operations. Recommendations included in CPAP for transportation included measures such as increasing carpooling and transit ridership, improving bicycle lanes, and converting the City vehicle fleet to low-emission or non-fossil-fueled vehicles. Recommendations in the CPAP for energy and other non-transportation emissions reductions included increasing building energy efficiency (i.e., requiring that all City projects achieve the U.S. Green Building Council's LEED Silver standard); reducing waste from City operations; continuing use of landfill methane as an energy source; reducing the urban heat island by avoiding dark roofs and roads which absorb and retain heat; and increasing shade tree and other vegetative cover plantings.

Because of City actions implemented earlier between 1990 and 2002, moderate GHG emissions reductions were reported in the CPAP. City actions taken to capture methane gas from solid waste landfills and sewage treatment plants resulted in the largest decrease in GHG emissions. Actions taken thus far to incorporate energy efficiency and alternative renewable energy reached only 5 percent of the City's 2010 goal. The transportation sector remains a significant source of GHG emissions in 2010 and has had the lowest GHG reductions, reaching only 2.2 percent of the goal for 2010. The City of San Diego General Plan includes a Policy CE-A.13 to regularly monitor and update the CPAP.

Sustainable Building Policies

In several of its policies, the City aims to reduce GHG emissions by requiring sustainable development practices in City operations and incentivizing sustainable development practices in private development. In Council Policy 900-14—Green Building Policy, adopted in 1997, Council Policy 900-16—Community Energy Partnership, and the updated Council Policy 900-14—Sustainable Buildings Expedite Program, last revised in 2006, the City establishes a mandate for all City projects to achieve the U.S. Green Building Council's LEED Silver standard for all new buildings and major renovations over 5,000 square feet. Incentives are also provided to private developers through the Expedite Program, which expedites project review of green building projects and discounts project review fees.

The City has also enacted codes and policies aimed at helping the City achieve the State's 50 percent waste diversion mandate, including the Refuse and Recyclable Materials Storage Regulations (Municipal Code Chapter 14, Article 2, Division 8), Recycling Ordinance (O-19678 Municipal Code Chapter 6, Article 6, Division 7), and the

Construction and Demolition (C&D) Debris Deposit Ordinance (O-19420 & O-19694 Municipal Code Chapter 6, Article 6, Division 6).

4.9.1.3 Existing GHG Emissions

There are numerous GHGs, both naturally occurring and artificial. Table 4.9-4 summarizes some of the most common GHGs.

TABLE 4.9-4
GLOBAL WARMING POTENTIALS (GWPs) AND ATMOSPHERIC LIFETIMES (YEARS)

Gas	Atmospheric Lifetime	100-year GWP	20-year GWP	500-year GWP
Carbon Dioxide (CO_2)	50-200	1	1	1
Methane (CH_4)[a]	12±3	21	56	6.5
Nitrous oxide (N_2O)	120	310	280	170
HFC-23	264	11,700	9,100	9,800
HFC-125	32.6	2,800	4,600	920
HFC-134a	14.6	1,300	3,400	420
HFC-143a	48.3	3,800	5,000	1,400
HFC-152a	1.5	140	460	42
HFC-227ea	36.5	2,900	4,300	950
HFC-236fa	209	6,300	5,100	4,700
HFC-4310mee	17.1	1,300	3,000	400
CF_4	50,000	6,500	4,400	10,000
C_2F_6	10,000	9,200	6,200	14,000
C_4F_{10}	2,600	7,000	4,800	10,100
C_6F_{14}	3,200	7,400	5,000	10,700
SF_6	3,200	23,900	16,300	34,900

SOURCE: U.S. EPA 2002.
[a] The methane GWP includes the direct effects and those indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO_2 is not included.

Of the gases listed in Table 4.9-4, carbon dioxide, methane, and nitrous oxide are produced by both natural and anthropogenic (human) sources. The remaining gases, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6) are the result of human processes.

The potential of a gas to trap heat and warm the atmosphere is measured by its "global warming potential" or GWP. Specifically, GWP is defined as the cumulative radiative forcing—both direct and indirect effects—integrated over a period of time from the emission of a unit mass of gas relative to some reference gas (EPA 2002).

The project site is located in Balboa Park. The footprint of the project includes the Organ Pavilion parking lot, the Alcazar parking lot, internal roadways, and an undeveloped portion of the archery range. The existing sources of GHG emissions in the area of Balboa Park affected by the project are vehicles and exterior lighting. To establish the

existing baseline, GHG emissions associated with these sources were calculated. Then, to determine the project's GHG impacts, the "baseline plus project" GHG emissions were compared to the baseline GHG emissions.

The traffic impact analysis prepared for the project calculated the existing weekend and weekday vehicle trips within the project area. There are 6,500 ADT on a typical weekday and 7,600 ADT on a typical weekend day (Appendix D-1). This value, multiplied by the existing regional average trip length of 5.8 miles (SANDAG 2009), results in 14,425,843 VMT annually. This equates to a total of 6,894 $MTCO_2E$ of GHGs that are being emitted by vehicles associated with existing on-site area.

There is also existing exterior lighting within the project area. There are currently 155 50-watt lights that are on for an average of 12 hours per day in the evening and nighttime hours. This consumes 33,945 kWh per year. This equates to the emission of 12 $MTCO_2E$ per year.

4.9.1.4 Implications of Climate Change

The increase in the earth's temperature is expected to have wide ranging effects on the environment. Although global climate change is anticipated to affect all areas of the globe, there are numerous implications of direct importance to California. Statewide average temperatures are anticipated to increase by between 3 and 10.5° F by 2100. Some climate models indicate that this warming may be greater in the summer than in the winter. This could result in widespread adverse impacts to ecosystem health, agricultural production, water use and supply, and energy demand. Increased temperatures could reduce the Sierra Nevada snowpack and put additional strain on the region's water supply. In addition, increased temperatures could result in lower inversion levels leading to a decrease in air quality. It is important to note that even if GHG emissions were to be eliminated or dramatically reduced, it is projected that the effect of those emissions would continue to affect global climate for centuries.

4.9.2 Issue 1: GHG Emissions

Would the proposal generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

The City has not adopted its own GHG Thresholds of Significance for CEQA. To determine when a GHG analysis would be required, the City is following guidance from the California Air Pollution Control Officers Association (CAPCOA) report *CEQA & Climate Change*, dated January 2008, for interim screening criteria. To determine when a cumulatively significant contribution of GHGs has occurred, the City is using information from the CARB Scoping Plan and BAU 2020 Forecast (CAPCOA 2008).

An annual 900-metric-ton screening criterion for determining when a detailed GHG reduction analysis is required was chosen by the City based on available guidance from the CAPCOA report. The CAPCOA report references the 900-metric-ton guideline as a conservative threshold for requiring further analysis and mitigation. This emission level is based on the amount of vehicle trips, the typical energy and water use, and other factors associated with projects (City of San Diego 2008).

The City of San Diego uses the 900 $MTCO_2E$ net increase "trigger" for determining when a project is required to demonstrate a GHG reduction when compared to BAU. For projects that emit a net increase of GHGs in excess of 900 $MTCO_2E$ annually, the City requires a GHG emissions analysis to demonstrate that the project design achieves a 28.3 percent reduction relative to BAU GHG emissions. As demonstrated below, net emissions are not projected to exceed the City's GHG screening criterion of 900 $MMTCO_2E$ annually, and further analysis to determine the project's reduction compared to the BAU 2020 model is not warranted (City of San Diego 2008b).

4.9.2.1 Impacts

ALL PROJECT COMPONENTS

Emission estimates were calculated for the three GHGs of primary concern (CO_2, CH_4, and N_2O) that would be emitted from project construction and from the project's five sources of operational emissions: on-road vehicular traffic, electricity generation, natural gas consumption, water usage, and solid waste disposal. Construction GHG emissions were estimated using the California Emissions Estimator Model (CalEEMod) Version 2011.1.1 released by CARB in March 2011. GHG emissions due to the other operational sources were estimated using estimated energy and water use and GHG emission factors obtained from a variety of sources. Emissions were estimated in terms of total $MTCO_2E$. CO_2-equivalent emissions are the preferred way to assess combined GHG emissions because they give weight to the GWP of a gas. The GWP, as described above in Section 4.9.1.3, is the potential of a gas to warm the global climate in the same amount as an equivalent amount of emissions of CO_2. CO_2 thus has a GWP of 1. Methane (CH_4) has a GWP of 21 and nitrous oxide (N_2O) has a GWP of 310, which means they have a greater global warming effect than CO_2.

The methodologies, assumptions, and calculations for each GHG emission source are discussed in detail in below.

GHG emissions were estimated using the CalEEMod Version 2011.1.1 released by CARB in March 2011. CalEEMod was developed by the CARB and an air quality consultant, with the participation of several state air districts including the South Coast Air Quality Management District (SCAQMD) and the SDAPCD. The model estimates criteria air pollutants and GHG emissions by multiplying emission source intensity factors by estimated quantities of emission sources based on the land use information entered

by the user in the first module of the model. The input land uses, size features, and population are used throughout CalEEMod in determining default variables and calculations in each of the subsequent modules. The subsequent modules include construction (including off-road vehicle emissions), mobile (on-road vehicle emissions), area sources (woodstoves, fireplaces, consumer products [cleaners, aerosols, solvents], landscape maintenance equipment, architectural coatings), water and wastewater, and solid waste.

a. Vehicle Emissions

Transportation-related GHG emissions comprise the largest sector contributing to both inventoried and projected statewide GHG emissions, accounting for 38 percent of the projected total statewide 2020 BAU emissions (CARB 2008b). On-road vehicles alone account for 35 percent of forecasted 2020 BAU emissions. GHG emissions from vehicles come from the combustion of fossil fuels (primarily gasoline and diesel) in vehicle engines. The quantity and type of transportation fuel consumed determines the amount of GHGs emitted from a vehicle. Therefore, not only are vehicle engine and fuel technology of importance, but so are also the amount of vehicle trips and trip distances that motorists travel.

While future traffic volumes would be greater than the existing condition due to regional growth, the project would not generate an increase in traffic volumes and the project does not propose to alter the general external trip distribution patterns within the study area. Therefore, there would be no net increase in vehicle emissions due to the project. Existing and future vehicle GHG emissions under the project would be the same as the existing and future vehicle GHG emissions under No Project. The existing vehicle GHG emissions of 6,894 MTCO $_2$E per year calculated above in Section 4.9.1.3 would also apply to the “baseline plus project” scenario.

b. Electricity Emissions

Electric power generation accounted for the second largest sector contributing to both inventoried and projected statewide GHG emissions, comprising 24 percent of the projected total 2020 statewide BAU emissions (CARB 2008b). Buildings use electricity for lighting, heating and cooling. GHGs are generated during the generation of electricity from fossil fuels at off-site in power plants. A building’s electricity use is thus associated with the off-site or indirect emission of GHGs at the source of electricity generation (power plant).

The project would include the construction of a parking structure as well as several park amenities including a visitor center, valet station, and restrooms. Electricity would be required for the parking structure, the amenity buildings, and exterior lighting.

GHG emissions from electricity generation were calculated by multiplying the total consumption in kWh by electricity GHG emission factors applicable to the project location and utility provider. The utility provider for the project area is SDG&E. The SDG&E GHG emission factors are summarized in Table 4.9-5.

TABLE 4.9-5
SDG&E INTENSITY FACTORS

GHG Intensity	Factor[1] (lbs/MWh)
Carbon dioxide (CO_2)	780.79
Methane (CH_4)	0.029
Nitrous oxide (N_2O)	0.011

[1]SOURCE: CalEEMod Version 2011.1.1., CARB 2011.
lbs = pounds
MWh = megaWatt hour

These energy intensity values were obtained from the CalEEMod program and are based on CARB's Local Government Operations Protocol (for CO_2) and E-Grid (for CH_4 and N_2O) values. The parking structure would consume 660,000 kWh of electricity per year (Kuhn, pers. comm. 2011). This equates to the emission of 235 $MTCO_2E$ per year.

The total electricity requirement for the visitor center (1,400 square feet), valet station (36 square feet for enclosed portion), and restrooms (1,585 square feet) is not known at this time. To quantify GHG emissions due to electricity consumption associated with these buildings, it was assumed that the electricity consumption would be similar to an average commercial use. The average electricity consumption rate for commercial uses was obtained from consumption data published by the EIA. The average annual consumption rate for commercial use is 14.1 kWh per square foot per year (EIA 2006). This rate was multiplied by the total square footage of the buildings to obtain the total annual electricity consumption of 42,596 kWh. This equates to the emission of 15 $MTCO_2E$ per year.

The project would also require exterior lighting not associated with the parking structure or any other proposed structures. The project would install 233 50-watt lights that would be on for an average of 12 hours per day in the evening and nighttime hours. This would consume 51,027 kWh per year. This equates to the emission of 18 $MTCO_2E$ per year.

Table 4.9-6 summarizes the total electricity consumption and the associated GHG emissions for the project.

TABLE 4.9-6
TOTAL ELECTRICITY CONSUMPTION AND ASSOCIATED GHG EMISSIONS

Source	Electricity Consumption (kWh)	Electricity GHG Emissions ($MTCO_2E$ per Year)
Parking Structure	660,000	235
Visitor Center	19,740	7
Valet Station	508	0
Restrooms 22,348		8
Exterior Lighting	51,027	18
TOTAL 753,62	3	268

c. Natural Gas Emissions

Buildings combust natural gas primarily for hea ting and cooking purpo ses, re sulting in the emission of GHGs. GHG emissions from natural gas co mbustion were calculat ed by multiplying the total co nsumption in million cubic feet by natural gas GHG emission factors. The natural gas GHG emission factors are summarized in Table 4.9-7.

TABLE 4.9-7
NATURAL GAS EMISSION FACTORS

GHG	Natural Gas Combustion Emission Factors (pound/million ft^3)
Carbon dioxide (CO_2) 120,00	0
Methane (CH_4)	2.3
Nitrous oxide (N_2O)	2.2

[1]SOURCE: U.S. EPA 1998.

The projection was based on natural gas use only in the amenity buil dings discu ssed above. Like electricity, the total natural gas requirement for the visitor center, valet station, and restrooms is not know n at this t ime. To quantify GHG emissions d ue to natural gas combustio n for these buildings, it was assumed that the natural gas consumption would be similar t o an average commercial use . The natural gas consumption rate for a commercial consumer was assumed to be 1.2 thousand British thermal units (kBTU) pe r square foot per year (CARB 2011). This rate was multiplied by the total square foota ge of the buildings to obtain the total annu al natural gas consumption of 3,554 cubic feet per year. This e quates to the emission of 0.19 MT CO_2E per year.

d. Water Emissions

The provision of potab le water co nsumes large amounts of energy associated with source and conveyanc e, treatment , distributio n, end use, and waste water treat ment. This type of energy use is known as embodied energy. The GHG emissions a ssociated with water u se are calcu lated by mul tiplying the embodied energy in a g allon of pota ble

water by the total number of gallons projected to be consumed by the project and then by the electricity generation GHG emissions factors shown in Table 4.9-6. For these estimates, it is assumed that water delivered to the project site would have an embodied energy of 2,779 kWh/acre-foot, or 0.0085 kWh/gallon (Torcellini et al. 2003).

A preliminary water demand analysis was prepared for the project. The analysis calculates the estimated increase in total water use for the project. The project would use 8.85 acre-feet per year. This is a net increase of 5.85 acre-feet per year. The embodied energy demand associated with 8.85 acre-feet of water is 24.51 MWh/year. This was converted to GHG emissions with the same electrical grid coefficients as the other purchased electricity. The resulting emissions amount to 8.73 $MTCO_2E$ per year.

e. Solid Waste Emissions

The disposal of solid waste produces GHG emissions from anaerobic decomposition in landfills, incineration, and transportation of waste. A preliminary Waste Management Plan (WMP) was prepared for the project (Appendix O). The expected annual waste to be generated during the operation of the project would be consistent with the annual waste that is generated today, which varies from day to day. There would be no significant increase in solid waste generation. Therefore, there would be no net increase in GHG emissions associated with solid waste at the operational level.

f. Construction Emissions

Construction activities emit GHGs primarily though combustion of fuels (mostly diesel) in the engines of off-road construction equipment and through combustion of diesel and gasoline in on-road construction vehicles and in the commute vehicles of the construction workers. Smaller amounts of GHGs are also emitted through the energy use embodied in any water use (for fugitive dust control) and lighting for the construction activity. Every phase of the construction process, including demolition, grading, paving, and building, emits GHG emissions, in volumes proportional to the quantity and type of construction equipment used. The heavier equipment typically emits more GHGs per hour of use than the lighter equipment because of their greater fuel consumption and engine design.

Construction GHG emissions were calculated using the construction module of the CalEEMod program. CalEEMod was developed by the CARB and an air quality consultant, with the participation of several state air districts including the SCAQMD and the SDAPCD. In brief, the model estimates criteria air pollutants and GHG emissions by multiplying emission source intensity factors by estimated quantities of emission sources.

CalEEMod estimates construction emissions for each year of construction activity based on the annual construction equipment profile and other factors determined as needed to

complete all phases of construction by the target completion year. As such, each year having reported construction emissions has varying quantities of GHG emissions. However, the AEP has recommended that total construction GHG emissions resulting from a project be amortized over 30 years and added to operational GHG emissions (AEP 2010). Estimates of the total emissions from construction activities estimated by CalEEMod were thus divided by 30, in accordance with the AEP recommendations.

The project is scheduled for a 24-month overall construction duration. The project's construction includes four phases, as described in Section 3.9.2. Table 4.5-4 summarizes the construction equipment parameters for each phase. Only the equipment anticipated to operate simultaneously was entered into CalEEMod. For example, there would be 18 generators on-site; however, not all 18 generators would operate at one time (personal communication, Kevin Horst, KCM).

As discussed in Section 4.5 Air Quality, since a subcontractor has not yet been selected for the project, the exact make, model, and age of the equipment cannot be known at this time. Equipment with model year 2008 or later will have Tier 3 or Tier 4 engines. For the purposes of this analysis (and to obtain a worst-case scenario estimate), it was assumed that equipment would be older and have Tier 2 engines.

Additionally, emissions due to export hauling activities discussed above were modeled. The schedule duration for the parking structure excavation and export activity would be approximately 40 consecutive working days using dual shifts. Soil export hauling would be coordinated to occur outside the peak traffic hours. On average, the operation would require a fleet of 20 to 25 double bottom dump trucks cycling every 45 to 60 minutes between the project site and the Arizona Street Landfill. This would equate to 13,600 to 17,000 round trips over a distance of approximately 2.8 miles, or 76,160 to 95,200 total hauling miles traveled. The number of trips would be distributed evenly over the 40-day hauling period. This would result in a total of 340 to 425 trips per day so 425 trips per day was used as a worst-case analysis.

Table 4.9-8 summarizes the estimated GHG emissions due to construction activities.

TABLE 4.9-8
CONSTRUCTION GHG EMISSIONS
(metric tons)

Year	CO_2	CH_4	N_2O	MT CO_2E
2012	362.10	0.04	0.00	363.00
2013	2,917.79	0.33	0.00	2,924.69
2014	741.16	0.08	0.00	742.84
TOTAL	*4,021.05*	*0.45*	*0.00*	*4,030.53*
Amortized Over 30 Years	**134.04**	**0.02**	**0.00**	**134.35**

As shown, the project would result in approximately 134 $MTCO_2E$ when amortized over 30 years.

g. Total Emissions

Table 4.9-9 summarizes the study area emissions without the project, the study area emissions with the project, and the net increase in emissions due to implementation of the project. As shown in Table 4.9-9, without implementation of the project, the study area emits approximately 6,909 $MTCO_2E$ annually. Most of this is due to vehicle traffic through the study area. The total emissions after implementation of the project would be approximately 7,305 $MTCO_2E$ annually. As shown, the vehicle emissions would be the same in the "without project" condition. This is because the project would not result in an increase in vehicle traffic. Finally, as shown in Table 4.9-9, the project would result in a net total of approximately 397 $MTCO_2E$ per year. This increase is due to additional exterior lighting, additionally energy use in the parking garage and other structures, and additional water use. This is less than the City's screening criteria of 900 $MTCO_2E$ per year. Since the total $MTCO_2E$ per year for the project would be less the City's screening criteria, impacts would be less than significant.

TABLE 4.9-9
SUMMARY OF BASELINE AND PROJECT GHG EMISSIONS
($MTCO_2E$)

Emission Source	Study Area Emissions without the Project	Study Area Emissions with the Project	Net Increase in GHG Emissions due to the Project
Vehicles	6,893.63	6,893.63	0.00
Electricity	12.08	268.27	256.19
Natural Gas	0.00	0.19	0.19
Water	2.95	8.73	5.78
Solid Waste	0.00	0.00	0.00
Construction	N/A	134.35	134.35
TOTAL	**6,908.67**	**7,305.18**	**396.52**

4.9.2.2 Significance of Impacts

The net increase in GHG emissions due to construction and operation of the project would not exceed the screening criteria of 900 $MTCO_2E$ per year, therefore, no additional analysis is required and impacts would be less than significant.

4.9.2.3 Mitigation, Monitoring, Reporting

Impacts would be less than significant. No mitigation is required.

4.9.3 Issue 2: Consistency with Plans, Policies, and Regulations

Would the proposal conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHG?

4.9.3.1 Impacts

ALL PROJECT COMPONENTS

The regulatory plans and policies discussed in Section 4.9.1.2 above aim to reduce federal, state, and local GHG emissions by primarily targeting the largest emitters of GHGs: the transportation and energy sectors. Plan goals and regulatory standards are thus largely focused on the automobile industry and public utilities. For the transportation sector, the reduction strategy is generally three pronged: to reduce GHG emissions from vehicles by improving engine design; to reduce the carbon content of transportation fuels through research, funding, and incentives to fuel suppliers; and to reduce the miles these vehicles travel through land use change and infrastructure investments.

For the energy sector, the reduction strategies aim to: reduce energy demand; impose emission caps on energy providers; establish minimum building energy and green building standards; transition to renewable non-fossil fuels; incentivize homeowners and builders; fully recover landfill gas for energy; expand research and development; and so forth.

As discussed above, the project would not result in an increase in traffic on area roadways. Sustainable design that would be incorporated into the project to reduce the project's overall demand for energy include installation of energy and water efficient lighting and irrigation systems. In addition, the parking structure was designed such that it is naturally ventilated without the need for mechanical equipment and has access to natural lighting during the day. By implementing these project design features and by complying with the park-wide sustainability program discussed in Section 4.9.1.2 above, the project would be consistent with many of the General Plan goals and policies including the following:

CE-A.5. Employ sustainable or "green" building techniques for the construction and operation of buildings.

CE-A.7. Construct and operate buildings using materials, methods, and mechanical and electrical systems that ensure a healthful indoor air quality. Avoid contamination by carcinogens, volatile organic compounds, fungi, molds, bacteria, and other known toxins.

CE-F.2. Continue to upgrade energy conservation in City buildings and support community outreach efforts to achieve similar goals in the community.

CE-I.4. Maintain and promote water conservation and waste diversion programs to conserve energy.

4.9.3.2 Significance of Impacts

The project is consistent with the goals and strategies of local and state plans, policies, and regulations aimed at reducing GHG emissions from land use and development. The project would include installation of energy and water efficient lighting and irrigation systems and the parking structure would not require mechanical equipment. Additionally, the project would result in a net increase of about 397 $MTCO_2E$ GHG emissions annually, which is less than the City's 900 M TCO_2E screening criteria. Therefore, impacts would be less than significant.

4.9.3.3 Mitigation, Monitoring, Reporting

No significant impacts would occur; therefore, no mitigation measures would be necessary.

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4.10 Health and Safety/Hazardous Materials

This section of the EIR addresses the potential for public safety impacts associated with hazardous materials sites and interference with an adopted emergency response plan. Supporting technical documentation includes a Phase I Environmental Site Assessment (ESA), prepared by Geocon Consultants on May 31, 2011. This report is included as Appendix I of this EIR.

4.10.1 Existing Conditions

4.10.1.1 Hazardous Materials Regulations

Numerous federal, state, and local laws and regulations regarding hazardous materials have been developed with the intent of protecting public health, the environment, surface water, and groundwater resources. Over the years, the laws and regulations have evolved to deal with different aspects of the handling, treatment, storage, and disposal of hazardous substances. Relevant laws and regulations include:

- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, also known as "Superfund," and the Superfund Amendments and Reauthorization Act (SARA) of 1986 (amended CERCLA, SARA Title III). CERCLA, SARA Title III provide a federal framework for setting priorities for cleanup of hazardous substances releases to air, water, and land. This framework provides for the regulation of the cleanup process, cost recovery, response planning, and communication standards.

- Federal Resource Conservation and Recovery Act (RCRA) of 1976. This act established the authority of the Environmental Protection Agency to develop regulations to track and control hazardous substances from their production, through their use, to their disposal.

- The California Health and Safety Code is the collection of state laws that govern the handling of hazardous waste, corrective action (remediation) and permitted facilities. The California Environmental Protection Agency Department of Toxic Substances Control (DTSC) develops regulations based on the California Health and Safety Code. The state regulations regarding corrective action, permitted facilities, and hazardous waste management are found in Title 22.

These acts established the authority of the EPA to develop regulations to track and control hazardous substances from their production, through their use, and ultimately to their disposal. These acts also provided a framework for setting priorities for cleanup of hazardous substances and set the precedent for states and local authorities to do the

same. Applicable regulatory agencies have kept records on hazardous materials storage, use, and disposal, and make these lists publicly available. Locally, these include the DTSC List and the San Diego County Hazardous Materials Division (HMD) database.

DTSC regulates hazardous waste, maintains a database of potentially contaminated properties, cleans up existing contamination, and researches ways to reduce the hazardous waste produced in California. DTSC regulates hazardous waste primarily under the authority of the federal RCRA and the California Public Health and Safety Code (DTSC 2011).

At the local level, the City Fire Department screens inventories of substances and inspects sites every 12 months; the County Health Department screens inventories, inspects facilities every 15 months, and reviews the hazardous Materials Business Plan, and the SDAPCD evaluates projects for possible toxic emissions and issues permits as necessary.

The HMD is the Certified Unified Program Agency for San Diego County responsible for regulating hazardous materials business plans and chemical inventory, hazardous waste and tiered permitting, underground storage tanks, aboveground petroleum storage, and risk management plans (County of San Diego 2011a).

4.10.1.2 Environmental Site Assessment

The Phase I ESA (see Appendix I) involved the preliminary research and review of publicly available records in addition to a visual check of the site and surrounding area. The Phase I assessment for the proposed development included: (1) a review of federal, state, and local regulatory and municipal agency databases concerning the site and surrounding properties within a one-mile radius; (2) an on-site investigation; (3) interviews with individuals familiar with site operations, materials, and history; and (4) photographic documentation of the current condition of the site and abutting properties. The results of the Phase I assessment study concerning hazardous materials on the project site are summarized below.

a. Records Search

The Phase I ESA prepared for the project included a search of federal, state, and local databases for the project site and the surrounding area. The search showed 42 listings were found within one mile of the project site. Of those, four listings were within approximately 1,000 feet of the project site, and are associated with four facilities:

1. **Balboa Art Conservation Center, 1649 El Prado** is located approximately 328 feet east of the project site. This facility was listed in 1996 as a small quantity generator (generates between 100 and 1,000 kilograms per month) of

oxygenated solvents (acetone, butanol, ethyl acetate, etc). No violations are referenced in the RCRA-SQG database for this facility. Neither the HAZNET nor the FINDS databases provide information regarding violations associated with the facilities.

2. **San Diego Zoo Inc., 2920 Zoo Drive** is located approximately 933 feet north-northwest of the project site. This facility was listed in the Notify 65 database. The Notify 65 database is operated by the State Water Resources Control Board (SWRCB) and includes information regarding Proposition 65 notices (protection of drinking water resources) reported to local counties, but does not list specific violation information. Information in the database was last updated in 1993 and is no longer updated by the SWRCB. The Notify 65 database does not provide information for violations associated with the facilities.

3. **Arizona Street Landfill, (address unknown)** (approximately 1,005 feet north-northwest of the Site) – This facility was listed in the Waste Management Unit Database System/Solid Waste Assessment Test (WMUDS/SWAT) database as a Solid Waste Site-Class III for non-hazardous solid wastes. The WMUDS/SWAT database is used for program tracking and inventory of waste management units but does not provide information for violations associated with the facilities.

4. **Naval Hospital San Diego Facility Mgmt. 12, 1900 Park Boulevard** (approximately 619 feet south-southeast of the project site). Five underground storage tanks (USTs) are reported in conjunction with this site (four for vehicle fueling and one for waste oil). No violations are referenced in the San Diego County Hazardous Materials Management Division database for this facility. The SWEEPS UST database does not provide information for violations associated with the facilities.

Based on the distances of these facilities from the site, the nature of listings, and the information provided in the referenced databases, the Phase I ESA concluded that the likelihood that these facilities would adversely impact the project site is low.

b. Historical Use

Sanborn maps (from 1921 to 1971), historical aerial photographs (from 1953 to 2005) and historical topographic maps (from 1904 to 1996) were reviewed for indications of past land uses that had the potential to have impacted the project site through the use, storage, or disposal of hazardous substances and/or petroleum. No direct evidence of recognized environmental conditions was observed in any of these sources.

c. Site Reconnaissance

A reconnaissance of the project site and environs was conducted by Geocon on April 8, 2011. The on-site survey did not yield any evidence of soil staining, waste disposal, pits, USTs, aboveground storage tanks (ASTs), or stressed vegetation. No evidence of potential recognized environmental conditions (REC) were observed during off-site reconnaissance.

d. Interview

An interview was conducted with a representative of the City of San Diego Park and Recreation Department that currently manages Balboa Park. He stated that he is not aware of hazardous substances, petroleum products, unidentified waste materials, tires, automotive or industrial batteries, or other waste materials dumped, buried, or burned at the site. The representative also stated that he was not aware of the import of any fill soils, or of pits, ponds, or lagoons, stained soil, ASTs, USTs, fill or vent pipes, floor drains, or wells on-site.

4.10.1.3 Arizona Street Landfill

a. Location and Current Uses

The landfill is located on the East Mesa, approximately 2,500 feet to the east of the Plaza de Panama (see Figure 2-3b). The landfill stretches from Jacaranda Place on the north and Pershing Drive to the south. Its western boundary is Florida Drive. The Arizona Street Landfill is an inactive landfill equipped with a landfill gas collection system and a flare station. Land uses are restricted because of a lack of formal closure, irregular settlement of the ground surface, and past problems with methane generation. However, City Park and Recreation Department utilizes a portion of the landfill for maintenance sheds and equipment storage. Since the site does not have a perimeter fence, the public is free to access the site and there are numerous hiking/biking trails through the landfill and along its perimeter. Adjacent site uses include the Balboa Park municipal golf course, municipal swimming pool, tennis courts, Frisbee golf course, a Park nursery, bicycle velodrome, and baseball fields.

b. History

The Arizona Street Landfill comprises an area of about 70 acres on the East Mesa, including the area of the maintenance yard. This portion of the East Mesa (pre-1935) was originally a naturally vegetated small southwest-trending canyon. The landfill in its entirety is composed of two historic fills, technically called Balboa Landfill in the northern section and the Arizona Street Landfill in the southern section. The shallower end of the canyon is the oldest part of the landfill which was initially developed as the “Balboa Park Landfill” and used for demolition debris from 1935 to 1936. The deeper southern portion

of the canyon is known as the "Arizona Street Landfill" which was operated as a Class III municipal solid waste disposal facility from 1952 to 1974. During its operating lifetime, the landfill received approximately 1,938,000 tons of solid waste; the composition of which has been estimated at 90 percent municipal solid waste and 10 percent construction/demolition waste (EMPP; City of San Diego 1993).

The EMPP provides a variety of recommendations for the closure and subsequent development of the landfill for "free and open park uses." The concept summary of the EMPP describes the vision for the landfill as a vast open space restored to grassy meadows, non-irrigated and low growing, that can be used for informal pick-up games, as well as passive recreation, such as kite flying and catch. Some of these recommendations have been implemented. The landfill is unlined because its closure pre-dates the 1994 requirements for formal closure, but it has an interim cover consisting of native on-site soils placed over the refuse (City of San Diego 2005). The cover was originally placed approximately 3–15 feet in depth and revegetated (with varying degrees of success) with native grasses and shrubs. The City installed a landfill gas collection system and flare station in 1991 in response to a 1987 explosion of methane gases that had accumulated within a confined space at a construction site adjacent to the landfill (EMPP; City of San Diego 1993). In 2001, an additional 10,000 cubic yards of soil was spread within the proximity of the main drainage channel that added an additional 2–3 feet of depth (Castillo 2012).

c. Regulatory Context

Oversight of solid waste disposal facilities is under the jurisdiction of the San Diego Local Enforcement Agency (LEA). State law requires that every local jurisdiction designate an LEA that is certified by the Department of Resources Recycling and Recovery (CalRecycle; formerly known as the California Integrated Waste Management Board, or CIWMB) to enforce federal and state laws and regulations for the safe and proper handling of solid waste (City of San Diego 2012).

However, the CalRecycle/CIWMB standards do not address air or water quality aspects of the environment that are regulated by other state or local agencies. Therefore, where necessary to protect water quality, the RWQCB can implement, in coordination with the LEA, appropriate standards. The Arizona Street Landfill is subject to the RWQCB Order No. 97-11 which states that landfills that were closed, abandoned, or inactive prior to November 1984 are not subject to Article 8 requirements. They are, however, subject to post-closure maintenance requirements in accordance with 27 CCR Section 20080(g), which impose specific erosion control, drainage, landscaping, landfill gas control, and other requirements necessary for the protection of public health and safety (State of California 2012).

4.10.1.4 Emergency Response/Evacuation and Planning

The County of San Diego Office of Emergency Services (OES) coordinates the overall county response to disasters. OES is responsible for: notifying appropriate agencies when a disaster occurs; coordinating all responding agencies; ensuring resources are available and mobilized; developing plans and procedures for response to and recovery from disasters, and developing and providing preparedness materials for the public.

OES staffs the Operational Area Emergency Operations Center, a central facility that provides regional coordinated emergency response, and also acts as staff to the Unified Disaster Council (UDC), its governing body. The UDC, established through a joint powers agreement among all 18 incorporated cities and the County of San Diego, provides for coordination of plans and programs countywide to ensure protection of life and property.

In 2010, the County and 18 local jurisdictions, including the City of San Diego, adopted the Multi-hazard Mitigation Plan (MHMP). The MHMP is a countywide plan that identifies risks and ways to minimize damage by natural and manmade disasters. The plan is a comprehensive document that serves many purposes, including creating a decision tool for management, promoting compliance with state and federal program requirements, enhancing local policies for hazard mitigation capability, and providing interjurisdictional coordination (County of San Diego 2011b).

The City of San Diego's disaster prevention and response activities are conducted in accordance with U.S. Department of Homeland Security Office of Domestic Preparedness requirements and incorporate the functions of planning, training, exercising, and execution. The City's disaster preparedness efforts include oversight of the City's Emergency Operations Center (EOC), including being responsible for maintaining the EOC in a continued state of readiness, training City staff and outside agency representatives in their roles and responsibilities, and coordinating EOC operations when activated in response to an emergency or major event/incident (City of San Diego General Plan 2008b).

4.10.2 Issue 1: Hazardous Materials/Human Health

Would the proposal be located on a site which is included on a list of hazardous materials sites and, as a result, create a significant hazard to the public or environment?

According to the the City's Significance Determination Thresholds, impacts associated with hazardous materials/public safety may be significant if:

- Known Contamination Sites: The project site is located on or near known contamination sources. Sources of this information are:

- San Diego County Environmental Assessment Case Listing
- State DTSC
- Other possible sources—Sanborn maps, Fire Department records, topographic/ existing conditions surveys.
- Site-specific emission data from the SDAPCD
- State Water Resources Control Board

· Human Health: The project site meets one or more of the following criteria:

- Located within 1,000 feet of a known contamination site
- Located within 2,000 feet of a known border zone property (also known as a Superfund site) or a hazardous waste property subject to corrective action pursuant to the Health and Safety Code
- County of San Diego–Department of Environmental Health (DEH) site file closed
- Located in Centre City San Diego, Barrio Logan, or other areas known or suspected to contain contamination sites
- Located on or near an active or former landfill
- Located in a designated airport influence area and where the FAA has reached a determination of " hazard" through FAA Form 7460-1, "Notice of Proposed Construction or Alteration" as required by FAA regulations in the Code of Federal Regulations Title 14 §77.13.

4.10.2.1 Impacts

ALL PROJECT COMPONENTS

a. Known Contamination Sites

As detailed in Section 4.10.1.2, the Phase I ESA prepared for the project included a search of federal, state, and local databases for the project site and the surrounding area, an historical use analysis, a site reconnaissance, and interviews. Based on the sources referenced in Section 4.10.1.2 no hazardous materials have been reportedly generated and releases/violations have not been reported at the project site. Four facilities approximately 1,000 feet of the project site are referenced as storing or disposing of hazardous materials, but no violations/releases have been reported and

their potential for adversely affecting the project is low. Impacts associated with hazardous contamination sources would be less than significant.

b. Human Health

Superfund Site

The EnviroStor database search (Appendix C of the Phase I ESA) showed that the project site is not located within 2,000 feet of a known border zone property (also known as a Superfund site), or a hazardous waste property subject to corrective action pursuant to the Health and Safety Code. Impacts would be less than significant.

County of San Diego DEH Site File

As part of the Phase I ESA preparation, a request was submitted to the County of San Diego – Department of Environmental Health (DEH) for records pertaining to the APN associated with the site. According to DEH, records were found for the APN associated with the site but upon further review, the records referred to a release from a former UST at the Balboa Park municipal golf course, 2600 Golf Course Drive, approximately one mile southeast of the site. According to the records reviewed, the release affected soil only and the UST case was closed in July 2001. Based on the closed status of the UST case and the distance of this facility from the site, impacts would be less than significant.

Arizona Street Landfill

Based on the distance of this facility from the project, project improvements on the Central Mesa, and the closed status of the facility, the landfill would not have a significant adverse impact on these project components. However, the Arizona Street Landfill is a n off-site project component that would be affected by the proposed fill disposal activities associated with excavations for the proposed Organ Pavilion parking structure. As discussed in Sections 2.2 and 3.4.6.4, the approximately 142,000 cy of excess soils generated by excavation activities for the proposed parking structure at the Organ Pavilion would be disposed of at the Arizona Street Landfill. The landfill has an active gas recovery system and raising the gas probes and valve cans is a project permit condition subject to review and approval by City of San Diego Environmental Services Department (ESD)/LEA and a Health and Safety Plan must be submitted to the LEA (a trustee agency) as part of project approval. In addition, the grading plan for the Arizona Street Landfill would provide for erosion control, management of construction activities, management of export soil, placement and grading of soils, and haul route monitoring which would ensure that impacts associated with the fill disposal activities would be less than significant.

Airport Influence Area

As detailed in Section 4.1, project site lies within the AIA of the SDIA. The ALUC for San Diego County, the San Diego County Regional Airport Authority, determined that the project is consistent with the SDIA ALUCP. Therefore, the project would not be subject to hazards associated with the SDIA and impacts would be less than significant.

4.10.2.2 Significance of Impacts

As described in Section 4.10.2.1(a) above, there are four facilities within 1,000 feet of the project site that are listed on various hazardous waste databases. However, no violations are reported for any of these facilities. Based on the sources referenced above, no hazardous materials have been reportedly generated and releases/violations have not been reported at the project site. A number of nearby facilities are referenced as storing or disposing of hazardous materials, but no violations/releases have been reported. Through the preparation and approval of a Health and Safety Plan, along with construction and post-construction management, the deposition of soils at the Arizona Street Landfill would be less than significant. Altogether, impacts associated with hazardous materials/human health would be less than significant.

4.10.2.3 Mitigation, Monitoring, and Reporting

No mitigation is required.

4.10.3 Issue 2: Emergency Response

Would the proposal impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

According to the the City's Significance Determination Thresholds, impacts associated with hazardous materials/public safety may be significant if the project would:

- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

4.10.3.1 Impacts

ALL PROJECT COMPONENTS

The project area is located within the service area of the City of San Diego's Fire Department. As discussed in Section 2.3.1 of this document, the San Diego Fire Department strives to meet the national standard requiring an initial response (four-

person engine company) within five minutes (90 percent of the time) or an effective fire force (15 firefighters) within nine minutes (90 percent of the time).

The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The proposed changes in circulation have been reviewed by the Fire Department and were determined not to result in an increase in response times or present a constraint to fire/emergency response to the project area. In consultation with the San Diego Fire Department, the project has been designed to comply with emergency access requirements, allowing full-sized fire engines to access the interior of the west Prado area in the event of an emergency. Retractable bollards, which can be lowered electronically by emergency responders, would be in place west of the California Building's archway to allow emergency vehicles to access El Prado.

4.10.3.2 Significance of Impacts

The project would not result in an increase in response times or present a constraint to fire/emergency response in the area. Impacts would be less than significant.

4.10.3.3 Mitigation, Monitoring, and Reporting

Impacts would be less than significant. No mitigation is required.

4.11 Hydrology

The following hydrology analysis is summarized from the Preliminary Drainage Study for the project prepared by Rick Engineering Company, dated December 21, 2011. The drainage study provides preliminary design of the on-site storm drain system and assessment of impacts to runoff peak flow rates. This technical report is included in its entirety as Appendix J of this EIR.

4.11.1 Existing Conditions

4.11.1.1 Receiving Waters

According to the Water Quality Control Plan for the San Diego Basin (9) (California RWQCB 1994, the project is located in the following hydrologic basin planning area:

- Hydrologic Unit – Pueblo San Diego (908)
- Hydrologic Area – San Diego Mesa (.2)
- Hydrologic Subarea – Lindbergh (.21)

The Pueblo San Diego Hydrologic Unit is a triangular-shaped area of about 60 square miles with no major stream system. It is bordered to the north by the watershed of the San Diego River and on the south, in part, by that of the Sweetwater River. The major population center is the City of San Diego. The San Diego Bay is the primary receiving water body for the San Diego Mesa Hydrologic Area. Further detail on the existing drainage patterns towards to the San Diego Bay are included below.

4.11.1.2 Drainage Patterns

The project site is defined by six major drainage basins. Of these major drainage basins, three of them are located in the western portions of the site (i.e., Basin 100, 150, and 200) and drain in westerly directions to canyons and eventually to an existing storm drain system along SR-163. The remaining three major drainage basins (i.e., Basin 300, 400 and 500) convey runoff southeasterly towards an existing storm drain system that eventually connects with the existing storm drain system along SR-163. The existing storm drain system extends to the San Diego Bay Shoreline near B Street.

The project also consists of a fill disposal site located at the Arizona Street Landfill on the East Mesa. This consists of placing the fill and grade contouring in three areas of the Arizona Street Landfill. Site 1, southwest of the Park and Recreation Operations Yard, is anticipated to receive approximately 116,000 cubic yards of export, with fills ranging from 2 feet to 11 feet in height. Site 2, the existing East Mesa archery range, is

anticipated to receive approximately 11,000 cubic yards of export with fills ranging from 2 to 4 feet in height; and Site 3, the former "casting ponds," would receive the remaining approximately 15,000 cubic yards of export with fills ranging from 2 to 8 feet (total of 142,000 cy).

4.11.2 Issue 1: Runoff

Would the proposal result in a substantial increase in impervious surfaces and associated increased runoff?

According to the City's Significance Determination Thresholds, impacts related to hydrology would be significant if the project would:

- Result in increased flooding on- or off-site that may impact upstream or downstream properties and environmental resources.

4.11.2.1 Impacts

ALL PROJECT COMPONENTS

The overall drainage area as well as the drainage characteristics in the post-project condition would remain similar as compared to the pre-project conditions. Implementation of the project would result in a slight increase to impervious surfaces within one of the affected drainage basins (Basin 100); however, it would not result in significant impacts to upstream or downstream properties, nor environmental resources. To compare the flow rates in the pre- and post-project conditions, a hydrologic analysis for the project site was performed using the City of San Diego's Drainage Design Manual (see Table 4.11-1 below).

TABLE 4.11-1
PRE- AND POST-PROJECT FLOW COMPARISON

Basin	Area (acres)	Q 100-Year (cfs)	T_c (min)
PRE-PROJECT			
100	7.1	12.0	10.7
150	5.0	15.7	8.9
200	22.6	53.6	12.7
300 & 400	11.4	23.3	8.0
500	3.2	5.7	18.5
POST-PROJECT			
100	6.9	11.1	13.3
150	5.0	15.7	8.9
200	22.8	52.7	13.2
300 & 400	11.5	18.4	18.4
500	3.1	5.5	18.9

T_c = Time of Concentration; Q = Flow Rates; "cfs" = cubic feet per second

The improvements would maintain similar drainage patterns for each drainage basin compared to pre-project conditions and result in similar post-project peak flow rates within Basin 150, Basin 200, the combination of Basin 300 and 400 (since they confluence within the same storm drain system), and 500.

For Basin 100, while drainage patterns would remain similar; there would be a slight increase to impervious cover. Despite the increase in the impervious surface, the post-project condition would result in a slight reduction to the peak flow rate. The primary reason for the reduction in the peak flow rate is a result of a longer flow path based on the proposed routing for storm water runoff through Basin 100 to the existing canyon. Therefore, for flood control purposes, there would be no significant impacts to the existing downstream pipe (i.e., the existing pipe connecting to the SR-163 storm drain system).

As a result of the increase to impervious surface within Basin 100, the project includes a hydromodification management plan to manage, detain, and attenuate post-project runoff rates and duration to maintain or reduce pre-project downstream erosion conditions and protect stream habitat (pursuant to the Hydromodification Management Requirements outlined in Section 4.5 of the City of San Diego Storm Water Standards Manual, January 2011) (City of San Diego 2011b).

All drainage basins would include permanent storm water management facilities, including Low Impact Development (LID) Best Management Practices (BMPs) and/or Treatment Control BMPs that would help further manage, detain, and attenuate post-project runoff flows prior to discharge from the project (see Appendix J). Thus, impacts associated with impervious surfaces and associated runoff would be less than significant. Drainage characteristics for each of the major drainage basins are described below.

a. Western Drainage Basins (Drainage Basin 100, 150, and 200)

The western drainage basins would include on-site flood control conveyance for the 100-year storm event. On-site storm conveyance systems would be used to collect runoff from the existing portions of the project and from the proposed on-site development area. A network of storm drains, open channels, and water quality features would be used to collect, convey, and treat storm water runoff throughout the development area prior to discharging into the proposed integrated management practice (IMP) and BMP locations (i.e., proposed bioretention locations and high-rate media filters). The tributary area to each outfall location would remain similar to its current drainage patterns.

b. Southeast Drainage Basin (Drainage Basin 300, 400 and 500)

The drainage basin would include on-site flood control conveyance for the 100-year storm event. On-site storm conveyance systems would be used to collect runoff from

the existing portions of the project site and from the proposed on-site development areas. A network of storm drains, open channels, and water quality features would be used to collect, convey, and treat storm water runoff throughout the development area prior to discharging to the IMP and BMP locations (i.e., proposed bioretention locations and high-rate media filters) at the southwest corner of the project. The tributary area to each existing storm drain system would remain similar to its current drainage patterns.

c. Fill Disposal Site at the Arizona Street Landfill

The post-project drainage characteristics of the fill disposal site such as tributary area, flow paths, impervious area, and time of concentration to each outlet point would mimic the pre-project condition drainage characteristics. Furthermore, the project does not propose impervious surfaces within the fill disposal site. For water quality purposes, fill areas would be landscaped with non-irrigated plantings that are consistent with "passive" park uses and Park and Recreation land use goals for the Arizona Street Landfill. Since there are no proposed impervious surfaces, there are no additional permanent BMPs required for the fill disposal site related to water quality or hydromodification management. Therefore, there would be no change to the runoff coefficient and peak flow rates for the fill disposal site.

4.11.2.2 Significance of Impacts

The project would not significantly impact the quantity of runoff compared to the pre-project condition; since, with the exception of Basin 100, the majority of the site would maintain similar runoff rates. The project would not impose flood hazards on surrounding lands, nor would the project develop wholly or partially within a FEMA designated 100-year floodplain. While drainage patterns would remain similar for Basin 100, there is a slight increase to impervious cover. Despite the increase in the impervious surface, the post-project condition would result in a slight reduction to the peak flow rate. The primary reason for the reduction in the peak flow rate is a result of a longer flow path based on the proposed routing for storm water runoff through Basin 100 to the existing canyon. Therefore, for flood control purposes, there would be no significant impacts anticipated to the existing downstream pipe (i.e., the existing pipe connecting to the SR-163 storm drain system). In locations where an increase to impervious surface would occur (i.e., Basin 100), the project includes a hydromodification management plan to manage, detain, and attenuate post-project runoff rates and duration to maintain or reduce pre-project downstream erosion conditions and protect stream habitat (pursuant to the Hydromodification Management Requirements outlined in Section 4.5 of the City of San Diego Storm Water Standards Manual, January 2011). The project would also include LID and treatment control BMPs that would further reduce/slow runoff for post-project conditions. Implementation of the project design measures and conformance with applicable federal, state, and City regulatory standards would effectively avoid

and/or address potentially significant short-and long-term impacts related to hydrology; therefore, impacts would be less than significant.

4.11.2.3 Mitigation, Monitoring, and Reporting

Impacts related to an increase in flooding would be less than significant and no mitigation would be required.

4.11.3 Issue 2: Drainage Patterns

Would the proposal result in a substantial alteration to on- and off-site drainage patterns due to changes in runoff flow rates or volumes?

According to the City's Significance Determination Thresholds, impacts related to hydrology would be significant if the project would:

- Result in modifications to existing drainage patterns that would impact environmental resources such as biological communities and archaeological resources.

4.11.3.1 Impacts

ALL PROJECT COMPONENTS

As detailed above, the project would maintain similar drainage patterns compared to pre-project conditions, improve the on-site storm drain system, and provide storm water treatment. The proposed storm drain system for the project would be designed for the 100-year storm event. Runoff throughout the project site would be collected by a system of curb and gutter, catch basins and storm drains that would be sized for the 100-year storm. Features of the project that would improve runoff quality are described further in Section 4.16, Water Quality.

The project would not modify drainage patterns in a manner that would significantly impact environmental resources such as archaeological resources or vegetation communities. Specifically, based on the available and surveyed data regarding the locations of archaeological resources, the project would not substantially alter drainage patterns to these historical resources. As discussed above, the project would incorporate LID BMPs. The term LID means a storm water management and land development strategy that emphasizes conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions. An example of LID BMPs includes landscaping proposed steep hillside and other proposed slopes with native plants

selected for erosion control. Implementation and maintenance of the BMPs is further detailed in Section 4.16, Water Quality.

As a result of these improvements and the project design described above in Section 4.11.3, the project would not result in significant impacts to drainage patterns that would significantly impact environmental resources such as biological communities or archaeological resources.

4.11.3.2 Significance of Impacts

The project would maintain overall drainage pattern as compared to the existing condition and would not cause adverse impacts to the hydraulics of existing drainage systems located downstream of the project as well as to the on-site or off-site properties, including the fill disposal site. The project would not modify drainage patterns in a manner that would significantly impact environmental resources such as archaeological resources or vegetation communities. Implementation of the described project design measures and conformance with applicable federal, state, and City regulatory standards would effectively avoid and/or address potentially significant short-and long-term impacts related to hydrology; therefore, impacts are less than significant.

4.11.3.3 Mitigation, Monitoring, and Reporting

The project would not cause a significant impact to drainage patterns. Therefore, no mitigation is required.

4.12 Noise

The following section is based on the Noise Technical Report for the project prepared by RECON in January 2012 (Appendix K). This section evaluates potential impacts associated with project construction and operation.

4.12.1 Existing Conditions

4.12.1.1 Existing Noise Standards

The noise descriptors used for this study are the 1-hour average-equivalent noise level ($L_{eq[1]}$), the 12-hour average-equivalent noise level ($L_{eq[12]}$), and the CNEL. The 1-hour and 12-hour average-equivalent noise levels ($L_{eq(1)}$ and $L_{eq(12)}$) are the levels of a steady sound which, in the stated time period and at a stated location, has the same A-weighted sound energy as the time-varying sound. In other words, the hourly equivalent sound level is the A-weighted sound level over a 1-hour period, and the 12-hourly equivalent sound level is the A-weighted sound level over a 12-hour period. A-weighting is a frequency correction that often correlates well with the subjective response of humans to noise.

The CNEL is a 24-hour A-weighted average sound level [dB(A) L_{eq}] obtained after the addition of 5 dB to sound levels occurring between 7:00 p.m. and 10:00 p.m., and 10 dB to sound levels occurring between 10:00 p.m. and 7:00 a.m. Adding 5 dB and 10 dB to the evening and nighttime hours, respectively, accounts for the added sensitivity of humans to noise during these time periods.

a. Noise Land Use Compatibility

The City's General Plan Noise Element specifies compatibility standards for different categories of land use. The land use compatibility standards are summarized in Table 4.12-1. As shown in Table 4.12-1, regional parks are compatible up to 65 dB CNEL and conditionally compatible up to 70 dB CNEL. As shown in the legend in Table 4.12-1, compatible means that activities associated with the land use may be carried out, and conditionally compatible means that feasible noise mitigation techniques should be analyzed and incorporated to make the outdoor activities acceptable.

The City's Significance Determination Thresholds also provides noise significance land use compatibility standards. The land use compatibility chart is shown in Table 4.12-2. Compatible land uses are shaded. Incompatible land uses are unshaded. As shown, parks are compatible up to 65 dB CNEL.

TABLE 4.12-1
GENERAL PLAN LAND USE NOISE COMPATIBILITY GUIDELINES

Land Use Category	Exterior Noise Exposure [CNEL]				
	60	65	70	75	
Open Space, Parks, and Recreational					
Community and Neighborhood Parks; Passive Recreation					
Regional Parks; Outdoor Spectator Sports, Golf Courses; Athletic Fields; Water Recreational Facilities; Horse Stables; Park Maintenance Facilities					
Agricultural					
Crop Raising and Farming; Aquaculture, Dairies; Horticulture Nurseries and Greenhouses; Animal Raising, Maintaining and Keeping; Commercial Stables					
Residential					
Single Units; Mobile Homes; Senior Housing		**45**			
Multiple Units; Mixed-Use Commercial/Residential; Live Work; Group Living Accommodations		**45**	**45**		
Institutional					
Hospitals; Nursing Facilities; Intermediate Care Facilities; Kindergarten through Grade 12 Educational Facilities; Libraries; Museums; Places of Worship; Child Care Facilities		**45**			
Vocational or Professional Educational Facilities; Higher Education Institution Facilities (Community or Junior Colleges, Colleges, or Universities)		**45**	**45**		
Cemeteries					
Sales					
Building Supplies/Equipment; Food, Beverage, and Groceries; Pets and Pet Supplies; Sundries, Pharmaceutical, and Convenience Sales; Wearing Apparel and Accessories			**50**	**50**	
Commercial Services					
Building Services; Business Support; Eating and Drinking; Financial Institutions; Assembly and Entertainment; Radio and Television Studios; Golf Course Support			**50**	**50**	
Visitor Accommodations		**45**	**45**	**45**	
Offices					
Business and Professional; Government; Medical, Dental, and Health Practitioner; Regional and Corporate Headquarters			**50**	**50**	
Vehicle and Vehicular Equipment Sales and Services Use					
Commercial or Personal Vehicle Repair and Maintenance; Commercial or Personal Vehicle Sales and Rentals; Vehicle Equipment and Supplies Sales and Rentals; Vehicle Parking					
Wholesale, Distribution, Storage Use Category					
Equipment and Materials Storage Yards; Moving and Storage Facilities; Warehouse; Wholesale Distribution					
Industrial					
Heavy Manufacturing; Light Manufacturing; Marine Industry; Trucking and Transportation Terminals; Mining and Extractive Industries					
Research and Development				**50**	

	Compatible	Indoor Uses	Standard construction methods should attenuate exterior noise to an acceptable indoor noise level.
		Outdoor Uses	Activities associated with the land use may be carried out.
	Conditionally Compatible	Indoor Uses	Building structure must attenuate exterior noise to the indoor noise level indicated by the number for occupied areas.
		Outdoor Uses	Feasible noise mitigation techniques should be analyzed and incorporated to make the outdoor activities acceptable.
	Incompatible	Indoor Uses	New construction should not be undertaken.
		Outdoor Uses	Severe noise interference makes outdoor activities unacceptable.

SOURCE: City of San Diego 2008a.

TABLE 4.12-2
CITY OF SAN DIEGO NOISE LAND USE COMPATIBILITY CHART

Land Use		CNEL 50	55	60	65	70	75	
1	Outdoor amphitheaters							
2	School, libraries							
3	Nature preserves, wildlife preserves							
4	Residential single-family, multi-family, mobile homes, transient housing							
5	Retirement homes, intermediate care facilities, convalescent homes							
6	Hospitals							
7	Parks, playgrounds							
8	Office buildings, business and professional							
9	Auditoriums, concert halls, indoor arenas, churches							
10	Riding stables, water recreation facilities							
11	Outdoor spectator sports, golf courses							
12	Livestock farming, animal breeding							
13	Commercial-retail, shopping centers, restaurants, movie theaters							
14	Commercial-wholesale, industrial manufacturing, utilities							
15	Agriculture (except livestock), extractive industry, farming							
16	Cemeteries							

b. Standards Applicable to On-Site Stationary Noise

Section 59.5.0401 of the City's Noise Abatement and Control Ordinance states that:

> A. It shall be unlawful for any person to cause noise by any means to the extent that the one-hour average sound level exceeds the applicable limit. . . .
>
> B. The sound level limit at a location on a boundary between two zoning districts is the arithmetic mean of the respective limits for the two districts. . . .

The applicable noise limits are summarized in Table 4.12-3. There is no noise ordinance limit for park uses. Because Balboa Park has museums, businesses, and other daytime uses, the commercial limits were determined to be applicable.

TABLE 4.12-3
APPLICABLE NOISE LEVEL LIMITS

Land Use	Time of Day	One-Hour Average Sound Level [dB(A) $L_{eq(1)}$]
Single-family Residential	7:00 a.m. to 7:00 p.m.	50
	7:00 p.m. to 10:00 p.m.	45
	10:00 p.m. to 7:00 a.m.	40
Multi-family Residential (Up to a maximum density of 1/2000)	7:00 a.m. to 7:00 p.m.	55
	7:00 p.m. to 10:00 p.m.	50
	10:00 p.m. to 7:00 a.m.	45
All Other Residential	7:00 a.m. to 7:00 p.m.	60
	7:00 p.m. to 10:00 p.m.	55
	10:00 p.m. to 7:00 a.m.	50
Commercial	7:00 a.m. to 7:00 p.m.	65
	7:00 p.m. to 10:00 p.m.	60
	10:00 p.m. to 7:00 a.m.	60
Industrial or Agricultural	Anytime	75

c. Standards Applicable to Construction Noise

Section 59.5.0404 of the City's Noise Abatement and Control Ordinance states that:

> A. It shall be unlawful for any person, between the hours of 7:00 p.m. of any day and 7:00 a.m. of the following day, or on legal holidays as specified in Section 21.04 of the San Diego Municipal Code, with exception of Columbus Day and Washington's Birthday, or on Sundays, to erect, construct, demolish, excavate for, alter or repair any building or structure in such a manner as to create disturbing, excessive or offensive noise. . . .
>
> B. . . . it shall be unlawful for any person, including the City of San Diego, to conduct any construction activity so as to cause, at or beyond the property lines of any property zoned residential, an average sound level greater than 75 decibels during the 12-hour period from 7:00 a.m. to 7:00 p.m.

As indicated, the construction noise limit of 75 dB(A) $L_{eq(12)}$ is applied at the property lines of any residential uses. The 75 dB(A) $L_{eq(12)}$ construction noise limit in the noise ordinance does not apply at any other land use. However, there are many noise sensitive uses within Balboa Park that would be exposed to construction noise.

The City of San Diego Significance Thresholds indicate that impacts may also be significant if temporary construction noise would substantially interfere with normal business communication or affect sensitive receptors. Construction noise levels at these areas were evaluated relative to the residential property line of 75 dB(A) $L_{eq(12)}$ threshold

and, in addition, using the compatibility guidelines (see Table 4.12-1). As shown in Table 4.12-1, the interior noise compatibility level for institutional uses, including museums, is 45 dB when exterior noise is between 60 and 65 dB. While this interior noise limit is not typically applied to construction noise, for the purposes of this analysis 45 dB was used as a guideline for determining temporary interior noise impacts due to construction activities. The City of San Diego considers that standard construction techniques will provide a 15 dB reduction of exterior noise levels to an interior receiver. With these criteria, standard construction is considered to result in interior noise levels of 45 dB or less when exterior sources are 60 dB or less.

4.12.1.2 Existing Ambient Noise

a. Existing Noise Level Measurements

Noise measurements were taken on Saturday, April 9, 2011 and Saturday, September 24, 2011, during times when the weather was sunny and there were many Park activities and visitors. Noise levels were measured on Saturdays as opposed to weekdays because weekend days are some of the busiest Park days. Due to its location and the variety of activities that occur on a daily basis, noise at Balboa Park is generated by a variety of sources. In general, noise sources at Balboa Park included traffic on roadways and parking lots, aircraft approaching for landing at Lindbergh Field, Park visitors, chimes from the California Tower, and dogs and owners attending a dog event in the Park. Measured noise levels ranged from 54.7 to 64.9 dB(A) L_{eq}. Noise measurement locations are shown in Figure 4.12-1 and summarized in Table 4.12-4.

b. Existing Aircraft Noise

Lindbergh Field is located approximately one mile west of the project site. During normal weather conditions, aircraft approaching Lindbergh Field fly directly over Balboa Park. Existing noise level contours for aircraft operations at Lindbergh Field are shown in Figure 4.12-2. As shown, a portion of the project is located within the 60-65 dB CNEL noise contours. The remainder of the site is below 60 dB CNEL.

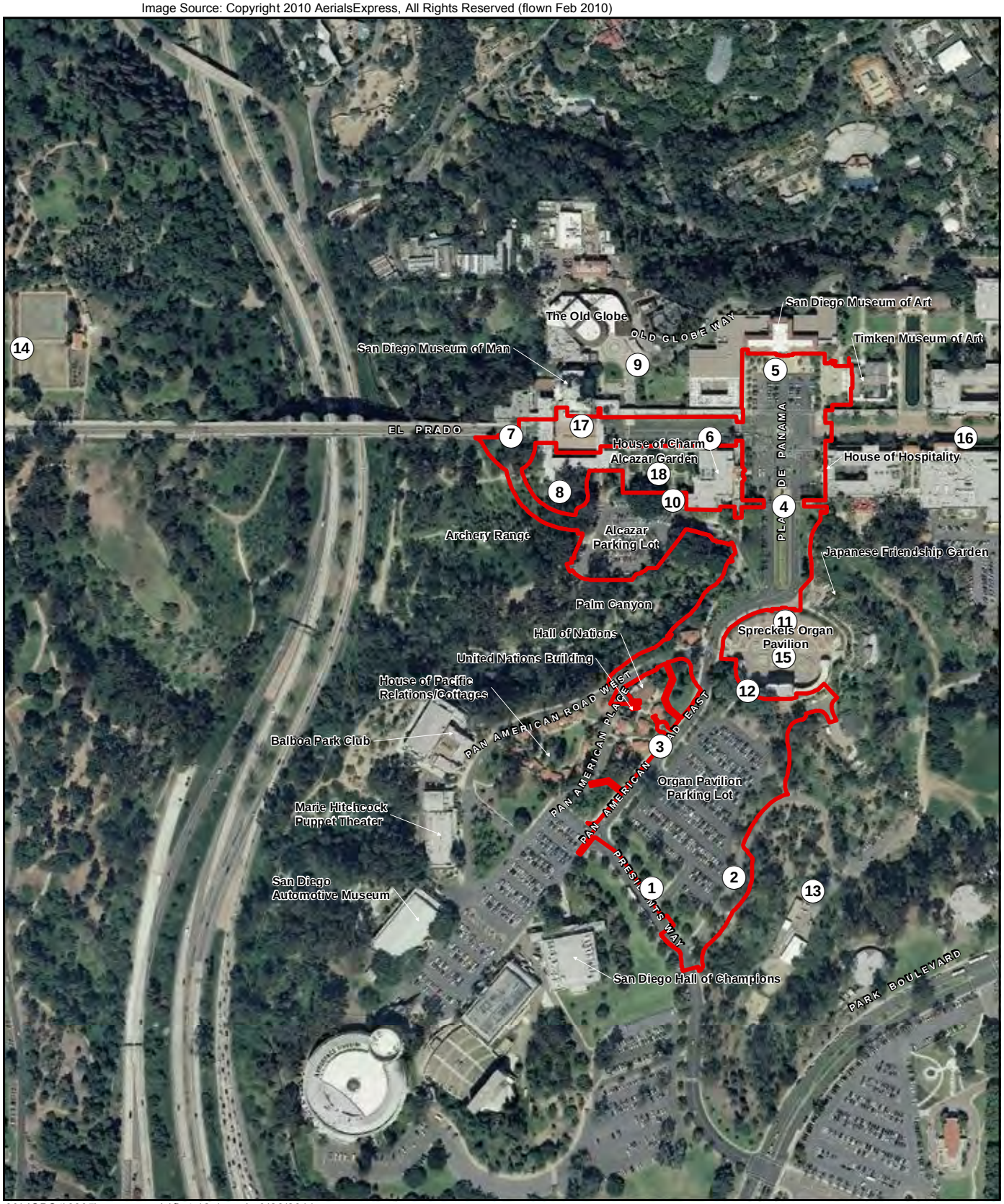
4.12.2 Issue 1: Noise/Land Use Compatibility

Would the proposal expose people to current or future transportation which exceed standards established in the GP or an adopted ALUCP?

According to the City's Significance Determination Thresholds, impacts related to noise would be significant if the project would:

- Expose people to noise levels which are incompatible with the City of San Diego General Plan, 2008b, Table NE-3 Land Use-Noise Compatibility Guidelines and City Land Use Compatibility Standards (see Tables 4.12-1 and 4.12-2).

Image Source: Copyright 2010 AerialsExpress, All Rights Reserved (flown Feb 2010)



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Project Area

5 Measurement Locations

FIGURE 4.12-1

Noise Measurement Locations

TABLE 4.12-4
NOISE MEASUREMENT RESULTS

Measurement Number	Location	Description/Noise Sources	Date/Time	Measured Noise Level [dB(A) L_{eq}]
1	Presidents Way south of Organ Pavilion parking lot	Noise sources included traffic on Presidents Way; parking lot activity; aircraft; chimes from the California Tower; and dogs, owners, and loud speakers at dog event on Presidents Lawn. The Organ Pavilion parking lot was approaching full capacity during the measurement period.	April 9, 2011 10:47 a.m. – 11:02 a.m.	62.6
2	Southeast of Organ Pavilion parking lot	Noise sources included traffic on Presidents Way; parking lot activity; aircraft; chimes from the California Tower; and dogs, owners, and loud speakers at dog event on Presidents Lawn. The Organ Pavilion parking lot was at full capacity during the measurement period and cars were circling the lot.	April 9, 2011 11:08 a.m. – 11:23 a.m.	63.8
3	Pan American Road East	Noise sources included traffic on Pan American Road East, parking lot activity, aircraft, park visitors, and chimes from the California Tower.	April 9, 2011 11:33 a.m. – 11:48 a.m.	63.5
4	Plaza de Panama adjacent to El Cid Statue	Noise sources included traffic on Plaza de Panama, parking lot activity, aircraft, park visitors, and chimes from the California Tower.	April 9, 2011 11:58 a.m. – 12:13 p.m.	61.3
5	San Diego Museum of Art	Noise sources included parking lot activity, aircraft, park visitors, and chimes from the California Tower. The Museum of Art parking lot was full.	April 9, 2011 12:20 p.m. – 12:25 p.m.	57.1
6	El Prado adjacent to House of Charm	Noise sources included traffic on El Prado, aircraft, park visitors, and chimes from the California Tower. Traffic on El Prado approaching the stop sign to the east was moving slow and/or stopped during the measurement period.	April 9, 2011 12:40 p.m. – 12:55 p.m.	63.2
7	El Prado west of San Diego Museum of Man	Noise sources included traffic on El Prado, aircraft, park visitors, and chimes from the California Tower. Traffic on El Prado approaching the stop sign to the east was moving slow and/or stopped during the measurement period.	April 9, 2011 1:00 p.m. – 1:15 P.M.	64.9
8	Archery range in Palm Canyon south of West Gate	Noise sources included traffic on SR-163, aircraft, and chimes from the California Tower. There was no one on the archery range during the measurement period.	April 9, 2011 1:20 p.m. – 1:35 p.m.	56.4
9	The Old Globe	Noise sources included theater-goers gathering in the vicinity, aircraft, and chimes from the California Tower. Noise levels were measured for the 15-minute period prior to the start time of two performances at The Old Globe and Sheryl and Harvey White Theater.	April 9, 2011 1:43 p.m. – 1:58 p.m.	60.2
10	Alcazar Garden/parking lot	Noise sources included parking activities in the Alcazar parking lot, aircraft, park visitors, and chimes from the California Tower.	April 9, 2011 2:04 p.m. – 2:19 p.m.	58.4
11	North of Organ Pavilion	Noise sources included aircraft, park visitors, and chimes from the California Tower.	April 9, 2011 2:23 p.m. – 2:38 p.m.	59.7
12	South of Organ Pavilion	Noise sources included aircraft, parking activity in the Organ Pavilion parking lot, park visitors, students, and chimes from the California Tower.	April 9, 2011 2:42 p.m. – 2:57 p.m.	64.3
13	Gold Gulch	Noise sources included aircraft, park visitors gathered on Presidents Lawn, vehicles, and chimes from the California Tower.	September 24, 2011 12:37 p.m. – 12:52 p.m.	59.3

TABLE 4.12-4
NOISE MEASUREMENT RESULTS
(continued)

Measurement Number	Location	Description/Noise Sources	Date/Time	Measured Noise Level [dB(A) L_{eq}]
14	West Mesa Lawn Bowling Greens	Noise sources included traffic on El Prado and Sixth Avenue, aircraft, park visitors.	September 24, 2011 1:07 p.m. – 1:22 p.m.	51.5
15	Organ Pavilion	Noise sources included aircraft, park visitors, and chimes from the California Tower.	September 24, 2011 1:37 p.m. – 1:52 p.m.	54.7
16	East Prado Pedestrian Area	Noise sources included park visitors, aircraft, and chimes from the California Tower.	September 24, 2011 1:58 p.m. – 2:13 p.m.	58.7
17	El Prado adjacent to Museum of Man	Noise sources included traffic on El Prado, aircraft, park visitors, and chimes from the California Tower.	September 24, 2011 2:21 p.m. – 2:36 p.m.	61.2
18	Alcazar Garden	Noise sources included traffic on El Prado, parking activities in the Alcazar parking lot, aircraft, park visitors, and chimes from the California Tower.	September 24, 2011 2:39 p.m. – 2:54 p.m.	54.9

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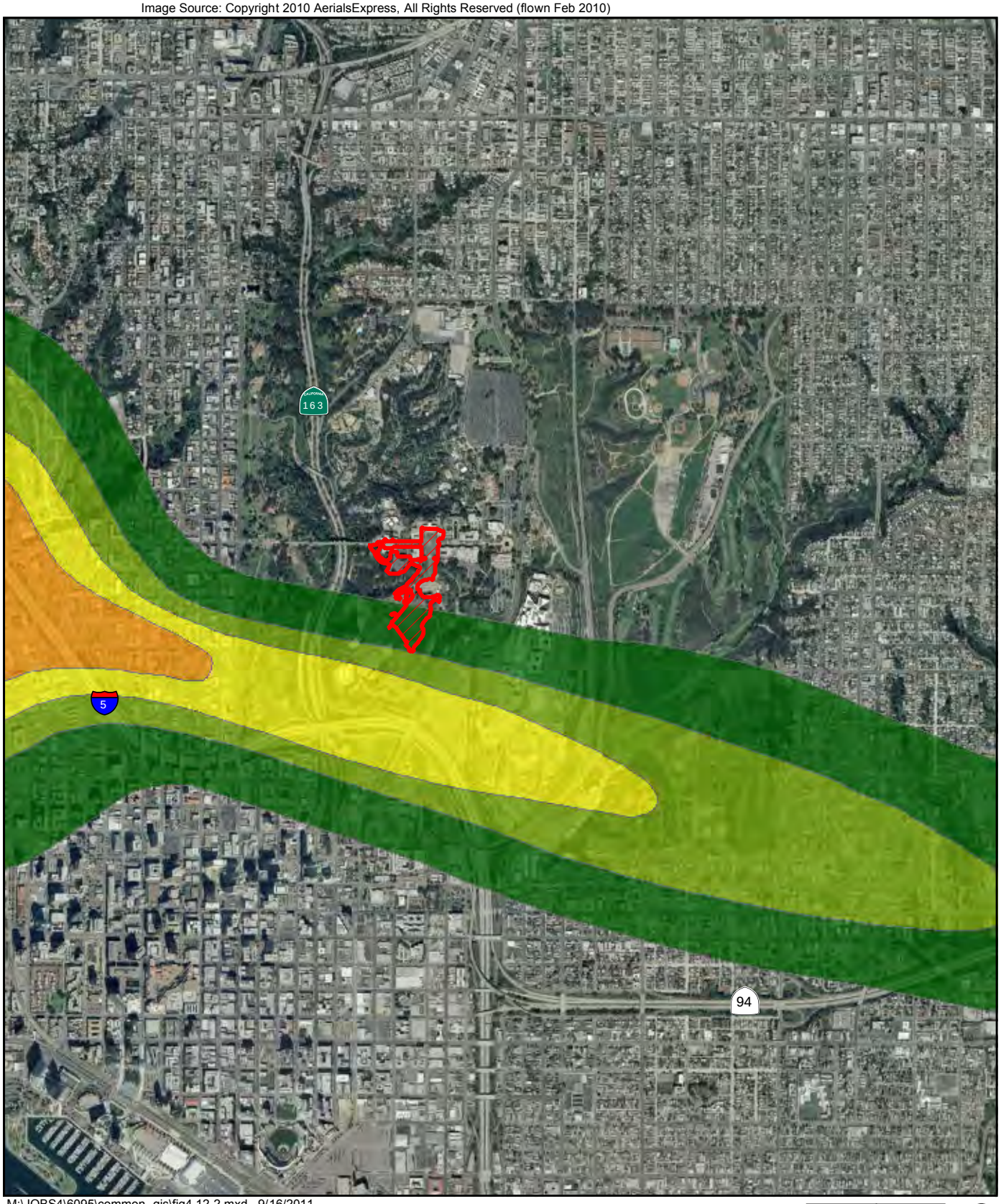

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Project Area **1990 Noise Contours**

- 60 CNEL
- 65 CNEL
- 70 CNEL
- 75 CNEL

0 Feet 2,000

FIGURE 4.12-2

Lindbergh Field Noise Contours

4.12.1.1 Impacts

ALL PROJECT COMPONENTS

The City's General Plan Noise Element specifies compatibility standards for different categories of land use and the City's Significance Determination Thresholds also specifies noise land use compatibility standards (see Tables 4.12-1 and 4.12-2). These noise thresholds are used as guidance for determining whether a land use is compatible in the existing or future noise environment. As shown on both tables, Park uses are compatible with a noise level up to 65 dB CNEL, although regional parks are also considered to be conditionally compatible with a noise level of 70 dB CNEL per the General Plan.

As shown in Table 4.12-4, existing measured noise levels ranged from 54.7 to 64.9 dB(A) L_{eq}. The project would construct additional pedestrian and park space within an existing Park. According to the City's threshold, these would be compatible with existing noise levels.

Traffic noise occurs adjacent to every roadway and is directly related to the traffic volume, speed, and mix of vehicles. While the project would not result in an increase in traffic volumes, it would reroute traffic within the Central Mesa and remove vehicular traffic from the Plaza de Panama, El Prado, Plaza de California, the Mall, and Pan American Road East. As a result, vehicle traffic noise levels within the newly proposed reclaimed pedestrian use areas would decrease when compared to the existing condition and would be similar to noise levels in other existing pedestrian areas such as the El Prado to the east of the project area. As shown in Table 4.12-4, the existing pedestrian noise level in the East Prado area is 58.7 dB(A) L_{eq} (Measurement Location 16). Additionally, noise levels at the museums and institutions surrounding the Plaza de Panama, El Prado, Plaza de California, the Mall, and Pan American Road East would decrease as well. These museums and institutions include the San Diego Museum of Man, the Old Globe Theatre, the House of Charm, the San Diego Museum of Art, the Timken Museum of Art, the House of Hospitality, and the Japanese Friendship Garden. Vehicle traffic noise levels at the Organ Pavilion would also decrease because the roadway would be moved further away from the Organ Pavilion as a result of the project.

Measurements 4, 5, and 6 were taken within areas that would be reclaimed for pedestrian use. The measured noise levels were 61.3, 57.1, and 63.2 dB(A) L_{eq}, respectively. Without the project, traffic would continue to travel through Plaza de Panama, El Prado, Plaza de California, the Mall, and Pan American Road East and noise levels would be unchanged. However, with the rerouting of traffic as a result of the project, it is expected that noise levels at these locations would be similar to noise levels in the existing pedestrian East Prado area (58.7 dB(A) L_{eq}). This difference would be even more noticeable in 2030 when future traffic volumes (both with and without the

project) are projected to result in noise levels of 63.3, 59.1, and 65.2 dB(A) L_{eq} at measurement locations 4, 5, and 6, respectively.

4.12.2.2 Significance of Impacts

The newly renovated pedestrian use areas would be located within areas subject to noise levels which are compatible with Park use in accordance with the City's thresholds. Therefore, the project would not expose people to noise levels in excess of the noise land use compatibility guidelines. Because the project would reroute vehicle traffic further from pedestrian and institutional use areas, vehicle traffic noise levels would decrease when compared to the existing condition.

4.12.2.3 Mitigation, Monitoring, and Reporting

Impacts would be less than significant. No mitigation is required.

4.12.3 Issue 2: Traffic Generated Noise

Would the proposal result or create a significant increase in the existing ambient noise levels?

According to the City's Significance Determination Thresholds, impacts related to noise would be significant if the project would:

- Expose people to noise levels which are incompatible with the City of San Diego General Plan, 2008b, Table NE-3 Land Use-Noise Compatibility Guidelines and City Land Use Compatibility Standards (see Tables 4.12-1 and 4.12-2).

4.12.3.1 Impacts

ALCAZAR PARKING LOT

As described above, the project would not increase traffic generated noise levels. Rather it would result in the reconfiguration of vehicle travel and resultant noise patterns. Since the Alcazar Garden would be most affected by the resulting noise environment and it is perhaps the most sensitive area where visitors often go for quiet reflections, a detailed comparison of the noise levels in the existing and project conditions was made.

Currently, traffic travels on the north side of the Alcazar Garden. As shown in Table 4.12-4, the existing measured noise level at the north side of the Alcazar Garden is 63.2 dB(A) L_{eq}. This measurement was taken at 20 feet from the centerline of El Prado during a peak weekend traffic hour. Contour distances for noise levels are shown in Table 4.12-5. Because the calculations were based on a peak hour noise measurement,

the contour distances shown in Table 4.12-5 would be considered a worst-case result for the existing plus project and future plus project condition.

TABLE 4.12-5
PROJECTED NOISE CONTOUR DISTANCES

	Distance from Roadway to Contour (feet)			
Noise Level [dB(A) L_{eq}]	Existing Weekday Volume 6,500 ADT	Existing Weekend Volume 7,600 ADT	Future Weekday Volume 10,300 ADT	Future Weekend Volume 12,100 ADT
65	11	13	18	21
60	36	42	57	67
55	113	132	179	210
50	357	418	566	665

To determine the effect the project would have on ambient noise levels in the Alcazar Garden in both the existing and future conditions, traffic noise was modeled for four scenarios: (1) the existing configuration with the existing weekend traffic traveling on El Prado north of the Alcazar Garden, (2) the existing configuration with the future weekend traffic traveling on El Prado north of the Alcazar Garden, (3) the proposed configuration with the existing weekend traffic traveling south of the Alcazar Garden, and (4) the proposed configuration with the future weekend traffic traveling south of the Alcazar Garden. The results are summarized in Table 4.12-6. The proposed configuration of the Alcazar parking lot is shown on Figure 4.12-3.

Existing and future hourly noise contours for the existing configuration with traffic on El Prado are shown in Figures 4.12-4 and 4.12-5, respectively. It should be noted that these hourly noise levels are due to traffic on El Prado and do not account for noise levels due to traffic circling the Alcazar parking lot.

While a low wall is proposed between the Alcazar Garden and the Alcazar parking lot that may slightly decrease traffic noise in the garden, for a worst-case analysis, noise levels in the garden were calculated without this wall. Furthermore, because parking in the Alcazar parking lot would be limited to ADA, it is anticipated that noise levels due to vehicles parking would be less than the existing configuration with vehicles circling the lot searching for general parking. Thus, the analysis below represents a conservative projection of the difference in noise levels with and without the project.

As shown in Table 4.12-6 and Figure 4.12-3, the proposed configuration would generally move traffic further from the Alcazar Garden than the existing configuration. Existing and future hourly noise contours for the proposed Centennial Road configuration are shown in Figures 4.12-6 and 4.12-7, respectively.

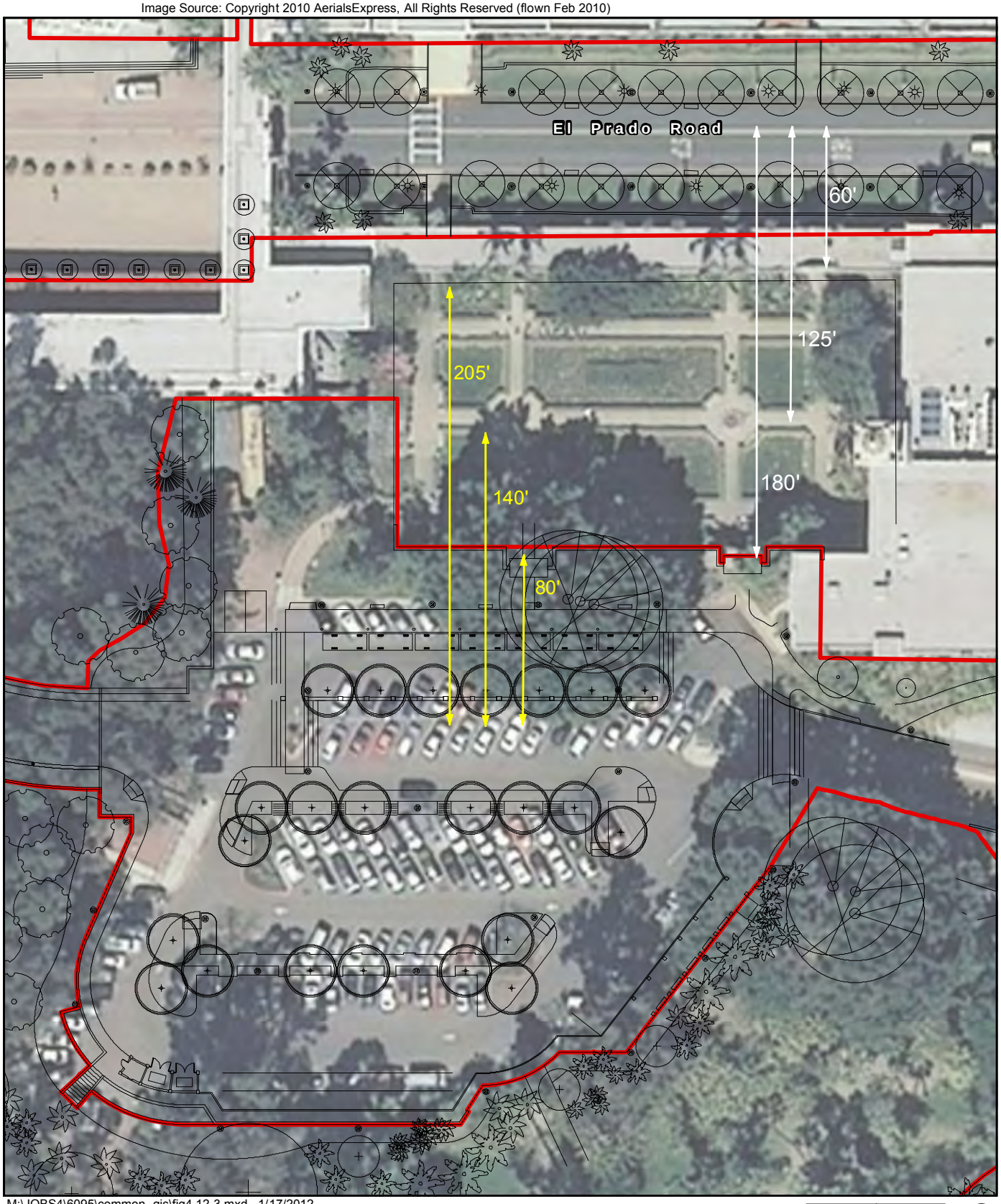
Noise levels at the northern edge of the Alcazar Garden would decrease as a result of the project. Noise levels at the middle of the Alcazar Garden would also decrease as a

TABLE 4.12-6
FUTURE WEEKEND ALCAZAR GARDEN NOISE LEVELS

	Southern Edge of Alcazar Garden		Middle of Alcazar Garden		Northern Edge of Alcazar Garden	
	Distance (feet)	Noise Level [dB(A) L_{eq}]	Distance (feet)	Noise Level [dB(A) L_{eq}]	Distance (feet)	Noise Level [dB(A) L_{eq}]
Existing Configuration[1]	180	55.7	125	57.3	60	60.4
Alcazar Parking Lot Configuration Alternative 1[2]	80	59.2	140	56.8	205	55.1
Alcazar Parking Lot Configuration Alternative 2[2]	75	59.5	135	56.9	200	55.2

[1]Traffic on El Prado north of Alcazar Garden
[2]Traffic through Alcazar Parking Lot south of Alcazar Garden

Image Source: Copyright 2010 AerialsExpress, All Rights Reserved (flown Feb 2010)



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0 Feet 60

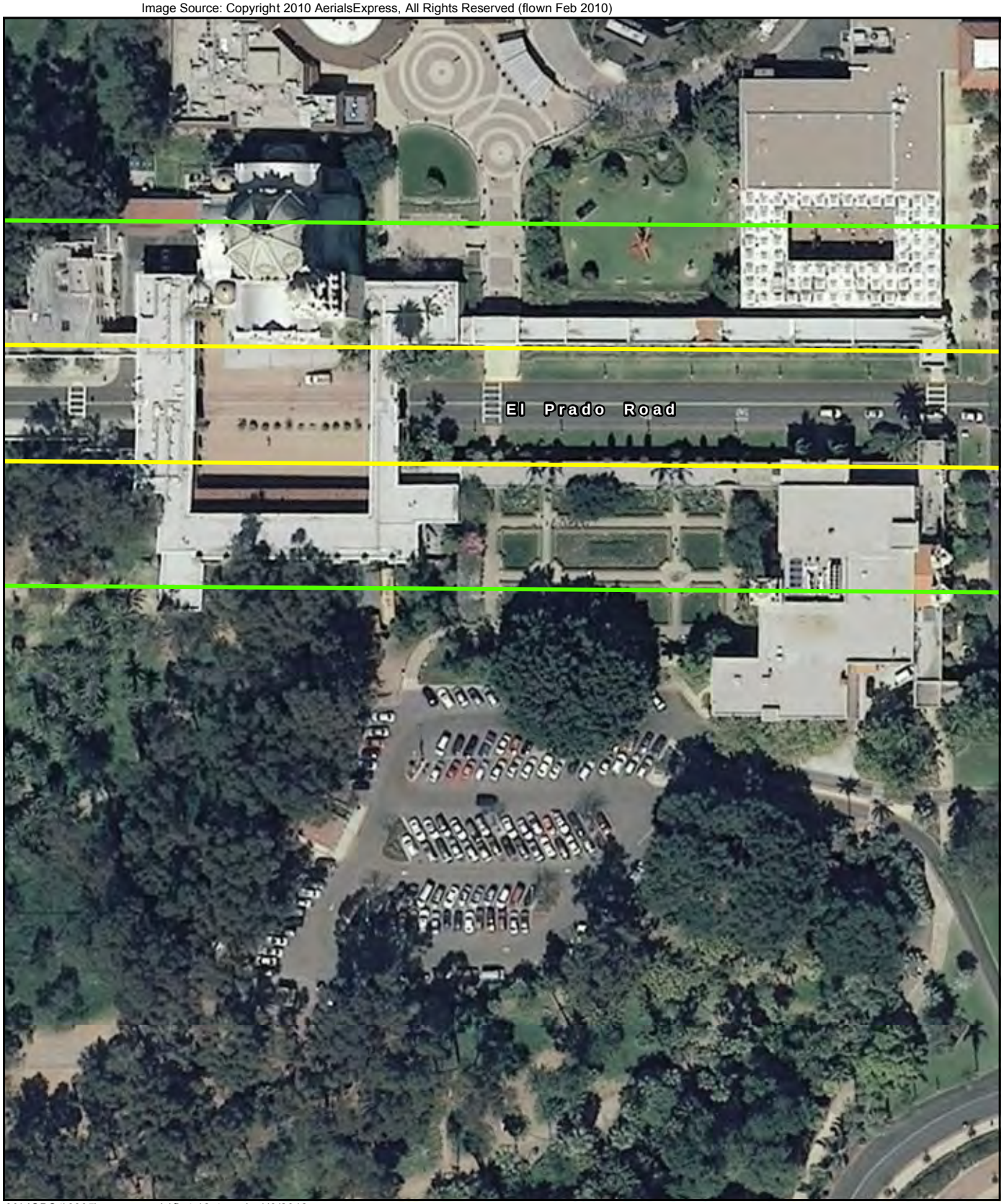
Project Area

Proposed Alcazar Parking Lot Design

FIGURE 4.12-3

Alcazar Parking Lot Configuration

Image Source: Copyright 2010 AerialsExpress, All Rights Reserved (flown Feb 2010)



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0 Feet 100

Hourly Noise Level [dB(A) Leq]

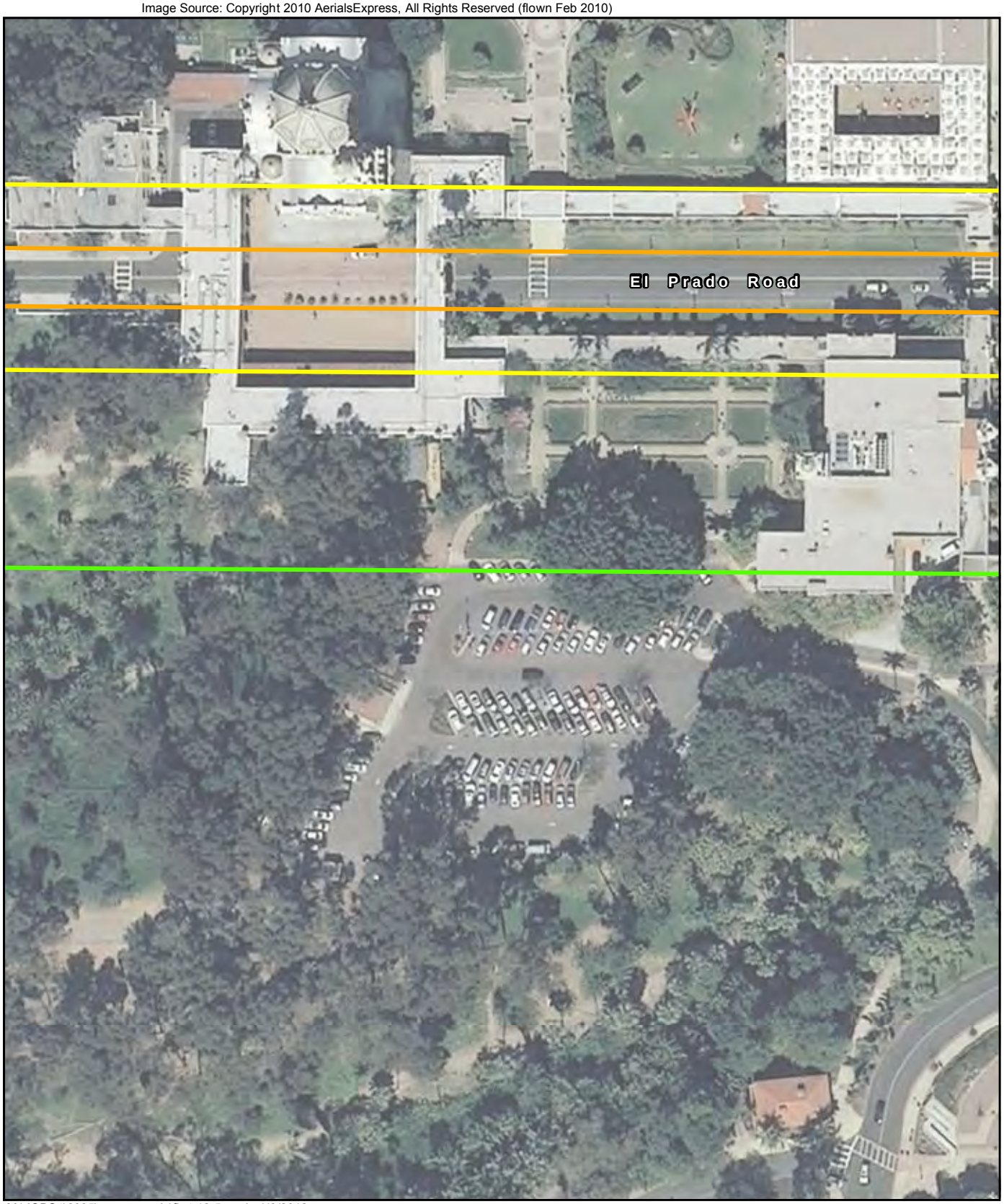
55

60

FIGURE 4.12-4

No Project Existing Hourly Traffic Noise Contours

Image Source: Copyright 2010 AerialsExpress, All Rights Reserved (flown Feb 2010)



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0 Feet 100

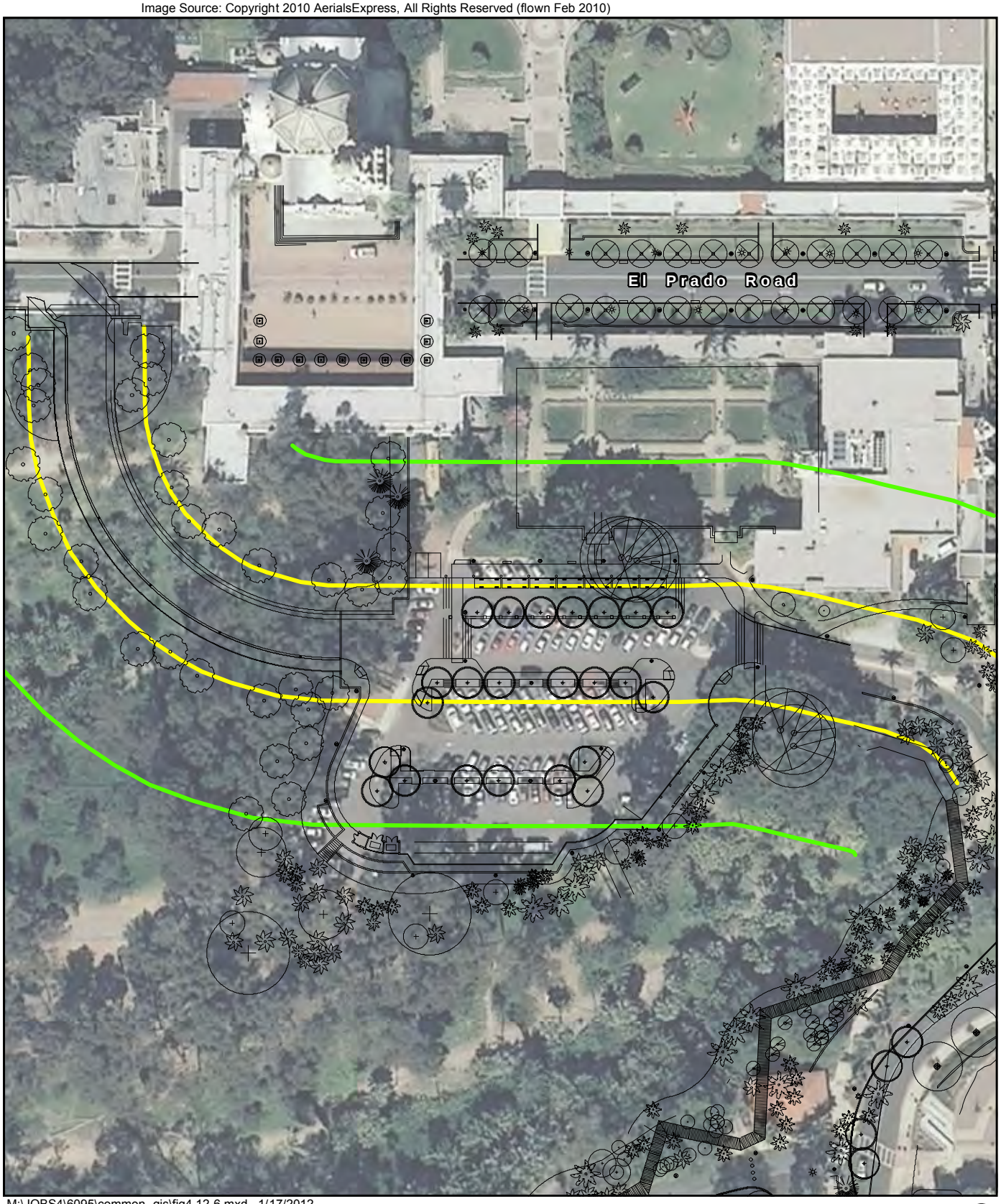
Hourly Noise Level [dB(A) Leq]

- 55
- 60
- 65

FIGURE 4.12-5

No Project Future Hourly Traffic Noise Contours

Image Source: Copyright 2010 AerialsExpress, All Rights Reserved (flown Feb 2010)



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0 Feet 100

Proposed Alcazar Parking Lot Design

Hourly Noise Level [dB(A) Leq]

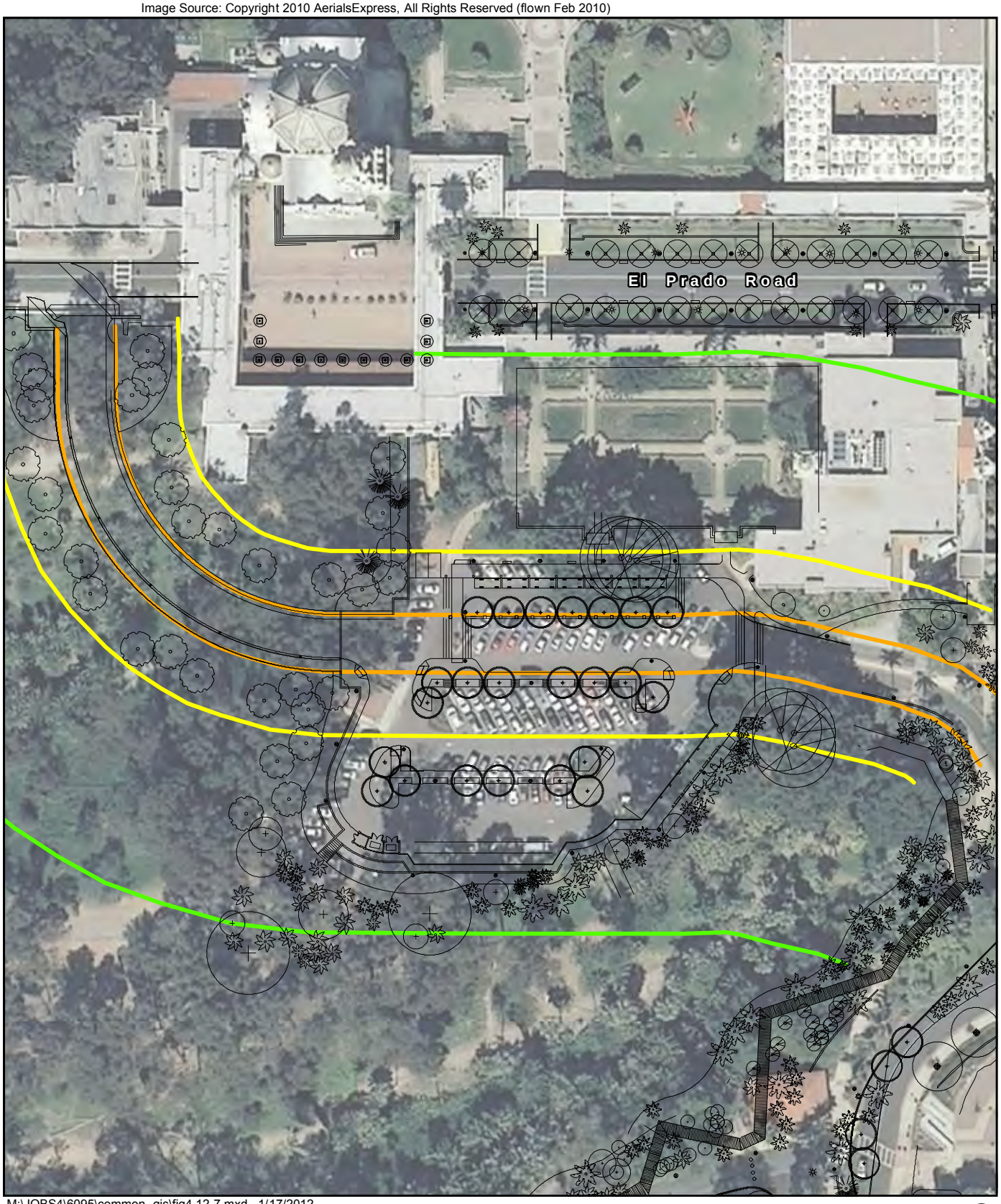
55

60

FIGURE 4.12-6

Project Existing Hourly Traffic Noise Contours

Image Source: Copyright 2010 AerialsExpress, All Rights Reserved (flown Feb 2010)



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Proposed Alcazar Parking Lot Design

0 Feet 100

Hourly Noise Level [dB(A) Leq]

55

60

65

FIGURE 4.12-7

Project Future Hourly Traffic Noise Contours

result of the project. Noise levels at the southern edge of the Alcazar Garden would increase as a result of the project because the traffic noise source would be closer to the southern edge of the Alcazar Garden. The existing measured noise level at this location is 58.4 dB(A) L_{eq} (Measurement Location 10) and was due to existing traffic circling through the Alcazar parking lot. Table 4.12-6 shows that the proposed configuration would result in approximately a 1 dB increase at this location. This increase would not be perceptible to the human ear. In addition, noise levels would be less at the southern edge of the Alcazar Garden than the current noise levels at the northern edge.

In summary, overall noise levels in the Alcazar Garden would decrease as a result of the project because the proposed configuration would increase the distance between the travel lanes and the garden. The increase in noise at the southern edge of the garden would not be perceptible. Therefore, the project would not create a significant increase in ambient noise levels within the proximity of sensitive Park uses such as the Alcazar Garden. Impacts would be less than significant.

4.12.3.2 Significance of Impacts

Overall traffic noise levels in the Alcazar Garden would decrease as a result of the project because the proposed configuration would increase the distance between the travel lanes and the garden. The increase in the noise level at the southern edge of the garden would not be perceptible. In addition, due the reconfiguration of the roads, traffic noise levels at all other uses adjacent to the Plaza de Panama would be less than the existing condition. The project would not result in an increase in existing ambient noise levels or expose Park uses to noise levels greater than 65 dB. Thus impacts would be less than significant.

4.12.3.3 Mitigation, Monitoring, and Reporting

Impacts would be less than significant. No mitigation is required.

4.12.4 Issue 3: ALUCP Compatibility

Would the proposal result in land uses which are not compatible with aircraft noise levels as defined by an adopted ALUCP?

According to the City's Significance Determination Thresholds, impacts related to noise would be significant if the project would:

- Result in airport noise levels in excess of 65 dB CNEL at sensitive uses.

4.12.4.1 Impacts

ALL PROJECT COMPONENTS

As shown in Figure 4.12-2, a portion of the project lies within the AIA and 60–65 dB CNEL contour for Lindbergh Field. The remainder is less than 60 dB CNEL. The ALUCP for Lindbergh Field indicates that noise-sensitive uses are compatible when noise levels are less than 65 CNEL. In the case of the project, the noise-sensitive uses include new and reclaimed park space. Therefore, the project would be compatible with the noise levels defined in the adopted ALUCPs.

4.12.4.2 Significance of Impacts

Noise levels due to aircraft operations at Lindbergh Field would not exceed 65 dB CNEL. Impacts would be less than significant.

4.12.4.3 Mitigation, Monitoring, and Reporting

Impacts would be less than significant. No mitigation is required.

4.12.5 Issue 4: On-Site Generated Noise

Would the proposal result in the exposure of people to noise levels which exceed the City's adopted noise ordinance?

According to the City's Significance Determination Thresholds, impacts related to noise would be significant if the project would:

- Generate noise levels at the property line which exceed the City's Noise Ordinance Standards. These limits were summarized above in Table 4.12-3.

4.12.5.1 Impacts

ORGAN PAVILION PARKING STRUCTURE/ROOFTOP PARK

The Organ Pavilion parking structure is a new element that would be introduced by the project. The potential effect of this structure on the noise environment is discussed below. The eastern side of the structure would be open and parking activity noise would emanate from there. Periodic noise would result from use of the proposed parking garage.

Noise measurements taken at an existing parking garage (at Scripps Mercy Hospital in the City of San Diego) indicate a reference hourly noise level of 33.5 dB(A) at 50 feet from the garage per vehicle (RECON 2006). The proposed garage would have 798

parking spaces. As a worst-case scenario, it was assumed that the entire parking garage could reach capacity in one hour. This results in a worst-case hourly noise level of 62.5 dB(A) $L_{eq(1)}$ at 50 feet. Also, for a worst-case analysis, flat site conditions with no intervening structures were assumed. As detailed below, this would result in less than significant noise impacts. Because the parking structure is designed so that only the eastern side would be open and the other sides would be underground, actual parking structure noise levels would be less than those calculated below. For modeling purposes, it was assumed that the acoustic center of the parking structure activity would be the center of the parking structure.

Source noise levels from vehicles on Centennial Road passing by the Organ Pavilion would be similar to existing noise levels from vehicles on the existing Pan American East Road as the project would not result in an increase in traffic. The edge of the existing Pan American Road is 100 feet from the westmost seating at the Organ Pavilion. The newly constructed roadway would be 150 feet from this area. Therefore, roadway through traffic would be less than the existing condition and noise would thereby be reduced.

The proposed rooftop park would include only passive park uses. Noise levels from the additional park space would be negligible.

The following is an analysis of the worst-case parking garage noise levels at the nearest receptors:

Spreckels Organ Pavilion: The Organ Pavilion is located approximately 325 feet northeast of the center of the proposed parking garage. Worst-case parking garage activity noise levels would attenuate to 46.2 dB(A) $L_{eq(1)}$ at the Organ Pavilion if there is a direct line of sight between the parking activity and the Organ Pavilion. However, the parking structure would be constructed so that the rooftop park would be at the same elevation as the Organ Pavilion and the parking structure would only be open on the eastern side. Therefore, parking activity occurring below the rooftop park would be shielded from Organ Pavilion visitors and noise levels would actually be less than 46.2 dB(A) $L_{eq(1)}$.

Additionally, as shown in Table 4.12-4, the existing measured noise level at the south of the Organ Pavilion is 64.3 dB (A) L_{eq}. The noise sources observed during this measurement included aircraft, parking activity at the existing Organ Pavilion parking lot, Park visitors, students, and chimes from the California Tower. Adding the worst-case parking structure noise level of 46.2 dB(A) $L_{eq(1)}$ to this measured noise level results in a total noise level of 64.4 dB(A) $L_{eq(1)}$, an increase of 0.1 dB. As discussed above, this does not account for any shielding provided by the parking structure's design. Therefore, there would be no perceptible increase in noise over existing measured noise levels. It should also be noted that the measured noise level of 64.3 dB(A) L_{eq} includes noise due

to vehicles parking at the existing Organ Pavilion parking lot which would no longer exist as a result of the project.

The center of the Organ Pavilion is located approximately 475 feet from the center of the proposed parking structure. The worst-case parking structure activity noise levels would attenuate to 42.9 dB(A) $L_{eq(1)}$ at the center of the Organ Pavilion. As shown in Table 4.12-4, the existing measured noise level at the center of the Organ Pavilion is 54.7 dB(A) L_{eq}. The noise sources observed during this measurement included aircraft, Park visitors, students, and chimes from the California Tower. Adding the worst-case parking structure noise level of 42.9 dB(A) $L_{eq(1)}$ to this measured noise level results in a total noise level 55.0 dB(A) $L_{eq(1)}$, an increase of 0.3 dB. As discussed above, this does not account for any shielding provided by the parking structure's design. Therefore, there would be no perceptible increase in noise over existing measured noise levels.

Hall of Nations/United Nations Building: The Hall of Nations and United Nations Building are located approximately 140 feet northwest of the center of the proposed parking structure. Worst-case parking structure activity noise levels would attenuate to 53.6 dB(A) $L_{eq(1)}$ at the Hall of Nations and United Nations Building.

San Diego Hall of Champions: The San Diego Hall of Champions is located approximately 450 feet southwest of the center of the proposed parking garage. Worst-case parking structure activity noise levels would attenuate to 43.4 dB(A) $L_{eq(1)}$ at the San Diego Hall of Champions.

To assess potential impacts to the new rooftop park, parking activity noise levels were calculated at the edge of the parking structure and compared to the noise standards shown in Table 4.12-3. The edge of the proposed parking structure is approximately 95 feet from the center. A worst-case noise level of 62.5 dB(A) $L_{eq(1)}$ at 50 feet would attenuate to 56.9 dB(A) $L_{eq(1)}$ at 95 feet. This is less than both the daytime and evening noise ordinance limits of 65 and 60 dB(A) $L_{eq(1)}$, respectively.

In conclusion, impacts due to parking structure activities would be less than significant.

4.12.5.2 Significance of Impacts

As discussed above, parking structure activity noise at the nearest receptors would not result in a significant increase in noise. In addition, noise levels would not exceed noise ordinance limits. Noise Impacts due to parking structure activities would be less than significant.

4.12.5.3 Mitigation, Monitoring, and Reporting

Impacts would be less than significant. No mitigation is required.

4.12.6 Issue 5: Temporary Construction Noise

Would the proposal result in the exposure of people to temporary construction noise levels which exceed standards of the City's adopted noise ordinance?

According to the City's Significance Determination Thresholds, impacts related to noise would be significant if the project would:

- Result in temporary construction noise which exceed noise levels identified in Municipal Code 59.0404, including result in temporary construction noise level that exceed an average sound level greater than 75 dB(A) $L_{eq(12)}$ at a property zoned residential during the 12-hour period from 7:00 a.m. to 7:00 p.m., or

- Cause temporary construction noise that would substantially interfere with normal business communication or affect sensitive receptors.

  The 75 dB(A) $L_{eq(12)}$ construction noise limit in the noise ordinance applies at residential uses and does not apply at any other land use, including Park uses. However, there are many noise sensitive uses within Balboa Park that would be sensitive to construction noise such as museums, theaters, gardens, and amphitheater. The City of San Diego Significance Thresholds indicate that impacts would be significant if temporary construction noise would substantially interfere with normal business communication or affect sensitive receptors. Although the noise ordinance does not regulate construction noise levels at these uses, due to the nature of these uses, for this project the City is evaluating construction noise levels at these areas relative to the 75 dB(A) $L_{eq(12)}$ threshold. Additionally, as shown in Table 4.12-1, the interior noise land use compatibility level for institutional uses, including museums, is 45 dB. While this interior noise limit is not typically applied to construction noise, for this project the City has specified an hourly noise level of 45 dB(A) L_{eq} as a guideline for determining the significance of temporary interior noise impacts due to construction activities. Further, the City of San Diego assumes that standard construction techniques will provide a 15 dB reduction of exterior noise levels to an interior receiver. With these criteria, standard construction could be assumed to result in interior noise levels of 45 dB L_{eq} or less when exterior sources are 60 dB L_{eq} or less.

4.12.6.1 Impacts

ALL PROJECT COMPONENTS

Project construction activities would generate noise through construction equipment, truck hauling, and construction worker vehicle trips. Compared to construction equipment and hauling noise, traffic noise due to construction worker trips would be negligible and result in a less than significant noise impact. As such, detailed

construction employee traffic noise analysis is not necessary and is not completed herein. Construction equipment and truck hauling noise impacts are analyzed below.

a. Construction Equipment Noise

A variety of noise-generating equipment would be used during the construction phase of the project such as scrapers, dump trucks, backhoes, front-end loaders, jackhammers, and concrete mixers, along with others as outlined in Section 3.8, Project Description. The project is scheduled for a 24-month overall construction duration. This schedule is based on typical working hours with hours of operation between 7:00 a.m. and 7:00 p.m., Monday through Friday, per the Municipal Code Section 59.5.0404. Specific activities, such as extensive on-road equipment operations, underground utility tie-ins, utility shutdowns, and roadway disruptions, would occur outside typical working hours in order to minimize impacts to Park visitors, Park operations, and surrounding operations. Activities scheduled outside the typical working hours would occur in coordination and with the authorization of City Park and Recreation staff. The actual after hours work would be flexible to remain responsive to the schedule of a particular evening's event. The project's construction includes a total of four phases.

Table 4.12-7 summarizes the number and pieces of equipment, the source noise levels and usage factors, and the total noise level for each phase averaged over a 12-hour period. The levels presented in Table 4.12-7 assume the use of only the pieces of construction equipment listed that would operate simultaneously for each phase, and in each phase work areas (Horst, pers. comm. 2011).

As discussed above, unless a permit is granted, "it shall be unlawful for any person, including the City of San Diego, to conduct any construction activity so as to cause, at or beyond the property lines of any property zoned residential, an average sound level greater than 75 decibels during the 12-hour period from 7:00 a.m. to 7:00 p.m." The nearest residential property line is approximately 2,000 feet west of the project footprint. The loudest construction noise level of 88.4 dB(A) $L_{eq(12)}$ at 50 feet, which occurs during Phase III, would attenuate to 56.4 dB(A) $L_{eq(12)}$ at the nearest residential property line. Therefore, construction of the project would not exceed the noise ordinance limits.

Specific construction activities would occur outside typical working hours in order to minimize noise to Park visitors and Park operations. These after-hours construction activities would only occur when Park venues, including Old Globe nighttime performances, and any special events would be closed. Additionally, in an effort to minimize impacts to Park visitors, parking, and general Park operations, the work on portions of the parking structure would be accelerated by a two shift operation, with the first shift working from 1:00 a.m. to 9:30 a.m. and the second shift working from 9:30 a.m. to 6:00 p.m. Since the nearest off-site receptor is 2,000 feet away, noise impacts to off-site receptors during these occurrences would not be significant.

TABLE 4.12-7
CONSTRUCTION EQUIPMENT AND NOISE LEVELS

Phase	Equipment	Number	Maximum 1-Hour Noise Level at 50 Feet [dB(A) $L_{eq(1)}$][1]	Usage Factor[2]	Total Noise Level at 50 Feet [dB(A) $L_{eq(1)}$]	Total Noise Level at 50 Feet Averaged Over 12-Hour Period [dB(A) $L_{eq(12)}$][3]
Phase I	Bobcat	1	60.7	100%	60.7	58.9
	Backhoe	5	77.6	40%	80.6	78.8
	Loader	1	79.1	40%	75.1	73.4
	Forklift	5	60.7	100%	67.7	65.9
	Crane	1	80.6	16%	72.6	70.9
Phase I Total:					**82.4**	**80.6**
Phase II	Bobcat	8	60.7	100%	69.7	68.0
	Backhoe	3	77.6	40%	78.4	76.6
	Loader	8	79.1	40%	84.2	82.4
	Forklift	5	60.7	100%	67.7	65.9
	Excavator	2	80.7	40%	79.7	78.0
	Drill Rig	1	84.4	20%	77.4	75.6
	Compressor	4	77.7	40%	79.7	78.0
	Concrete Pump	3	81.4	20%	79.2	77.4
	Paving Machine	1	77.2	50%	74.2	72.4
	Generator	4	80.6	50%	83.6	81.8
	Lift	2	74.7	20%	70.7	69.0
	Crane	5	80.6	16%	79.6	77.9
Phase II Total:					**93.0**	**88.4**
Phase III	Bobcat	5	60.7	100%	67.7	65.9
	Loader	1	79.1	40%	75.1	73.4
	Concrete Pump	1	81.4	20%	74.4	72.6
	Paving Machine	1	77.2	50%	74.2	72.4
Phase III Total:					**79.6**	**77.9**
Phase IV	Bobcat	8	60.7	100%	69.7	68.0
	Backhoe	3	77.6	40%	78.4	76.6
	Loader	5	79.1	40%	82.1	80.3
	Forklift	2	60.7	100%	63.7	61.9
	Concrete Pump	2	81.4	20%	77.4	75.7
	Crane	1	80.6	16%	**72.6**	**70.9**
Phase IV Total:					**85.0**	**83.2**

[1]Source for all equipment except Bobcat FHWA 2006.
Source for Bobcat: RECON 2008.
[2]Usage factor is the amount of time the equipment is operating at full power.
[3]It was assumed that all equipment would operate 8 hours per day. The noise level was calculated for a 12-hour period (8 hours operating, 4 hours not operating) for comparison to the Noise Ordinance limits.

However, there are many noise sensitive uses within Balboa Park that would be exposed to construction noise. Although the noise ordinance does not regulate construction noise levels at these uses, construction noise levels at these areas were analyzed in accordance with the Significance Determination Thresholds (City of San Diego 2011a) that indicate construction noise that interferes with normal business communications or affects sensitive receptors may be considered a significant noise impact.

A list of the nearest on-site sensitive Park uses is shown in Table 4.12-8. The worst-case noise levels during each phase of construction were calculated at these locations. Construction noise generally can be treated as a point source and would attenuate at approximately 6 dB(A) for every doubling of distance assuming hard site conditions and no intervening structures or topography. Construction activities would not be situated at any one location for a long period of time. The acoustic centers were assumed to be the centers of the main construction activity locations for each phase. Construction during Phase I would occur in the Alcazar parking lot. Construction during Phase II would occur at the location of the proposed Centennial Bridge and the proposed Organ Pavilion parking structure. Construction during Phase III would occur at the location of the proposed Pan American Promenade and in the Alcazar parking lot. Construction during Phase IV would occur in the Mall/Plaza de Panama.

Note that the noise levels shown in Table 4.12-8 are a worst-case scenario. They assume that all equipment on-site would be operating simultaneously for eight hours a day, and they do not account for shielding provided by existing buildings and terrain.

The main construction areas and the nearest on-site sensitive Park uses are shown in Figure 4.12-8. The main construction areas shown in Figure 4.12-8 were selected because these are the areas where a majority of the construction activity would take place and where a majority of the construction equipment would be located for each phase. The following is a discussion of each of the on-site sensitive Park uses and the potential construction noise impacts.

The Old Globe: The Old Globe Theatre consists of three venues: the Old Globe Theatre, the Sheryl and Harvey White Theater, and the outdoor Lowell Davies Festival Theater. There are approximately 675 to 700 performances annually, most occurring during the summer months at the height of Balboa Park's attendance. The normal performance schedule is Tuesday at 7:00 p.m., Wednesday at 7:00 p.m., Thursday at 8:00 p.m., Friday at 8:00 p.m., Saturday at 2:00 p.m. and 8:00 p.m., and Sunday at 2:00 p.m. and 7:00 p.m. There are also occasional Monday evening performances and events and Wednesday matinees at 2:00 p.m. In addition to these performance times, there would also be periodic rehearsals.

As discussed above, typical working hours for construction would be Monday through Friday from 7:00 a.m. to 7:00 p.m. The only time at which construction may occur at the

TABLE 4.12-8
CONSTRUCTION NOISE LEVELS AT NEAREST SENSITIVE PARK USES [dB(A) $L_{eq(12)}$]

Location	Phase I		Phase IIa		Phase IIb		Phase IIIa		Phase IIIb		Phase IV	
	Distance (feet)	Noise Level	Distance (feet)	Noise Level	Distance (feet)	Noise Level	Distance (feet)	Noise Level	Distance (feet)	Noise Level	Distance (feet)	Noise Level
Old Globe	500	60.6	415	70.0	1,285	60.2	1,020	51.7	500	57.9	500	63.2
San Diego Museum of Man	350	63.7	250	74.4	1,095	61.6	845	53.3	350	61.0	470	63.8
Alcazar Garden	120	73.0	275	73.6	825	64.0	550	57.1	120	70.3	275	68.4
House of Charm	215	68.0	480	68.7	795	64.3	505	57.8	215	65.2	135	74.6
San Diego Museum of Art	650	58.3	780	64.5	1,250	60.4	965	52.2	650	55.6	210	70.8
Timken Museum of Art	770	56.9	980	62.5	1,200	60.8	920	52.6	770	54.1	210	70.8
Botanical Garden	1,000	54.6	1,150	61.1	1,475	59.0	1,200	50.3	1,000	51.9	440	64.4
House of Hospitality	600	59.0	880	63.5	955	62.7	655	55.5	600	56.3	160	73.1
Spreckels Organ Pavilion	415	62.2	715	65.3	300	72.8	80	73.8	415	59.5	510	63.1
Japanese Friendship Garden	750	57.1	1,050	61.9	405	70.2	340	61.2	750	54.4	450	64.2
Hall of Nations	415	62.2	635	66.3	275	73.6	140	68.9	415	59.5	810	59.1
United Nations Building	530	60.1	700	65.4	235	74.9	250	63.9	530	57.4	950	57.7
House of Pacific Relations/Cottages	510	60.4	625	66.4	300	72.8	340	61.2	510	57.7	985	57.4
San Diego Hall of Champions	1,125	53.6	1,260	60.3	485	68.6	760	54.3	1,125	50.8	1,525	53.6
Balboa Park Club	650	58.3	620	66.5	635	66.3	680	55.2	650	55.6	1,225	55.5
Marie Hitchcock Puppet Theater	870	55.8	865	63.6	685	65.6	800	53.8	870	53.1	1,400	54.3
San Diego Automotive Museum	1,175	53.2	1,180	60.9	805	64.2	1,005	51.8	1,175	50.5	1,690	52.7

NOTES:
Phase I – Center of construction assumed to be center of Alcazar Parking Lot
Phase IIa – Center of construction assumed to be center of proposed Centennial Bridge
Phase IIb – Center of construction assumed to be center of proposed Organ Pavilion parking structure
Phase IIIa – Center of construction assumed to be center of proposed pedestrian bridge
Phase IIIb – Center of construction assumed to be center of Alcazar Parking Lot
Phase IV – Center of construction assumed to be center of the Mall/Plaza de Panama (at existing fountain)

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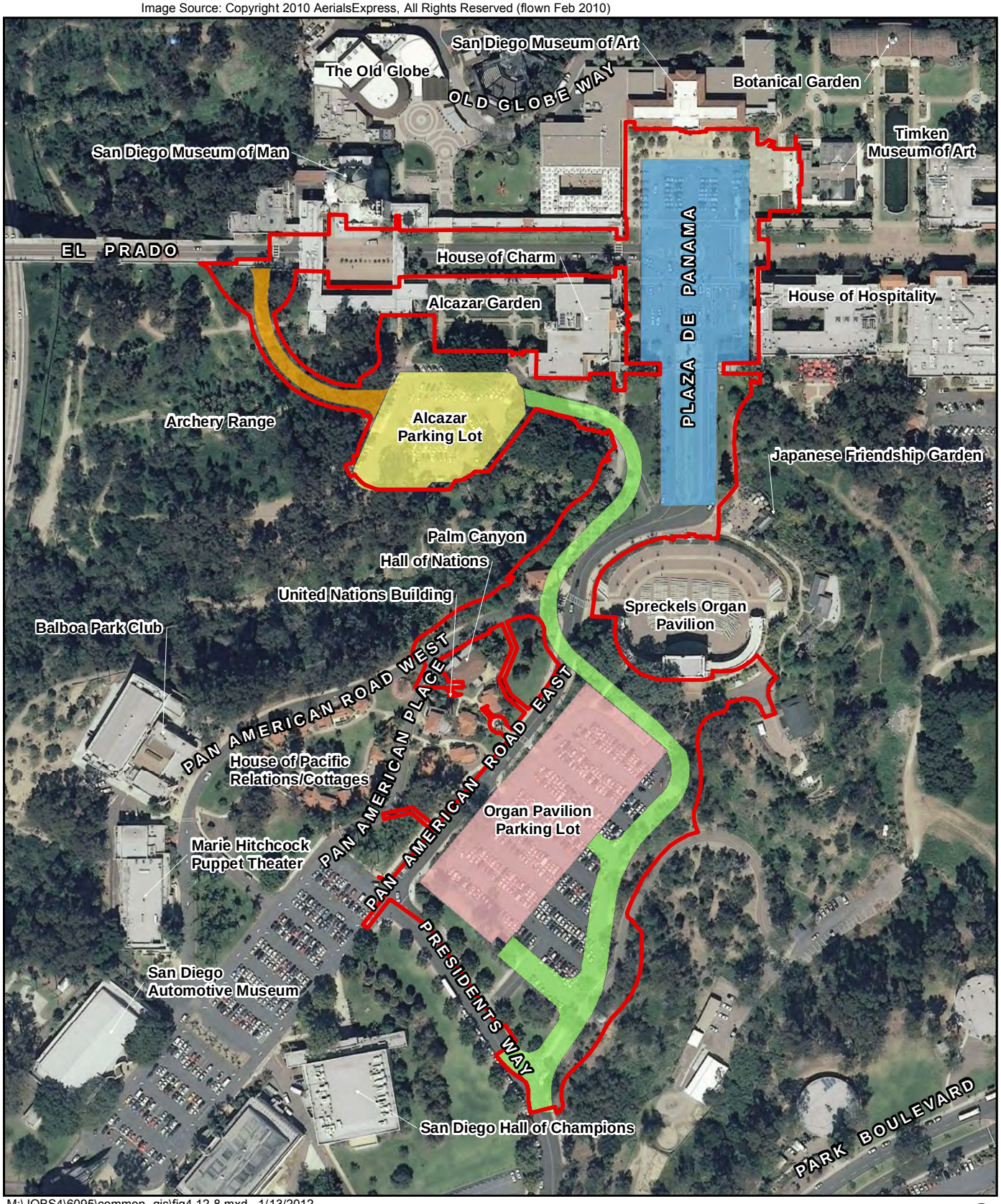

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Project Area

Construction Locations

- Alcazar Parking Lot
- Centenial Bridge
- The Mall/Plaza de Panama
- Parking Garage
- Pedestrian Bridge and Centennial Road

FIGURE 4.12-8
Construction Locations and Nearby Sensitive Park Uses

same time as an event at the Old Globe would be during the occasional Wednesday 2:00 p.m. matinees. The timeframe of "after hours work" would be responsive to the schedule of a particular evening's event, including events at the Old Globe.

As shown in Table 4.12-8, the loudest noise level at the Old Globe would be 70.0 dB(A) $L_{eq(12)}$ and would occur during construction of the Centennial Bridge during Phase II. The San Diego Museum of Man blocks the line of sight between the Old Globe and the proposed Centennial Bridge. Therefore, construction noise levels at the Old Globe would be less than those shown in Table 4.12-8. Although construction noise at the Old Globe is not regulated by the noise ordinance and noise levels would not exceed the residential noise ordinance limit of 75 dB(A) $L_{eq(12)}$, construction noise may be considered a nuisance during the 2:00 p.m. Wednesday matinees. Nuisance noise may be intrusive. As discussed, the City of San Diego assumes that standard construction techniques will provide a 15 dB reduction of exterior noise levels to an interior receiver. With these criteria, standard construction could be assumed to result in interior noise levels of 45 dB CNEL or less when exterior sources are 60 dB CNEL or less. Because exterior construction noise levels could exceed 60 dB, interior noise levels could exceed 45 dB. These temporary interior noise impacts would be significant.

San Diego Museum of Man: The San Diego Museum of Man is located in the Historic California Building within the project area. The proposed Centennial Bridge would wrap around the southwest corner of the Museum of Man. As shown in Table 4.12-8, the loudest noise level at the Museum of Man would be 74.4 dB(A) $L_{eq(12)}$ and would occur during construction of the Centennial Bridge during Phase II. Noise levels during the remaining phases of construction would be less than 65 dB(A) $L_{eq(12)}$. There are no outdoor uses at the San Diego Museum of Man so an exterior noise limit does not apply. As discussed above, because exterior construction noise levels could exceed 60 dB, interior noise levels could exceed 45 dB. Therefore, temporary interior noise impacts would be significant.

Alcazar Garden: The Alcazar Garden is located adjacent to the San Diego Museum of Man and the House of Charm. The Alcazar parking lot is located directly south of the Alcazar Garden. As shown in Table 4.12-8, the loudest noise level at the Alcazar Garden would be 73.6 dB(A) $L_{eq(12)}$ and would occur during construction of the Centennial Bridge during Phase II. Additionally, during construction activities in the Alcazar parking lot, noise levels would be 73.0 dB(A) $L_{eq(12)}$ (Phase I) and 70.3 dB(A) $L_{eq(12)}$ (Phase III). Exterior noise levels would be less than significant.

House of Charm: The House of Charm contains the Mingei International Museum and the San Diego Art Institute and is north of the Alcazar parking lot and west of the Mall/Plaza de Panama. As shown in Table 4.12-8, the loudest noise levels at the House of Charm would be 74.6 dB(A) $L_{eq(12)}$ and would occur during Phase IV construction activities in the Mall/Plaza de Panama. There are no outdoor uses at the House of

Charm. Because exterior construction noise levels could exceed 60 dB, interior noise levels could exceed 45 dB. Thus, temporary interior noise impacts would be significant.

San Diego Museum of Art: The San Diego Museum of Art is located north of the project adjacent to the Mall/Plaza de Panama. As shown in Table 4.12-8, the loudest noise levels at the San Diego Museum of Art would be 70.8 dB(A) $L_{eq(12)}$ and would occur during Phase IV construction activities in the Mall/Plaza de Panama. Noise levels during the remaining phases of construction would be less than 70 dB(A) $L_{eq(12)}$. There is a garden and an outdoor café at the San Diego Museum of Art. However, exterior noise levels would be less than significant due to the distance from construction activities. Because exterior construction noise levels could exceed 60 dB, interior noise levels could exceed 45 dB and temporary interior noise impacts would be significant.

Timken Museum of Art: The Timken Museum of Art is located east of the project adjacent to the Mall/Plaza de Panama. As shown in Table 4.12-8, the loudest noise levels at the Timken Museum of Art would be 70.8 dB(A) $L_{eq(12)}$ and would occur during Phase IV construction activities in the Mall/Plaza de Panama. Noise levels during the remaining phases of construction would be less than 70 dB (A) $L_{eq(12)}$. There are no outdoor uses at the Timken Museum of Art. Because exterior construction noise levels could exceed 60 dB, interior noise levels could exceed 45 dB. These temporary interior noise impacts would be significant.

Botanical Garden: The Botanical Garden is located northeast of the project area and northeast of the San Diego Museum of Art and Timken Museum of Art. As shown in Table 4.12-8, the loudest noise levels at the Botanical Garden would be 64.4 dB(A) $L_{eq(12)}$ and would occur during Phase IV construction activities in the Mall/Plaza de Panama. Noise levels during the remaining phases of construction would be less than 70 dB(A) $L_{eq(12)}$. This does not account for noise reduction provided by intervening structures. Exterior noise impacts at the Botanical Garden would be less than significant.

House of Hospitality: The House of Hospitality contains the Balboa Park visitor center, a police storefront, office of cultural and educational organizations, and The Prado restaurant. The House of Hospitality is located adjacent to the Mall/Plaza de Panama. As shown in Table 4.12-8, the loudest noise levels at the House of Hospitality would be 73.1 dB (A) $L_{eq(12)}$ and would occur during Phase IV construction activities in the Mall/Plaza de Panama. Noise levels during the remaining phases of construction would be less than 70 dB(A) $L_{eq(12)}$. There is a courtyard at the center of the House of Hospitality. The Prado restaurant also has an outdoor dining area at the House of Hospitality. Noise levels in the courtyard and dining area would be less than those discussed above because of intervening structures. Because exterior construction noise levels could exceed 60 dB, interior noise levels could exceed 45 dB. Temporary interior noise impacts would be significant.

Spreckels Organ Pavilion: The Spreckels Organ Pavilion houses one of the world's largest outdoor pipe organs. Free concerts are performed every Sunday at 2:00 p.m. However, as discussed above, construction would not occur on Sundays. There are also weekday concerts during the summer months, but they would occur after construction activity stops. As shown in Table 4.12-8, the loudest noise levels at the Spreckels Organ Pavilion would be 73.8 dB(A) $L_{eq(12)}$ and would occur during Phase III construction activities at the proposed Pan American Promenade. Additionally, during construction activities at the proposed parking structure during Phase II, noise levels would be 72.8 dB(A) $L_{eq(12}$. Exterior noise impacts would be less than significant.

Japanese Friendship Garden: The Japanese Friendship Garden is located adjacent to the Spreckels Organ Pavilion. As shown in Table 4.12-8, the loudest noise levels at the Japanese Friendship Garden would be 73.1 dB(A) $L_{eq(12)}$ and would occur during Phase II construction activities at the proposed parking structure. Noise levels during the remaining phases of construction would be less than 65 dB(A) $L_{eq(12)}$. Exterior noise impacts would be less than significant.

Hall of Nations, United Nations Building, and House of Pacific Relations/Cottages: The Hall of Nations, United Nations Building, and House of Pacific Relations are located west of the project adjacent to the proposed parking structure. Open houses occur every Sunday from 12:00 p.m. to 4:00 p.m. to showcase traditions from other countries and cultures. As discussed above, construction would not occur on Sundays during these events. As shown in Table 4.12-8, the loudest noise level at these buildings and cottages would be 74.9 dB(A) $L_{eq(12)}$ and would occur during Phase II construction activities at the proposed parking structure. Noise levels during the remaining phases of construction would be less than 70 dB(A) $L_{eq(12)}$. Noise levels at the exterior use areas at the Cottages would be less than those discussed above because of intervening structures. Because exterior construction noise levels could exceed 60 dB, interior noise levels could exceed 45 dB and temporary interior noise impacts would be significant.

San Diego Hall of Champions: The San Diego Hall of Champions is a sports museum located south of the project. As shown in Table 4.12-8, the loudest noise level at the San Diego Hall of Champions would be 68.6 dB(A) $L_{eq(12)}$ and would occur during Phase II construction activities at the proposed parking structure. Noise levels during the remaining phases of construction would be less than 65 dB (A) $L_{eq(12)}$. Because exterior construction noise levels could exceed 60 dB, interior noise levels could exceed 45 dB and temporary interior noise impacts would be significant.

Balboa Park Club: The Balboa Park Club contains banquet and meeting halls and is located southwest of the project. As shown in Table 4.12-8, the loudest noise level at the Balboa Park Club would be 66.5 dB(A) $L_{eq(12)}$ and would occur during Phase II construction activities at the proposed Centennial Bridge. Because exterior construction noise levels could exceed 60 dB, interior noise levels could exceed 45 dB. Therefore, temporary interior noise impacts would be significant.

Marie Hitchcock Puppet Theater: The Marie Hitchcock Puppet Theater is located southwest of the project. Currently, performances are held Wednesday through Friday at 10:00 a.m. and 11:30 a.m., and Saturday and Sunday at 11:00 a.m., 1:00 p.m., and 2:00 p.m. As shown in Table 4.12-8, the loudest noise level at the Marie Hitchcock Puppet Theater would be 65.6 dB(A) $L_{eq(12)}$ and would occur during Phase II construction activities at the proposed parking structure. Because exterior construction noise levels could exceed 60 dB, interior noise levels could exceed 45 dB. Thus, temporary interior noise impacts would be significant.

San Diego Automotive Museum: The San Diego Automotive Museum is located southwest of the project. As shown in Table 4.12-8, the loudest noise level at the San Diego Automotive Museum would be 64.2 dB(A) $L_{eq(12)}$ and would occur during Phase II construction activities at the proposed parking structure. Because exterior construction noise levels could exceed 60 dB, interior noise levels could exceed 45 dB and temporary interior noise impacts would be significant.

In summary, while construction noise at the Park uses is not regulated by the noise ordinance, it may be considered a nuisance particularly for museum visitors and during special events and performances. The noise ordinance does, however, regulate the time of day during which construction would occur. For the project, typical working hours for construction would be from 7:00 a.m. to 7:00 p.m. Monday through Friday. The timeframe of "after hours work" would be responsive to the schedule of a particular evening's event and shall be timed to be least impactful on Park operations or that of surrounding operations. These occurrences would only occur when Park venues, including Old Globe nighttime performances, and any special events would be closed. Since the nearest off-site receptor is 2,000 feet away, noise impacts to off-site receptors during these occurrences would be less than significant based on the 75 dB(A) $L_{eq(12)}$ threshold for construction noise at residential properties.

Outdoor use areas would be more subject to the effects of construction noise. There are outdoor uses at the Old Globe, Alcazar Garden, San Diego Museum of Art, Botanical Garden, House of Hospitality, Spreckels Organ Pavilion, Japanese Friendship Garden, and the Cottages. Interior noise levels would be less than exterior noise levels. Because exterior construction noise levels could exceed 60 dB, interior noise levels could exceed the 45 dB standard. Therefore, temporary interior noise impacts would be potentially significant.

b. Truck Hauling Noise

As discussed in Chapter 3.8.2.2, Project Description, the proposed haul route for the parking structure export to the Arizona Street Landfill would be from the current Organ Pavilion parking lot to Presidents Way, east on Presidents Way to Park Boulevard, north on Park Boulevard to Zoo Place, south on Zoo Place to Florida Drive, south on Florida Drive to Pershing Drive, and north on Pershing Drive to the Arizona Street Landfill. The

haul route is shown on Figure 3-42. This route would be the most direct and least impactful route (in terms of traffic, residential noise, and emissions) for the haul operation. In order to minimize impacts to Park operation, visitors, zoo operations, and adjacent operations of the Naval Medical Hospital and City College, a second nighttime shift is proposed for parking structure export only between the hours of 1:00 a.m. to 9:30 a.m., with the first shift operating 9:30 a.m. to 6:00 p.m. The schedule duration for the parking structure excavation and export activity would be approximately 40 consecutive working days using dual shifts. Soil export hauling would be coordinated to occur outside the peak traffic hours (defined as weekdays from 7:00 – 9:00 a.m. and 4:00 – 6:00 p.m.). On average, the operation would require a fleet of 20 to 25 double bottom dump trucks cycling every 45 to 60 minutes between the project site and the Arizona Street Landfill. Based on a worst-case scenario of 25 trucks cycling every 45 minutes this would result in a total of 400 trips over a 12-hour period.

Measurements of noise levels associated with typical truck pass-bys indicated an average sound exposure level of 90 dB (A) at 10 feet (RECON 1998). This measured sound exposure level of 90 decibels at 10 feet for a truck pass-by can be used to calculate the anticipated average noise level due to the truck traffic. It was calculated that the average 12-hour noise level due to truck trips would be 69.7 dB(A) $L_{eq(12)}$ at a distance of 10 feet from the center of the truck lane. The nearest sensitive uses are located more than 1,000 feet from the haul route. A noise level of 69.7 dB(A) $L_{eq(12)}$ at a distance of 10 feet would attenuate to 29.7 dB(A) $L_{eq(12)}$ at 1,000 feet. Noise levels at residences and on-site receptors located adjacent to the haul and delivery route would not exceed the construction noise limit of 75 dB(A) $L_{eq(12)}$. Additionally, noise levels would not exceed the noise ordinance limits shown in Table 4.12-3. Noise Impacts due to truck hauling and deliveries would be less than significant.

4.12.6.2 Significance of Impacts

a. Construction Equipment Noise

Exterior construction noise levels would not exceed the 75 dB(A) $L_{eq(12)}$ threshold, and therefore, would be less than significant. Because exterior construction noise levels could exceed 60 dB, interior noise levels could exceed the 45 dB standard. Therefore, temporary interior noise impacts would be potentially significant at the following institutions: The Old Globe, San Diego Museum of Man, House of Charm, San Diego Museum of Art, Timken Museum of Art, House of Hospitality, Hall of Nations, United Nations Building, and House of Pacific Relations/Cottages, San Diego Hall of Champions, Balboa Park Club, Marie Hitchcock Puppet Theater, and San Diego Automotive Museum.

b. Truck Hauling Noise

Noise levels at residences located adjacent to the haul and delivery route would not exceed the construction noise limit of 75 dB(A) $L_{eq(12)}$. Additionally, noise levels would not exceed the noise ordinance limits shown in Table 4.12-3. Noise Impacts due to truck hauling and deliveries would be less than significant.

4.12.6.3 Mitigation, Monitoring, and Reporting

a. Construction Equipment Noise

The following measures would reduce interior noise impacts, but not to a level less than significant:

N-1: The following mitigation shall be implemented during all phases of construction.

- All noise-producing equipment and vehicles using internal combustion engines shall be equipped with mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specification.
- Mobile or fixed “package” equipment (e.g., arc-welders, air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment.
- Electrically powered equipment shall be used instead of pneumatic or internal combustion powered equipment, where feasible.
- Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors.
- Construction site and access road speed limits shall be established and enforced during the construction period.
- The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only.
- No project-related public address or music system shall be audible at any adjacent receptor.

The construction contractor shall establish a noise disturbance coordinator. The disturbance coordinator shall be responsible for responding to any local complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (e.g., starting too early in the day, bad muffler, etc.) and shall be required to implement measures such that the complaint is resolved to the satisfaction of

the City Engineering Department. Signs posted at the construction site shall list the telephone number for the disturbance coordinator.

b. Truck Hauling Noise

Impacts would be less than significant. No mitigation is required.

4.12.4.4 Significance of Impacts after Mitigation

Implementation of the measure **N-1** above would reduce temporary interior construction noise impacts, but not to a level less than significant. Short-term, temporary impacts would remain significant.

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4.13 Paleontological Resources

The following section provides background information on existing paleontological resources within the project area. This analysis is based on a review of available literature, including the City's General Plan, the geotechnical reconnaissance (see Appendix G), Kennedy maps, the City's Paleontological Guidelines, and the County of San Diego Paleontological Resources by Deméré and Walsh (1994).

4.13.1 Existing Conditions

4.13.1.1 Paleontological Resource Potential

Paleontological resources (fossils) are the remains and/or traces of prehistoric animal and plant life exclusive of human remains or artifacts. Fossil remains such as bones, teeth, shells, leaves, and other fossils are found in the geologic deposits (rock formations) within which they were originally buried. Fossil remains are important as they provide indicators of the earth's chronology and history. They represent a limited, nonrenewable, and sensitive scientific and educational resource.

The potential for fossil remains at a given location can be predicted through previous correlations that have been established between the fossil occurrence and the geologic formations within which they are entombed. Geologic formations possess a specific paleontological resource potential wherever the formation occurs based on discoveries made elsewhere in that particular formation. To evaluate paleontological resources, the presence and distribution of geologic formations and the respective potential for paleontological resources were reviewed.

Geologic formations are rated for paleontological resource potential according to the following scale (Deméré and Walsh 1994).

- High Sensitivity - these formations contain a large number of known fossil localities. Generally, highly sensitive formations produce vertebrate fossil remains or are considered to have the potential to produce such remains.

- Moderate Sensitivity - these formations have a moderate number of known fossil localities. Generally, moderately sensitive formations produce invertebrate fossil remains in high abundance or vertebrate fossil remains in low abundance.

- Low and/or Unknown Sensitivity - these formations contain only a small number of known fossil localities and typically produce invertebrate fossil remains in low abundance. Unknown sensitivity is assigned to formations from which there are

presently no known paleontological resources, but which have the potential for producing such remains based on their sedimentary origin.

- Very Low Sensitivity - very low sensitivity is assigned to geologic formations that, based on their relative youthful age and/or high-energy depositional history, are judged to be unlikely to produce any fossil remains.

4.13.1.2 On-site Resource Sensitivity

Based on the geotechnical reconnaissance (see Appendix G), the project site is underlain by very old paralic deposits (broadly correlative with the Lindavista Formation), the San Diego Formation, and undocumented fill. According to the City's Paleontological Significance Thresholds, the Lindavista Formation and San Diego Formation have moderate and high paleontological resource sensitivity (i.e., for fossil deposits), respectively. These formations may contain well-preserved, rare, and significant paleontological fossil materials that could provide important information about the evolutionary history of the area.

4.13.2 Issue 1: Paleontological Resources

Would the proposal require over 1,000 cubic yards of excavation at a depth of 10 feet or greater in a high resource potential formation or over 2,000 cubic yards of excavation at a depth of 10 feet or greater in a moderate resource potential formation?

According to the City's Significance Determination Thresholds, impacts related to paleontological resources would be significant if:

- The geologic formation underlying a project area has sedimentary rocks such as those found in the coastal areas, they usually contain fossils.

- The geologic formation has a "high" or "moderate" sensitivity rating, as listed on the Paleontological Determination Matrix.

4.13.2.1 Impacts

ALL PROJECT COMPONENTS

Fossils are buried in sedimentary rock layers and are vulnerable to destruction from earthmoving operations. Such activities could expose and unearth fossil remains, which could destroy paleontological resources if the fossils are not recovered and salvaged. Construction activity impacts would therefore be significant if they involve excavation or grading of geologic formations that could contain fossil remains.

The project site (including the Arizona Street Landfill) is underlain by very old paralic deposits (broadly correlative with the Lindavista Formation) and the San Diego Formation, which are rated as moderate and high sensitivity resources, respectively (Table 4.13-1). Grading operations associated with the project would require approximately 163,000 cubic yards of cut at depths of 10 feet or more in some areas of the project site. This would exceed the threshold for both high and moderate sensitivity areas. Therefore, impacts resulting from construction of the project would be significant.

TABLE 4.13-1
PALEONTOLOGICAL DETERMINATION MATRIX

Geological Deposit/ Formation/Rock Unit	Potential Fossil Localities	Sensitivity Rating
Lindavista Formation (Qln, Qlb)[1]	A. Mira Mesa/Tierrasanta	A. High
	B. All other areas	B. Moderate
San Diego Formation	All communities where this unit occurs	High

SOURCE: City of San Diego CEQA Significance Determination Thresholds, January 2011.
[1]Broadly correlative with Qvop 1-13 (very old paralic deposits) of Kennedy and Tan (2008) new mapping nomenclature.

The fill disposal activities at the inactive Arizona Street Landfill would be placing additional fill on top of the existing cap. Because the cap is currently 3–15 feet thick and the project proposes only to add additional thickness to the cap; there would be no potential to uncover buried paleontological resources. Therefore, no impacts would occur in conjunction with this off-site project component.

4.13.2.2 Significance of Impacts

Because of the moderate and high sensitivity potential areas for paleontological resources, project grading could potentially destroy fossil remains, resulting in a significant impact to paleontological resources.

4.13.2.3 Mitigation, Monitoring, and Reporting

Significant impacts to paleontological resources are most often mitigated by the implementation of a monitoring program. The monitoring program is carried out under the supervision of a qualified paleontologist and includes attendance at pre-construction meetings as well as on-site inspections of active excavations.

PAL-1 The Applicant shall implement the procedures outlined below as a condition of approval.

I. Prior to Permit Issuance

A. Entitlements Plan Check

1. Prior to issuance of any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits or a Notice to Proceed for Subdivisions, but prior to the first preconstruction meeting, whichever is applicable, the ADD Environmental designee shall verify that the requirements for Paleontological Monitoring have been noted on the appropriate construction documents.

B. Letters of Qualification have been submitted to ADD

1. The applicant shall submit a letter of verification to MMC identifying the PI for the project and the names of all persons involved in the paleontological monitoring program, as defined in the City Paleontology Guidelines.

2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the paleontological monitoring of the project.

3. Prior to the start of work, the applicant shall obtain approval from MMC for any personnel changes associated with the monitoring program.

II. Prior to Start of Construction

A. Verification of Records Search

1. The PI shall provide verification to MMC that a site-specific records search has been completed. Verification includes, but is not limited to, a copy of a confirmation letter from San Diego Natural History Museum, other institution or, if the search was in-house, a letter of verification from the PI stating that the search was completed.

2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/ or grading activities.

B. PI Shall Attend Precon Meetings

1. Prior to beginning any work that requires monitoring; the Applicant shall arrange a Precon Meeting that shall include the PI, CM and/or Grading Contractor, RE, BI, if appropriate, and MMC. The qualified paleontologist shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Paleontological Monitoring program with the CM and/or Grading Contractor.

   a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM, or BI, if appropriate, prior to the start of any work that requires monitoring.

2. Identify Areas to be Monitored

   Prior to the start of any work that requires monitoring, the PI shall submit a Paleontological Monitoring Exhibit (PME) based on the appropriate construction documents (reduced to 11x17) to MMC identifying the areas to be monitored, including the delineation of grading/excavation limits. The PME shall be based on the results of a site-specific records search as well as information regarding existing known soil conditions (native or formation).

3. When Monitoring Will Occur

   a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.

   b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate conditions such as depth of excavation and/or site graded to bedrock, presence or absence of fossil resources, etc., which may reduce or increase the potential for resources to be present.

III. During Construction

A. Monitor Shall be Present During Grading/Excavation/Trenching

1. The monitor shall be present full time during grading/excavation/trenching activities as identified on the PME that could result in impacts to formations with high and moderate resource sensitivity. The Construction Manager is responsible for notifying the RE, PI, and MMC of changes to

any construction activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances, Occupational Safety and Health Administration safety requirements may necessitate modification of the PME.

2. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition, such as trenching activities, does not encounter formational soils as previously assumed, and/or when unique/unusual fossils are encountered, which may reduce or increase the potential for resources to be present.

3. The monitor shall document field activity via the CSVR. The CSVR's shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (Notification of Monitoring Completion), and in the case of ANY discoveries. The RE shall forward copies to MMC.

B. Discovery Notification Process

1. In the event of a discovery, the Paleontological Monitor shall direct the contractor to temporarily divert trenching activities in the area of discovery and immediately notify the RE or BI, as appropriate.

2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.

3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or e-mail with photos of the resource in context, if possible.

C. Determination of Significance

1. The PI shall evaluate the significance of the resource.

   a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required. The determination of significance for fossil discoveries shall be at the discretion of the PI.

   b. If the resource is significant, the PI shall submit a Paleontological Recovery Program and obtain written approval from MMC. Impacts to significant resources must be mitigated before ground disturbing activities in the area of discovery will be allowed to resume.

c. If the resource is not significant (e.g., small pieces of broken common shell fragments or other scattered common fossils), the PI shall notify the RE, or BI as appropriate, that a non-significant discovery has been made. The paleontologist shall continue to monitor the area without notification to MMC unless a significant resource is encountered.

d. The PI shall submit a letter to MMC indicating that fossil resources will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that no further work is required.

IV. Night and/or Weekend Work

A. If night and/or weekend work is included in the contract:

1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the Preconstruction Meeting.

2. The following procedures shall be followed.

a. No Discoveries

In the event that no discoveries were encountered during night and/or weekend work, the PI shall record the information on the CSVR and submit to MMC via fax by 8 A.M. on the next business day.

b. Discoveries

All discoveries shall be processed and documented using the existing procedures detailed in Section III - During Construction.

c. Potentially Significant Discoveries

If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction shall be followed.

d. The PI shall immediately contact MMC, or by 8 A.M. on the next business day, to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.

B. If night work becomes necessary during the course of construction:

1. The CM shall notify the RE, or BI as appropriate, a minimum of 24 hours before the work is to begin.

2. The RE or BI, as appropriate, shall notify MMC immediately.

C. All other procedures described above shall apply, as appropriate.

V. Post Construction

A. Preparation and Submittal of Draft Monitoring Report

1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Paleontological Guidelines which describes the results, analysis, and conclusions of all phases of the Paleontological Monitoring Program (with appropriate graphics) to MMC for review and approval within 90 days following the completion of monitoring.

   a. For significant paleontological resources encountered during monitoring, the Paleontological Recovery Program shall be included in the Draft Monitoring Report.

   b. Recording Sites with the San Diego Natural History Museum

      The PI shall be responsible for recording (on the appropriate forms) any significant or potentially significant fossil resources encountered during the Paleontological Monitoring Program in accordance with the City's Paleontological Guidelines, and submittal of such forms to the San Diego Natural History Museum with the Final Monitoring Report.

2. MMC shall return the Draft Monitoring Report to the PI for revision or, for preparation of the Final Report.

3. The PI shall submit revised Draft Monitoring Report to MMC for approval.

4. MMC shall provide written verification to the PI of the approved report.

5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.

B. Handling of Fossil Remains

1. The PI shall be responsible for ensuring that all fossil remains collected are cleaned and cataloged.

2. The PI shall be responsible for ensuring that all fossil remains are analyzed to identify function and chronology as they relate to the geologic history of the area, that faunal material is identified as to species, and that specialty studies are completed, as appropriate.

C. Curation of Fossil Remains: Deed of Gift and Acceptance Verification

1. The PI shall be responsible for ensu ring that all fossil remains associated with the monitoring fo r this proje ct are per manently curated with an appropriate institution.

2. The PI sh all include the Accept ance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.

D. Final Monitoring Report(s)

1. The PI shall submit two copies of the Final Monitoring Report to MMC (even if negative) within 90 days after notification from MMC that the Draft Monitoring Report has been approved.

2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitori ng Report from MMC which include s the Acceptance Verification from the curation institution.

4.13.2.4 Significance of Impacts After Mitigation

Implementation of the mitigation measure **PAL-1** described above would reduce impacts to paleontological resources to below a level of significance.

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4.14 Public Services and Facilities

Public services and facilities are those community-wide functions that serve residents on a community-wide basis. These functions include fire protection and emergency medical services, police protection, public schools, libraries, and public recreational facilities and parks, as well as their maintenance. The following provides a discussion of fire protection/emergency medical and police protection services as they relate to the project. Copies of the public service letters that were sent to the City of San Diego police and fire departments, as well as their response letters, are attached as Appendix L. Because the project would not introduce any new residents to the project area, no new demand for public services, such as schools, recreation and parks facilities, and libraries would occur. Impacts to these facilities were found not to be significant and are addressed in Section 8.0.

4.14.1 Existing Conditions

4.14.1.1 Fire Protection and Emergency Medical Services

Existing conditions for the project's fire-rescue services are included under Section 2.3.1 in the Environmental Setting. In summary, fire protection services to the project area are provided by the City of San Diego Fire Rescue Department (Fire Department). Fire Stations No. 1 and No. 3 provide fire protection and advanced life support services to the project site and surrounding area. Fire Station No. 1, located less than two miles southwest of the project site at 1222 First Avenue, houses two engine companies and a contracted paramedic ambulance. Fire Station No. 3 also is located less than two miles from the project site at 725 West Kalmia Street and houses one engine company. In addition, Fire Station No. 2 "Little Italy Bayside," to be located at the southeast corner of Cedar Street and Pacific Coast Highway, is scheduled to begin construction in late 2011 (Assistant Fire Marshal Laurence Trame, personal communication, 2011).

The San Diego Fire-Rescue Department's goal is one firefighter per 1,000 citizens. The Fire Department is currently at 0.20 firefighter per 1,000 residents for Station No. 3 and 0.54 for Station No. 1. The national standard requires an initial response (four-person engine company) within five minutes (90 percent of the time) or an effective fire force (15 firefighters) within nine minutes (90 percent of the time).

Emergency medical services are provided to the project area and throughout the City of San Diego through a public/private partnership between the City's Emergency Medical Services (EMS) and Rural/Metro Corporation, which provides some personnel and some ambulances. EMS has ambulances, paramedics, and EMTs who respond to emergency calls. Fire Station No. 1 houses paramedic units. In addition, all engines and trucks are

full Advanced Life Support units and are equipped and capable of managing medical emergencies.

4.14.1.2 Police Protection

Existing conditions for the project's police protection services are included under Section 2.3.3 in the Environmental Setting. In short, the project site is located within the boundaries of Police Beat 522, Central Division Substation. The Central Division Substation is located at 2501 Imperial Avenue, approximately 2.5 miles south of the project site and is currently staffed with 147 sworn personnel and 2 non-sworn personnel. Additional resources (SWAT, canine units, etc.) respond to Central Division as needed. The current patrol strength at Central Division is 140 uniformed patrol officers.

The City of San Diego Park and Recreation Department also provides Park Rangers who perform resource management, trail maintenance, interpretation, and give tours of the Park. There are seven rangers and one senior ranger (supervisor) who patrol the Park during the day time hours and special events in vehicles and on foot. The Park Rangers share radio frequencies with the San Diego Police Department and are First Responders capable of responding to both enforcement and emergency medical calls.

4.14.1.3 Public Facilities/Road Maintenance

Operation and maintenance of public facilities, utilities, roadways, recreation and parks facilities is generally managed and staffed by the City of San Diego Park and Recreation Department. Park and Recreation may utilize and coordinate services with the City Streets, Water, Storm Water and Public Utilities Divisions; however, within Park boundaries, Park and Recreation provides the resources management, maintenance, and/or operation of internal Park roadways, storm drains, water mains, landscaping facilities, open space, and general improvements.

4.14.2 Issue 1: Public Services and Facilities

Would the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas: fire/emergency medical or police protection, or the maintenance of public facilities (including roads)?

According to the City's Significance Determination Thresholds, impacts related to police and fire-rescue services would be significant if the project would:

- Be located in a brush fire hazard area, hillside, or an area with inadequate fire hydrant services or street access.

- Involve the use, manufacture, or storage of toxic, readily combustible, or otherwise hazardous materials?
- Not provide for adequate San Diego Fire-Rescue Department access as determined by Fire and Life Safety staff to be in conformance with the California Fire Code and Fire and Hazard Prevention Services Policy A-00-1?
- Substantially affect police or fire-rescue response times (i.e., increase the existing response times in the project area)?

4.14.2.1 Impacts

ALL PROJECT COMPONENTS

a. Fire Protection and Emergency Medical Services

A response letter from the San Diego Fire-Rescue Department (Assistant Fire Marshal Jose Lopez), which addressed the thresholds identified above, was received on May 16, 2011. The letter states that the improvements proposed as part of the project would not present any constraints with regard to response times or the Fire-Rescue Department's ability to provide adequate fire and emergency medical response to the project area.

The project is not located in a brush fire hazard area, hillside, or an area with inadequate fire hydrant services or street access. As discussed above in Section 4.14.1.1, Fire Stations No. 1 and No. 3 provide fire protection and advanced life support services to the project site and surrounding area. Figure 2-8 shows that approximately 20 fire hydrants are adjacent to the project site. Additionally, there is adequate street access to all areas of the project, including the temporary construction access roads. Access to these temporary access roads would be from the SR-163.

The project would not involve the use, manufacture, or storage of toxic, readily combustible, or otherwise hazardous materials. During construction activities, there may be small quantities of hazardous materials associated with construction equipment such as fuels, lubricants, and solvents. City standards and policies regarding the use of hazardous materials would be followed.

The proposed changes in circulation have been reviewed by the Fire-Rescue Department and were determined not to result in an increase in response times or present a constraint to fire/emergency response to the project area. Thus, no increase in department staffing, facilities (stations), or equipment (engines or ambulances) would be necessitated by implementation of the project (Assistant Fire Marshal Lopez 2011).

In consultation with the San Diego Fire Department, the project has been designed to comply with emergency access requirements. The proposed design for Plaza de

California and El Prado would allow full-sized fire engines to access the interior of the west Prado area in the event of an emergency. Removable and lockable bollards which can be lowered electronically by emergency responders would be in place west of the California Building's archway to allow emergency vehicles to access El Prado; all other vehicular traffic would be routed south and east via the proposed Centennial Road. Thus, the project would provide for adequate San Diego Fire-Rescue Department access, as determined by Fire and Life Safety staff, and would be in conformance with the California Fire Code and Fire and Hazard Prevention Services Policy A-00-1.

b. Police Protection

A response letter from the San Diego Police Department (Lieutenant Ken Hubbs) was received on May 11, 2011 stating that there are currently no plans for additional police substations within the vicinity of the project area. While response times in the area are expected to increase as a result of general population growth, the project itself would not result in an increased demand for public services, including police protection. In consultation with the San Diego Police Department, through the Crime Prevention through Environmental Design Review (CPTED); the project has been designed to comply with emergency access requirements. Therefore, response times would not be anticipated to increase in the project area as a result of project implementation; nor would build-out of the project result in the need for new or expanded police facilities.

c. Public Facilities/Road Maintenance

The project would include the construction of new facilities including the Centennial Bridge and Road, the new Organ Pavilion parking structure and rooftop park, and the Palm Canyon walkway. The proposed improvements would generate the need for additional maintenance expenditures by the City. The cost of maintaining the parking structure would be recovered through revenues generated by paid parking within the facility. The cost of maintaining the remaining improvements (the bridge, roadway, park, and pedestrian facilities) would be accomplished through current City funding sources. Furthermore, public facilities and roadway maintenance are a financial matter that would not result in physical effects on the environment.

4.14.2.2 Significance of Impacts

a. Fire Protection and Emergency Medical Services

The project would not increase the call volume for the engine companies assigned to the project area and would not contribute to the need for new or altered facilities. The project would provide for adequate access for the San Diego Fire-Rescue Department. Therefore, impacts to fire protection and emergency services would be less than significant.

b. Police Protection

The project would not result in additional demand for police service in Beat 531. No new staffing or facilities would be required; thus, there would be no significant impacts to police protection services.

c. Public Facilities/Road Maintenance

The project would result in new maintenance obligations within the Park. The cost of maintaining parking structure related facilities, including housekeeping, trash removal, utilities, operational systems, equipment, elevators, and landscaping, would be funded through parking fees; maintenance of other new facilities would be funded through current City funding sources. Therefore, impacts associated with public facilities and road maintenance would be less than significant.

4.14.2.3 Mitigation, Monitoring, and Reporting

a. Fire Protection and Emergency Medical Services

Impacts to fire protection services would be less than significant; thus, no mitigation would be required.

b. Police Protection

Impacts to police protection services would be less than significant, thus no mitigation would be required.

c. Public Facilities/Road Maintenance

Impacts to public facilities/road maintenance would be less than significant, thus no mitigation would be required.

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4.15 Public Utilities

The following section discusses public utilities, including water, wastewater, and energy infrastructure, along with solid waste disposal and is based on technical studies prepared for the project. A Water Demand Analysis was prepared by Rick Engineering (May 2011), along with a Sewer Study. These reports are included as Appendices M and N, respectively. Rick Engineering also prepared a Waste Management Plan (March 2011; Appendix O), to address the disposal of solid waste generated by the project. The topic of energy supply and demand is addressed separately in Section 4.7.

4.15.1 Existing Conditions

4.15.1.1 Water Supply

The City of San Diego PUD provides water service to all of Balboa Park. The PUD purchases up to 90 per cent of its water from the San Diego County Water Authority (CWA), which in turn purchases most of its water from the Metropolitan Water District of Southern California (MWD). While the PUD imports the majority of its water, it also relies on three local supply sources to meet or offset potable water demands. These include local surface water, conservation, and recycled water. The availability of sufficient imported and regional water supplies to serve existing and planned uses within the PUD service area is demonstrated through water management plans.

a. Metropolitan Water District of Southern California

The MWD was formed in 1928 to develop, store, and distribute supplemental water in southern California for domestic and municipal purposes. The MWD is a wholesale supplier of water to its member agencies. It obtains supplies from local sources as well as the Colorado River via the Colorado River Aqueduct which it owns and operates, and the Sacramento-San Joaquin Delta via the State Water Project.

Planning documents such as the Regional Urban Water Management Plan (RUWMP) and Integrated Water Resources Plan (IWRP) help ensure the reliability of water supplies and the infrastructure necessary to provide water to southern California. MWD's 2005 RUWMP documents the availability of these existing supplies and additional supplies necessary to meet future demands. The 2005 RUWMP includes the resource targets included in the IWRP and contains a water supply reliability assessment that includes a detailed evaluation of the supplies necessary to meet demands over a 25-year period in average, single-dry year and multiple-dry year periods. As part of this process, MWD also uses SANDAG's regional growth forecast in calculating regional water demands. In accordance with state law, the RUWMP is updated every five years. MWD published an update to its RUWMP in August 2010.

MWD's IWRP identifies a mix of resources (imported and local) that, when implemented, will provide 100 percent reliability for full-service demands through the attainment of regional targets set for conservation, local supplies, State Water Project supplies, Colorado River supplies, groundwater banking and water transfers. The latest IWRP (2007) includes a planning buffer to mitigate against the risks associated with implementation of local and imported supply programs. The planning buffer identifies an additional increment of water that could potentially be developed if other supplies are not implemented as planned. The planning buffer is intended to ensure that the southern California region, including the City of San Diego, will have adequate water supplies to meet future demands. The IWRP is currently undergoing an update to address water supply and infrastructure investments through 2035.

b. San Diego County Water Authority

The CWA purchases water from the MWD that is delivered to the region through two aqueducts. Of the MWD's 24 member agencies, the CWA is the largest member agency in terms of deliveries and purchases about 25 per cent of all the water the MWD delivered in fiscal year 2007. As a retail member agency of the CWA, the PUD purchases water from the CWA for retail distribution within its service area.

The CWA's 2005 (updated in 2007) Urban Water Management Plan (UWMP), in accordance with state law and the RUWMP, contains a water supply reliability assessment that identified a diverse mix of imported and local supplies necessary to meet demands over the next 25 years in average, single-dry year and multiple-dry year periods. The CWA's UWMP documents that no shortages are anticipated within its service area. The CWA also prepared an annual water supply report for use by its members that provides updated documentation on existing and projected water supplies. Similar to MWD, the CWA is in the process of updating the 2005 UWMP to address water reliability in light of recent challenges to water supply and in response to the population, housing, land use, and economic growth projections in SANDAG's 2050 Regional Growth Forecast.

c. Challenges to Regional Water Supply

Water supply for southern California faces many short-term and long-term challenges, including restrictions for endangered species and other environmental protections, droughts, funding shortfalls for new projects, climate change, and others. The PUD, CWA, and MWD prepare and revise their water supply and management plans as needed to ensure their continuing ability to serve the water supply needs of the region. These agencies continue to adopt measures and develop new programs, policies, and projects to provide a greater degree of certainty during periods of prolonged drought or to offset possible reductions in other sources of supply.

Operation of the State Water Project along with the Central Valley Project in the San Joaquin Valley were challenged in 2007 in efforts to protect endangered species and habitat, resulting in reduction in the water delivery capacity of both projects. To ensure reliability of the Sacramento-San Joaquin Delta water supply, the MWD adopted a Delta Action Plan as a framework to address water supply risks in the Sacramento-San Joaquin Delta both for the near-, mid- and long-term. In the near-term, MWD will continue to rely on plans and polices outlined in its RUWMP and IWRP to address water supply shortages and interruptions to meet water demands. Campaigns for voluntary water conservation, curtailment of replenishment water, and agricultural water delivery, are some of the actions outlined in the RUWMP. If necessary, reduction in municipal and industrial water use and mandatory water allocation could also be implemented. MWD also entered into a series of agreements to ensure the stability of its Colorado River supplies and to gain substantial storage capacity in years with surplus supplies. As a result, MWD's water supply is anticipated to be restored to previous levels in the future.

At the local level, the CWA is in the process of minimizing the amount of water it purchases from MWD by diversifying its water supply portfolio. The CWA intends to increase its local water supplies to 40 percent of the region's water supplies by 2020 through conservation programs, recycling, and groundwater development projects.

In addition, the PUD emphasizes the importance of water conservation to minimize water demand and avoid excessive water use. In accordance with Municipal Code Section 147.04, all residential, commercial, and industrial buildings, prior to a change in ownership, are required to be certified as having water-conserving plumbing fixtures in place.

Also, in accordance with the Conservation Element of the City's General Pan (Policy CE-A.11), development projects shall implement sustainable landscape design such as planting "deciduous shade trees, evergreen trees, and drought-tolerant native vegetation, as appropriate, to contribute to sustainable development goals" and using "recycled water to meet the needs of development projects to the maximum extent feasible" to aid in water conservation (City of San Diego 2008b).

The PUD Water Conservation Program, established in 1985, accounts for approximately 32,000 AF of potable water savings per year. Savings have been achieved through creation of a water conservation ethic, and implementation of programs, policies and ordinances designed to promote water conservation practices, including irrigation management. These programs undergo periodic reevaluation to ensure realization of forecasted savings. The PUD also examines new water saving technologies and annually checks progress toward conservation goals, working collaboratively with the MWD and CWA to formulate new conservation initiatives.

d. Global Climate Change

MWD's sources of water supply could be negatively impacted by global climate change and associated challenges, including, but not limited to: reduction in the average annual snow pack; changes in the timing, intensity, location and amount and variability in precipitation; long-term changes in watershed vegetation and increased incidence of wildfires; rise in sea level; increased water temperatures; and changes in urban and agricultural water demand (State of California 2006).

While the impacts of global climate change on MWD's water supply cannot be quantified at this time, MWD has taken actions to decrease potential impacts of climate change on the reliability of its water supplies, which are reflected in its IWRP and RUWMP. In addition to policies emphasizing diversification and adaptability of supply sources to manage uncertainties, current MWD water supply planning stresses the importance of local water supplies such as conservation, water reclamation, and groundwater recharge which would be less affected by global climate change. MWD has also entered into agreements to store water in groundwater reservoirs within and outside southern California.

The CWA is currently in the planning phase for projects to obtain potable water from ocean desalinization plants, which would relieve pressure on imported water sources and expand the local water supply.

e. Water Supply Assessment and Verification

California SB 221 and SB 610 went into effect January 2002 with the intention of linking water supply availability to land use decisions made by cities and counties. SB 610 requires water suppliers to prepare a water supply assessment (WSA) report for inclusion by land use agencies within the CEQA process for large-scale projects. SB 221 requires water suppliers to prepare written verification that sufficient water supplies are planned to be available prior to approval of large-scale subdivisions. As defined in SB 221 and SB 610, large-scale projects include those that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling units project and/or shopping centers or businesses employing more than 1,000 people or having more than 500,000 square feet of floor space. In making these calculations, 500 equivalent dwelling units are assumed to require 250,000 gallons per day (gpd).

As detailed in Section 4.15.2.1(a) below, the project's size and projected water demand does not meet the thresholds that trigger the requirement to prepare a WSA under the provisions of SB 610 or a Water Supply Verification report under the provisions of SB 221.

4.15.1.2 Water Systems

As discussed in Section 4.15.1.1, above, the PUD provides water service in the City of San Diego with water purchased from MWD and the CWA. The PUD maintains surface storage reservoirs, water treatment plants, and pump stations as part of their water system. The water system also includes transmission and distribution pipelines to deliver potable water to developed areas.

Water service presently is available within the project area. The existing water distribution system in the project area includes 16-inch public water mains located within El Prado, Pan American Drive, and Plaza de Panama (see Figure 2-6).

4.15.1.3 Wastewater Systems

The PUD Wastewater Division provides wastewater collection, treatment, and disposal services to the San Diego region through its Metropolitan Sewerage System. The system serves a population of two million, which generates approximately 180 million gallons per day (mgd) of wastewater. Planned improvements to existing facilities would increase wastewater treatment capacity to serve an estimated population of 2.9 million through the year 2050, when nearly 340 mgd of wastewater are anticipated to be generated.

Sewer service is presently available within the project area. The site is serviced by two systems of 8-inch sewer lines. The first "System 1" runs southwesterly from the Mall area, along the west side of the Organ Pavilion, and along Pan American Road West. The second "System 2" serves the International Cottages and travels along Pan American Place southeasterly along the western side of the Pan American Plaza parking lot. The two systems converge at existing manhole 23 at the point where Pan American Road West meets the Pan American Plaza parking lot (see Figure 2-5). Wastewater collected at the project site is conveyed west through various interceptors and pump stations and then finally to the City's Point Loma Wastewater Treatment Plant, located approximately eight miles southwest of the project area.

4.15.1.4 Solid Waste Disposal

Solid waste deposited in general use dumpsters within Balboa Park is collected by City of San Diego Environmental Services, but the institutions contract with a variety of private haulers (e.g., Allied Waste, Waste Management or EDCO). Solid waste is taken to either the City's West Miramar Landfill (Miramar Landfill), located north of SR-52; the Sycamore Sanitary Landfill (Sycamore Landfill), located east of I-15; or the Otay Landfill, located north of I-905. Based on current and projected disposal rates, and permitted disposal limits, the San Diego region is anticipated to exceed landfill capacity within the next few years unless landfill expansions are approved. Waste from the project is

expected to be disposed of primarily at Miramar; however, information on permitted capacity for all three landfills was obtained through the Solid Waste Information System in the event that solid waste is transported to other landfills (State of California 2011).

The Miramar Landfill is permitted to receive 8,000 tons per day. On average it receives approximately 2,655 tons per day Monday through Friday, and substantially less on weekends. Its remaining capacity is approximately 16.5 million cy. The estimated closure date of the Miramar Landfill is January 2017. The Sycamore Landfill is permitted to receive a maximum of 3,965 tons per day. Per the current permit, the Sycamore Landfill has a remaining capacity of 47.4 million cy and would close December 2031. The Otay Landfill is permitted to receive 5,830 tons per day, and has a remaining capacity of 33.1 million cy and a projected closure date of April 2021 (State of California 2010a).

ESD requires all new development projects, within a 40,000-square-foot threshold, to prepare a WMP that addresses disposal of waste generated during short-term project construction and long-term post-construction operation. The WMP is required to identify how the project would reduce waste and achieve target reduction goals and must include: projected waste generation calculations and identification of the types of waste materials generated; description of how materials would be reused on-site; identification of source separation techniques for recycling; and identification of recycling and reuse facilities where waste would be taken if not reused on-site. In tandem with the WMP, all new development projects must comply with the City's Construction and Demolition Ordinance and Section 142.0830 of the LDC which outlines the requirements for refuse and recyclable materials storage.

4.15.1.5 Energy Infrastructure

SDG&E is the owner and operator of natural gas and electricity transmission and distribution infrastructure in San Diego County. The project site is developed and presently receiving electricity and natural gas service. Refer to Section 4.7 for additional information pertaining to SDG&E facilities, electricity and natural gas.

4.15.2 Issue 1: Water

Would the proposal result in a need for new or substantially altered systems (i.e., water, wastewater, solid waste disposal, or energy provision), which would create physical impacts?

Based on the City's Significance Determination Thresholds, impacts related to water would be significant if the project would:

- Result in a need for new or substantially altered water systems which would create physical impacts, propose predominantly non-drought resistant landscaping, or result in the use of excessive amounts of water.

4.15.2.1 Impacts

ALL PROJECT COMPONENTS

For purposes of analyzing impacts associated with utilities and infrastructure (water supply, water delivery, sewer infrastructure, and solid waste), the following discussions are inclusive of all components of the project.

a. Water Supply

A Water Demand Analysis prepared by Rick Engineering is attached to this EIR as Appendix M. As detailed in Appendix M, the project would require 8.85 acre-feet per year (AFY) in the proposed condition, but utilizes 2.99 AFY in the existing condition. Thus, a net change of 5.85 in water demand would occur with implementation of the project. The projected increase in water demand can be attributed to the additional landscaping/water features proposed within El Prado, Plaza de Panama and the new 2.2-acre rooftop park.

The 5.85 AFY net change equates to 1,907,100 gallons per year or 5,225 gpd. As 5,225 gpd is less than 250,000 gpd, the project does not meet the SB 610/221 threshold for preparing a WSA/Verification. As designed, the project incorporates drought-resistant landscaping where feasible and water conservation features such as low-flush toilets, low-flow faucets, and timers on irrigation sprinklers to reduce water demands. Thus, the project development would not create a significant impact on water demand.

b. Water System

The project would not result in a substantial increase in demand for water, as described above, and therefore, would not warrant substantial changes to the existing on-site water system. The project does not propose the upsizing of existing water lines or the installation of new water infrastructure. An existing 16-inch water line would need to be relocated to allow for excavation activities required to construct the underground parking structure and access road. After the water line is relocated, the existing lateral lines would be reconnected with minimal interruptions to water flow within the Park.

Activities necessary to relocate the water line could temporarily impact traffic circulation, ambient noise levels, and may result in emissions that exceed established standards for air quality. Construction-related impacts are addressed under each of these issue areas within this EIR; no additional significant impacts associated with the construction of new facilities are identified.

4.15.2.2 Significance of Impacts

a. Water Supply

Although implementation of the project would contribute an incremental demand (additional 5,225 gpd) on water supply, it would not require the addition of new water service facilities or generate a demand for water that has not been accounted for by the applicable planning documents. Thus, impacts to water supply would be less than significant.

b. Water System

Since no new or altered water systems would be required for water service to the project, and no impacts from the installation of such facilities would occur, impacts would be less than significant.

4.15.2.3 Mitigation, Monitoring, and Reporting

a. Water Supply

Impacts would be less than significant; therefore, no mitigation would be required.

b. Water System

Impacts would be less than significant: therefore, no mitigation would be required.

4.15.3 Issue 2: Wastewater

Would the proposal result in a need for new or substantially altered systems (i.e., water, wastewater, solid waste disposal, or energy provision), which would create physical impacts?

Based on the City's Significance Determination Thresholds, impacts related to wastewater would be significant if the project would:

- Result in a need for new or substantially altered wastewater systems which would create physical impacts.

4.15.3.1 Impacts

ALL PROJECT COMPONENTS

Appendix N provides a comparison of the existing and proposed sewer flow calculations and capacity information in order to confirm that there is sufficient capacity and acceptable velocities in the proposed condition. As described in Appendix N, the project

proposes to abandon and remove several manholes and sewer line sections (System 1) in order to accommodate proposed grading. Because of the removal of the restroom west of the Organ Pavilion, flow within System 1 would be decreased. System 2 would also be modified in order to accommodate the project. A new 8-inch spur line would tie into System 2 at Manhole No. 35 in order to provide sewer service to the new public restroom on top of the parking structure.

As discussed in Appendix N, there is sufficient capacity in both System 1 and System 2 and at the point of convergence in the proposed condition. In the proposed condition, velocities are still above two feet per second downstream of where the restroom would be removed; thus adequate velocity is met. In addition, the project would not generate new demand for sewer capacity, and therefore, would not require substantial changes to the existing on-site wastewater infrastructure.

Activities associated with the construction of the sewer line extension would temporarily impact traffic circulation, ambient noise levels, and may result in emissions that exceed established standards for air quality. Construction-related impacts are addressed under each of these issue areas within this EIR; no additional significant impacts associated with the construction of new facilities are identified.

4.15.3.2 Significance of Impacts

Implementation of the project would not necessitate the installation of new or upgraded sewer facilities to accommodate effluent leaving the project site. A small, on-site sewer line spur would be required to serve the proposed new public restroom on top of the parking structure. Impacts would be less than significant.

4.15.3.3 Mitigation, Monitoring, and Reporting

Since impacts would be less than significant, no mitigation is required.

4.15.4 Issue 3: Solid Waste

Would the proposal result in a need for new or substantially altered systems (i.e., water, wastewater, solid waste disposal, or energy provision), which would create physical impacts?

Based on the City's Significance Determination Thresholds, projects that include the construction, demolition, or renovation of 1,000,000 square feet or more of building space may generate approximately 1,500 tons of waste or more and are considered to have direct impacts on solid waste facilities. For projects over 1,000,000 square feet, a significant direct and cumulative solid waste impact would result if:

- Compliance with the City's ordinances and the WMP fails to reduce the impacts of such projects to below a level of significance and/or if a WMP for the project is not prepared and conceptually approved by the Environmental Services Department prior to distribution of the draft environmental document for public review.

4.15.4.1 Impacts

ALL PROJECT COMPONENTS

Based on the size and scope of the project, a conceptual WMP was prepared to provide a comprehensive program to reduce waste generated project by construction activities and post-construction future land use. The WMP consists of two sections corresponding to the processes of site development: the demolition and construction phase and the post-construction occupancy phase. Each section of the WMP addresses the projected amount of waste that would be generated by the project, waste reduction goals, and the recommended techniques to achieve the waste reduction. The WMP is summarized below and can be reviewed in its entirety as Appendix O. A Final WMP is required prior to issuance of any demolition or construction permits.

a. Demolition and Construction Waste Management

Project construction would occur in four major phases: Phase I – Utility Relocation and Restroom Demolition; Phase II – Bridge and Parking Structure Construction; Phase III – Alcazar Parking Lot and Parkway Bypass Construction; and Phase IV – Mall and Plaza Improvements. Phase I would require utility relocations and the demolition of the existing public restrooms. Phase II would require removal of the existing Organ Pavilion surface parking lot. Phase III would require the removal of the existing Alcazar surface parking lot. Phase IV would require the demolition of existing hardscape and landscape at the Plaza de California, El Prado, Plaza de Panama, and the Mall. Table 4.15-1 summarizes the demolition and construction waste generation and diversion.

TABLE 4.15-1
TOTAL DEMOLITION/CONSTRUCTION WASTE GENERATED AND DIVERTED BY MATERIAL AND PHASE

Material	Phase I and II	Phase III	Phase IV	Tons Generated	Tons Diverted	Tons Disposed
Street Lights	4.5	1.0	10.8	16.2	9.7	6.5
Structure/Housing Materials	31.6	7.5	0.0	39.1	26.5	12.5
Trees	88.2	30.0	40.0	158.2	158.2	0.0
Landscape Materials	228.1	44.9	80.7	353.8	336.1	17.7
AC Paving and Base	2,641.2	744.8	1,313.2	4,699.3	4,699.3	0.0
Concrete/Hardscape (w/rebar)	295.4	78.9	310.7	685.0	465.1	219.9
Shoring/Formwork	33.5	2.0	4.0	39.5	26.8	12.7
Dry Utilities	4.3	0.5	1.0	5.8	3.9	1.8
Wet Utilities	15.0	0.0	2.0	17.0	11.5	5.5
Misc. Construction Debris	168.8	22.5	52.5	243.8	165.5	78.2
TOTAL (Tons)	3,510.6	932.1	1,814.9	6,257.7	5,902.6	354.8

As shown, a total of approximately 6,257.7 tons of material would be generated and 5,902.6 tons of material would be diverted through recycling in the demolition and construction phases. This would amount to a 94.3 percent reduction in solid waste which would be diverted from the landfill.

Following clean up and demolition activities, implementation of the project would require 8.91 acres of grading. Grading would total approximately 163,000 cubic yards of cut and 21,000 cubic yards of fill, with 142,000 cubic yards of anticipated export. Other anticipated wastes associated with this phase include a negligible amount of trash generated by contractors working on-site during the grading process.

The source separation strategies outlined below would be implemented during project construction to ensure that construction waste is diverted to at least the extent summarized in Table 4.15-1 above. The materials listed in the table above would be separated and taken to source-separated recycling facilities that achieve almost a 100 percent diversion rate.

Source Separation

Source separation of demolition/construction debris on the project site would facilitate reuse and recycling of materials. Recycling, salvage, reuse, and disposal options would be determined before the job begins. Inert granule products (asphalt and concrete), wood waste products, cardboard, and ferrous materials are categories of recyclable construction and demolition materials that would be source separated. These items have higher diversion rates at specialized recycling facilities than other materials.

Containers of various sizes would be provided for source separation. Materials that would be collected in source separated containers include, but are not limited to, metals, clean wood, concrete, asphalt mixed inerts (e.g., dirt, rock, brick), corrugated cardboard and green waste and land-clearing debris. Materials collected as source separated materials would be taken to specialized source separated facilities that achieve a 100 percent diversion rate.

The contractors would be responsible for evaluating the materials during the demolition and construction phases for reuse on-site. Materials that are determined not suitable for reuse would be deposited into separate source bins to be taken to the appropriate facilities for recycling.

Recycling

Recycling areas would be clearly identified with large signs. Lists of acceptable/ unacceptable materials would be posted on recycling bins and throughout the project site and all recycled material signage would be visible on at least two sides of haul containers. Recycling bins would be placed in areas that would be readily accessible and would minimize misuse or contamination. The Solid Waste Management Coordinator (discussed below) would be responsible for these efforts and would be reviewed at the pre-construction meeting. Materials for recycling would be redirected to appropriate recipients selected from ESD's directory of facilities that recycle demolition and construction materials, scrap metal and yard waste.

Contractor Education and Responsibilities

Contractors would be educated regarding the solid waste management plan. Solid waste management plans would be distributed to all entities when they first begin work on-site and when training workers, subcontractors, and suppliers on proper waste management procedures applicable to the project.

Solid Waste Management Coordinator

A Solid Waste Management Coordinator (SWMC) for the project shall be designated to ensure that the contractors and subcontractors are educated and that procedures for waste reduction and recycling efforts are implemented. Specific responsibilities of the SWMC include:

- Review the Solid Waste Management Plan, including the SWMC responsibilities.
- Work with the contractors to estimate the quantities of each type of material that would be salvaged, recycled, or disposed of as waste then assist in documentation.
- Review and enforce procedures for materials separation and verify availability and signage of containers.

- Coordinate solid waste mitigation implementation with other requirements such as storm water requirements, which may specify related measures, such as the placement of bins to minimize the possibility of runoff contamination.
- Review and enforce procedures for transportation of materials to recycling and disposal facilities.
- Return or reuse excess materials and packaging.

b. Post-Construction/Occupancy Waste Management

As discussed throughout the EIR, the project would modify some land uses and make changes to the circulation patterns within the Central Mesa; but is not anticipated to increase visitorship within the Park. Therefore, with respect to post-construction/occupancy, the proposed condition would be the same as the existing condition; thus, no significant impacts would occur.

4.15.4.2 Significance of Impacts

A conceptual WMP has been prepared for the project. As a condition of project approval, implementation of a final WMP would be verified in order to ensure that project impacts would be less than significant.

4.15.4.3 Mitigation, Monitoring, and Reporting

Since impacts would be less than significant, no mitigation is required.

4.15.5 Issue 4: Energy Infrastructure

Would the proposal result in a need for new or substantially altered systems (i.e., water, wastewater, solid waste disposal, or energy provision), which would create physical impacts?

Based on the City's Significance Determination Thresholds, impacts related to water would be significant if the project would:

- Result in the need for new or expanded public facilities necessary for the provision of energy that would create physical impacts.

4.15.5.1 Impacts

ALL PROJECT COMPONENTS

The first phase of construction (see Figure 3-41a) would involve utility relocations where existing SDG&E and AT&T utilities conflict with proposed grading or construction activities. These required utility line relocations would take place within existing or proposed streets or paved areas. All of the facilities involved are distribution size or smaller and are used to provide gas, electric, and telephone service to the Park. The construction of new energy infrastructure (e.g., transformers, poles, substation) would not be required for implementation of the project. South of the Organ Pavilion, a temporary aerial system would be required for electric facilities. This temporary system would involve two to four wood poles spanning an area of approximately 350 feet, but would be removed once the new access road between the south side of the Organ Pavilion and Presidents Way is completed.

Activities necessary to upgrade and construct facilities could temporarily impact traffic circulation and ambient noise levels. Construction-related impacts are addressed under each of these issue areas within this EIR and energy conservation is addressed in Section 4.7. The project would not require alteration of existing energy facilities.

4.15.5.2 Significance of Impacts

The project would not require substantial alteration of existing utilities, which would create physical impacts. Thus, impacts would be less than significant.

4.15.5.3 Mitigation, Monitoring, and Reporting

Since impacts would be less than significant, no mitigation is required.

4.16 Water Quality

The following water quality analysis is based on the Water Quality Technical Report (WQTR), dated December 21, 2011, prepared by Rick Engineering Company. The WQTR evaluates potential water quality impacts to downstream waters and prescribes measures which would be incorporated into the project to reduce impacts to downstream waters and habitat. The WQTR follows requirements described in the City of San Diego Storm Water Standards Manual, January 2011. The technical report is included in its entirety as Appendix P.

4.16.1 Existing Conditions

4.16.1.1 Surface/Receiving Waters

As identified in Section 4.11 the project site is located within the Lindbergh Hydrologic Subarea, Basin Number 908.21, of the San Diego Mesa Hydrologic Area (908.2), of the Pueblo San Diego Hydrologic Unit. The San Diego Bay and shoreline is the primary receiving water body for the San Diego Mesa Hydrologic Area. The fill disposal site for the project is located within the Chollas Hydrologic Subarea, Basin Number 908.22, of the San Diego Mesa Hydrologic Area (908.2), of the Pueblo San Diego Hydrologic Unit. The San Diego Bay and shoreline is also the primary receiving water for this hydrologic subarea.

a. Beneficial Uses

Section 303(d) of the federal Clean Water Act requires states to periodically prepare a list of all surface waters in the state for which beneficial uses of the water—such as for drinking, recreation, aquatic habitat, and industrial use—are impaired by pollutants. These include water quality limited estuaries, lakes, streams, and coastal regions that fall short of state water quality standards, and are not expected to show improvement in the next two years.

Receiving waters from the project site include the San Diego Bay and the San Diego Bay Shoreline (vicinity of B Street and B roadway piers). Beneficial uses of the San Diego Bay include industrial, navigation, recreational, commercial and sport fishing, biological habitats of special significance, estuarine habitat, wildlife habitat, rare, threatened, or endangered species habitat, marine habitat, migration of aquatic organisms, spawning habitat, and shellfish harvesting.

b. 303(d) List Status

Under Section 303(d) of the 1972 Clean Water Act, states, territories, and authorized tribes are required to develop a list of water quality limited segments. These waters on the list do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. The law requires that the above-mentioned jurisdictions establish priority rankings for waters on the lists and develop action plans, called Total Maximum Daily Loads, to improve water quality.

Water quality issues affecting the project's watershed include surface water quality degradation, habitat degradation, sediment toxicity in San Diego Bay, and sewer overflows. The receiving waters for the project that are currently listed include the San Diego Bay Shoreline (vicinity of B Street and Broadway piers) and San Diego Bay. The pollutant/stressor causing impairment of the San Diego shoreline (Vicinity of B Street and Broadway piers) are benthic community effects, indicator bacteria, and sediment toxicity. The pollutants/stressors causing impairment of San Diego Bay is polychlorinated biphenyls.

c. Environmentally Sensitive Areas

Pursuant to the City's Storm Water Requirements Applicability Checklist (Rick Engineering Company, March 2011), the project site is not located within or directly adjacent to, nor directly discharges runoff into a Water Quality Sensitive Area (WQSA), in which the project either creates 2,500 square feet of impervious surface area on the project site or increases the impervious surface area of the site by 10 percent or more. WQSAs include environmentally sensitive areas as defined by the Municipal Storm Water Permit (Order R9-2007-0001). WQSAs include: 303(d) listed (impaired) water bodies; rare beneficial use water bodies (water bodies that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened or endangered); City-defined environmentally sensitive areas or open space preserve areas, floodways, and/or wetland habitat.

4.16.1.2 Existing Pollutant Discharge

There are currently no runoff treatment management practices being employed on-site or off-site to treat runoff from the existing uses before being discharged into the San Diego Bay. Runoff is likely contaminated with pollutants typical of urban development, including nutrients from fertilizers and eroded soils, heavy metals, organic compounds, trash and debris, oxygen demanding substances, oil and grease from leaking vehicles or illegal dumping, bacteria and viruses from pet waste, and pesticides.

4.16.1.3 Regulatory Framework

Various federal, state, and local regulations provide requirements for new development to control erosion and runoff contaminants, as well as direct discharge of water quality pollutants.

Construction projects in the City of San Diego are subject to the erosion control requirements of the City's Grading Ordinance. Projects must also comply with the federal and state Clean Water Act. Conformance with the Clean Water Act is established through compliance with the requirements of the NPDES General Permit for the City of San Diego (Municipal Permit), No. R9-2007-0001.

The NPDES Municipal Permit, issued in 2007 to the City of San Diego by the San Diego RWQCB, requires the development and implementation, to the maximum extent practicable, of storm water pollution BMPs, both during project construction and in the project's permanent design to reduce discharge of pollutants. To address pollutants that may be generated from new development during and post-construction, the Municipal Permit further requires that the City implement a series of construction and permanent BMPs described in the Model Standard Urban Storm Water Mitigation Plan (SUSMP) which is contained in the City's *2011 Storm Water Standards Manual*. The City's Storm Water Standards Manual provides information to project applicants on how to comply with all of the City's construction and post-construction permanent storm water BMP requirements, including the SUSMP.

For every project upon formal project submittal, applicants must complete and submit the Storm Water Requirements Applicability Checklist in order to determine the project's storm water BMPs required during construction and post-construction. If the project requires treatment control BMPs, per the Storm Water Applicability Checklist, the applicant must submit a water quality technical report consistent with the City's Storm Water Standards. The report must include, but not be limited to, appropriate BMP selection, BMP maintenance schedules, and the responsible party for future maintenance and associated costs. The report must also address water quality by describing the type of pollutants that would be generated during construction and post-construction, as well as identifying pollutants captured and treated by the proposed BMPs.

4.16.2 Issue 1: Pollutant Discharge

Would the proposal result in an increase in pollutant discharge, including downstream sedimentation, to receiving waters during or following construction, including discharge to an already impaired water body?

As stated in the City's Significance Determination Thresholds for water quality, compliance with federal, state, and local water quality standards is assured through project adherence to the City's Storm Water Standards and related conditions placed on

building permits prior to project approval. Adherence to the City's Storm Water Standards is considered to preclude water quality impacts unless substantial evidence supports a fair argument that a significant impact would still occur. Project adherence to the City's Storm Water Standards comprises the City's water quality threshold.

4.16.2.1 Impacts

ALL PROJECT COMPONENTS

Water quality is affected by sedimentation caused by erosion, runoff carrying contaminants, and direct discharge of pollutants. Land development generally leads to increased opportunity for contaminated runoff that carries oil, heavy metals, pesticides, fertilizers, and other contaminants, to enter a watershed.

The project would be categorized in the following types of land use according to Table 4-1 of the City's Storm Water Standards Manual (January 2011): commercial development, restaurants, steep hillside development, parking lots, and streets, highways, and freeways. The anticipated and potential pollutants generated by these proposed land uses include:

- Sediments – anticipated and potential
- Nutrients – anticipated and potential
- Heavy metals – anticipated
- Organic compounds (petroleum hydrocarbons) – anticipated and potential
- Trash and debris – anticipated
- Oxygen demanding substances (including solvents) – anticipated and potential
- Oil and grease – anticipated
- Bacteria and viruses – anticipated and potential
- Pesticides – anticipated and potential.

As described in Section 4.11, Hydrology, the project would maintain the basic drainage patterns and would result in a similar amount of runoff leaving the site for Basins 200, 300, 400, 500, and for the fill disposal site. For Basin 100, drainage patterns would remain similar; however, due to the increase in impervious surfaces, the project would result in an increase to peak flow rates without the additional storm water management features discussed in Section 4.11. To meet the City's water quality and quantity requirements, the project design incorporates permanent storm water management features and hydromodification management design features to maintain or reduce pollutant discharge into the downstream canyons, storm drain systems, and ultimately into San Diego Bay. During construction, the project would implement a project-specific

Storm Water Pollution Prevention Plan (SWPPP) that would include temporary erosion and sediment control BMPs in accordance with the General Construction Permit.

a. Construction BMPs

The main water quality pollutant of concern on the project site during construction activities would be sediment from soil erosion. Erosion control and management of construction activities for the project would be conducted in accordance with the City's Storm Water Standards and applicable state storm water requirements. Construction activities would be required to comply with the State Water Resources Control Board (SWRCB) NPDES General Permit for Storm Water Discharges Associated with Construction Activity (Construction General Permit [CGP]). Per this CGP, the project would be required to submit a Notice of Intent to the SWRCB and prepare a SWPPP detailing the storm water management and erosion and sediment control BMPs that would be utilized on the construction site. A Construction Site Monitoring Program (CSMP) would also be prepared, in accordance with requirements set forth in the CGP. Implementation of the SWPPP and CSMP would be subject to inspection and enforcement by the RWQCB.

The BMPs relating to construction activity to be incorporated into the project would include:

- Perimeter protection BMPs
- Sediment control and sediment control tracking BMPs
- Standby BMP materials
- "Weather triggered" action plan and BMP implementation plan (40 percent chance of rain), if applicable
- Physical or vegetation erosion control BMPs as soon as grading/excavation completed
- Concrete washout area
- Storage areas for materials and wastes
- Daily removal and storage of remnant trash and debris
- Storage, service, cleaning, and maintenance area for vehicles identified and protected
- On-site materials for spill control/containment
- Non-storm water discharge eliminated or controlled

- Erosion control BMPs upgraded for storms within rainy season
- Physical or vegetation erosion control BMPs installed prior to rainy season and maintained throughout season
- Vegetation erosion control established prior to rainy season to be considered a BMP
- Limiting area of exposed soil to amount that can be adequately protected
- Disturbed area not completed and not being actively graded must be fully protected if left for seven or more calendar days.

Erosion control plans with notes and locations of BMPs would be submitted with the final project grading plans and/or within project-specific SWPPP.

As a condition of development, the construction phase of the project would be monitored by a qualified person to verify implementation of the SWPPP as a condition of development. Monitoring activities would be conducted by a qualified person with documented training in storm water management, and would include daily forecasting, daily evaluations of conditions during construction activities that are conducted during the wet season (October 1 to April 30), and weekly inspections during the dry season (May 1 to September 30). The qualified person would evaluate the conditions of the project site with respect to storm water pollution prevention and would represent the owner or contractor on storm water issues. Specific responsibilities of the qualified person would include:

- Ensuring that BMPs are properly documented and implemented
- Identifying maintenance and repair needs
- Verifying implementation of the SWPPP, including erosion and sediment control and waste management requirements.

b. Low Impact Development BMPs

The project design incorporates LID BMPs where feasible to minimize directly connected impervious surface areas and promote infiltration and evaporation of on-site runoff. In order to manage the quantity and quality of storm water runoff, LID practices use site design and specific devices to create a post-development condition that is similar to the hydrologic condition that existed prior to development. LID facilities such as bioretention, pervious surfaces and/or flow-through planters would be utilized to retain, reuse, or promote evapotranspiration of storm water. The following LID BMPS have been incorporated into the project design:

- Utilize bioretention areas; as an alternative to bioretention areas, the project may utilize pavers or flow-through planters in a few locations
- Conserve natural areas, provide buffer zones between natural water bodies and the project footprint, preserve existing native trees and shrubs, and concentrate or cluster development on the least environmentally sensitive portions of the site
- Minimize impervious footprint
- Minimize directly connected impervious areas
- Minimize soil compaction in landscape areas
- Topsoil improvement
- Convey runoff safely from the tops of slopes
- Vegetate slopes with native or drought-tolerant vegetation
- Stabilize permanent channel crossings (if applicable)
- Install energy dissipation where needed.

c. Source Control BMPs

Source control BMPs consist of measures to reduce pollutant loads in runoff, particularly for storm events, by reducing the potential for contamination at the source of pollution. Generally, the selected source control BMPs would minimize contact between pollutants and urban runoff. The following source control BMPs are proposed for the project:

- Steep hillside landscaping
- Use efficient irrigation systems and landscape design
- Design trash storage areas to reduce pollution contribution
- Design outdoor material storage areas to reduce pollution contribution
- Employ integrated pest management principles
- Provide storm water conveyance system stamping and signage
- Other source control requirements, pursuant to the storm water standards.

d. Treatment Control BMPs

Runoff and pollutant loads would be managed by treatment control BMPs. Selected treatment control BMPs target the current pollutants for which the downstream receiving water, the San Diego Bay shoreline (vicinity of B Street and Broadway piers) and San Diego Bay, are impaired as well as the anticipated project-generated pollutants. The

following storm water treatment control BMPs would be implemented as part of the project design:

- Bioretention
- High-rate media filters.

In addition, other options under design consideration include use of permeable pavers and flow-through planters. The selection of treatment control BMPs would follow the requirements in the Storm Water Standards manual, and would include preference to LID BMPs for use as Treatment Control BMPs where feasible (i.e., bioretention), with use of proprietary Treatment Control BMPs limited to highly constrained treatment locations, including project areas that would retrofit existing drainage systems (i.e., high rate media filters).

As a result of the installation of water quality BMPs that are not currently present on-site, and the implementation of a project-specific SWPPP during construction, the project would not have a significant adverse impact on water quality of runoff leaving the site.

The project also consists of a fill disposal site located at the Arizona Street Landfill on the East Mesa. The project does not propose impervious surfaces within the fill disposal site. For water quality purposes, fill areas will be landscaped with non-irrigated plantings that are consistent with “passive” park uses and Park and Recreation land use goals for the Arizona Street Landfill. Since there are no proposed impervious surfaces there are no additional permanent BMPs required for the fill disposal site related to water quality or hydromodification management.

4.16.2.2 Significance of Impacts

The project would incorporate BMPs and project design features to reduce pollutant discharge off-site, thus avoiding significant adverse water quality impacts to the San Diego Bay, a 303(d) impaired receiving water body. The long-term operation of the project would not create any direct significant impacts associated with siltation and sedimentation. The project would comply with all applicable federal, state, and local water quality standards through adherence to the City’s Storm Water Standards and the General Construction Permit. Implementation of the proposed BMPs described above would reduce potential impacts to water quality to less than significant.

4.16.2.3 Mitigation, Monitoring, and Reporting

Impacts to runoff water quality and to impaired receiving waters would be less than significant and no mitigation would be required.